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AN EXAMINATION OF PRECOLLEGIATE EDUCATION PROGRAMS IN THE K–12
CONTEXT: THE ROLE OF STUDENT MOTIVATION AND PERCEPTION AND
RECRUITMENT AND RETENTION STRATEGIES FOR SUCCESSFUL OUTCOMES

by

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ABSTRACT

State leaders have responded to recruiting and retaining teachers in the workforce with Grow Your Own (GYO) programs for recruiting secondary students or community members into education. An example of a GYO is the precollegiate Teacher Academy (TA) program offered in local high schools as a career and technical education pathway. The TA provides guidance for high school students thinking about the teaching profession. TA educators foster students' interest and recruit and retain them in education by exploring their motivations. This study was a triangulated mixed methods study with the quantitative/qualitative model of utilizing both data sets to determine student motivation and perception in relation to recruitment and retention. The collection of the quantitative data occurred via a Factors Influencing Teaching (FIT-Choice) survey of TA secondary students' perceptions and motivations. Additionally, the study's qualitative research component involved a TA questionnaire on TA recruitment and retention and a TA teacher focus group. The focus group encompasses three TA teachers and a higher education representative working with TA students. The results of this study showed statistical significance in fallback career, intrinsic motivation, and salary as motivation and perceptual sub-factors as determined by the FIT-Choice survey. This study's finding through a triangulated analysis shows that recruitment plans for secondary students will need to address social influences, teaching as a fallback career, job security, salary, and the opportunity to work with children/adolescents. Similarly, retention strategies will need to address intrinsic career values, difficulty, shape the future of children/adolescents, prior teaching and learning experiences, and social contributions within the classroom environment for students currently enrolled in a TA program. Thus, the study provides insight into how the role of student motivation and perception and recruitment and retention are necessary for successful outcomes of increasing participation.

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TABLE OF CONTENTS

LIST OF FIGURES.....	ix
LIST OF TABLES.....	x
CHAPTER ONE: INTRODUCTION.....	1
Background of the Study.....	1
Problem Statement.....	4
Purpose of the Study.....	7
Significance of the Study.....	8
Definitions of Terms.....	9
Conceptual Framework.....	11
Structural Components.....	13
Systematic Components.....	16
Standards-Based Components.....	18
Research Questions.....	21
Delimitations.....	22
Limitations.....	22
Assumptions.....	23
Organization of the Study.....	23
Summary of Chapter One.....	24
CHAPTER TWO: LITERATURE REVIEW.....	25
Introduction.....	25
Teacher Education Program: A Holistic View.....	25

Recruitment and Retention Within the Higher Education Context.....	25
Recruitment and Retention Within the K-12 Context.....	31
Grow Your Own Programs: A Macrolevel View.....	37
Foundational Components.....	37
Practical Applications.....	44
Localized Implementation.....	47
Career and Technical Education Programs: A Micro-Level View.....	50
High School Student Recruitment.....	50
High School Student Retention.....	52
Student Motivation.....	54
Summary of Chapter Two.....	55
CHAPTER THREE: METHODOLOGY.....	58
Introduction.....	58
Purpose of the Study.....	58
Research Procedures and Design.....	60
Quantitative Instrumentation and Qualitative Protocol.....	62
Quantitative Instrumentation.....	62
Qualitative Protocol.....	64
Interview Protocol.....	64
Validity.....	65
Population.....	66
Research Questions and Mixed Method Measures.....	66
Quantitative Measures and Analysis for Research Question 1.....	66

Quantitative Measures and Analysis for Research Question 2.....	67
Qualitative Measures and Analysis for Research Question 3.....	67
Data Collection and Analysis.....	68
Summary of Chapter Three.....	69
CHAPTER FOUR: RESULTS.....	71
Introduction.....	71
Descriptive Statistics.....	73
Participant Demographics.....	73
FIT-Choice Motivation Construct Survey.....	74
FIT-Choice Perception Construct Survey.....	75
Testing the Research Question.....	75
Research Question 1.....	75
Research Question 2.....	79
Research Question 3.....	96
Summary of Chapter Four.....	113
CHAPTER FIVE: SUMMARY, DISCUSSION, RECOMMENDATIONS, AND	
CONCLUSION.....	115
Introduction.....	115
Summary of the Study.....	116
Research Questions.....	116
Summary and Discussion of Findings.....	118
Research Question 1.....	118
Research Question 2.....	118

Research Question 3.....	120
Implementation of Practice and Policy.....	124
Recommendation for Further Practice and Policy.....	127
Conclusion.....	129
APPENDIX A: UNIVERSITY OF CENTRAL FLORIDA INSTITUTIONAL REVIEW	
BOARD APPROVAL.....	132
APPENDIX B: TEACHER ACADEMY STUDENT FIT-CHOICE MOTIVATION	
CONSTRUCT SURVEY.....	134
APPENDIX C: TEACHER ACADEMY STUDENT FIT-CHOICE PERCEPTION	
CONSTRUCT SURVEY.....	138
APPENDIX D: TEACHER ACADEMY STUDENT RECRUITMENT AND RETENTION	
QUESTIONNAIRE.....	141
APPENDIX E: G*POWER CALCULATION.....	143
APPENDIX F: PERMISSION OF FIT-CHOICE SURVEY MODIFICATION.....	145
REFERENCES.....	147

LIST OF FIGURES

Figure 1. Teacher Education Programs as Standards for Implementation..... 12

LIST OF TABLES

Table 1. Research Questions Matrix.....	69
Table 2. Research Questions Matrix.....	72
Table 3. Student Demographics.....	73
Table 4. Reliability Statistics.....	75
Table 5. Descriptive Statistics for FIT-Choice Motivation Construct Survey.....	76
Table 6. Descriptive Statistics for FIT-Choice Perception Construct Survey.....	78
Table 7. Results of Box’s M Test of Equality of Variance for Motivation Subfactor.....	79
Table 8. Multivariate Statistics for Gender and Race for Motivation Subfactor.....	80
Table 9. Univariate Statistics: F Statistics by Motivational Subfactors.....	81
Table 10. Estimate Marginal Means by Gender for Motivational Subfactors.....	83
Table 11. Estimate Marginal Means by Race for Motivational Subfactors.....	85
Table 12. Estimate Marginal Means by Gender * Race for Motivational Subfactors.....	87
Table 13. Results of Box’s M Test of Equality of Variance for Perceptual Subfactors.....	89
Table 14. Multivariate Statistics for Gender and Race for Perceptual Subfactors.....	90
Table 15. Univariate Statistics: F Statistics by Perceptual Subfactors.....	91
Table 16. Estimate Marginal Means by Gender for Perceptual Subfactors.....	92
Table 17. Estimate Marginal Means by Race for Perceptual Subfactors.....	93
Table 18. Estimate Marginal Means by Gender * Race for Perceptual Subfactors.....	94
Table 19. Theming for Student Motivation Factors.....	97
Table 20. Theming for Student Motivation Factors.....	102
Table 21. Theming for Student Recruitment.....	107

CHAPTER ONE: INTRODUCTION

Background of the Study

The teacher shortage has been a critical issue for school districts across the United States since the 1950s (Reitman & Karge, 2019; Sutchter et al., 2019). Too few teachers are available to fill vacancies in school districts. As of 2019, the United States has 3.5 million educators; however, scholars expect the number of educators needed to increase in the coming years (Carothers et al., 2019). Over the past decade, the U.S. teacher attrition rate has remained steady at 8% annually, representing in a minimum of 87,000 vacancies (Sutchter et al., 2019; Wronowski, 2018). Meanwhile, the number of teacher education program graduates decreased by 35% from 2012 to 2015 (Martin & Mulvihill, 2016).

The school-aged population will increase by three million by 2025, producing a more significant gap (Sutchter et al., 2019). School districts strive to fill vacancies quickly by recruiting from a limited population of teacher education program graduates or implementing programs to retain teachers, especially those in their early stages of teaching. Perryman and Calvert (2020) found that 46% of teachers leave within the first 5 years of teaching. School districts have recruitment and retention plans for filling teacher vacancies, such as induction programs and recruitment bonuses, alternative certification pathways, and resident teacher programs (Klimek, 2019).

School districts also face the challenge of a lack of diverse teachers in schools. In the 2011–2012 school year, only 7% of teachers were Black and 8% were Hispanic (Goings, Walker, & Cotignola-Pickens, 2018). The high number of White teachers does not match the current student population. Teachers of color foster positive outcomes for all students by improving

academic growth and expectations through culturally relevant teaching and by challenging cultural biases (Grillo & Barreau, 2020). School districts must increase the number of teachers of color with ethno-racial patterns by placing Black teachers in Black schools, providing accountability support in schools with high numbers of Black teachers, marketing for less-diverse populations, and increasing teacher protections (White et al., 2020). School districts must have proactive recruitment and retention strategies for teachers of color.

States have begun investigating how to recruit and retain teachers in the workforce. One response to the high number of teacher vacancies in Florida is the Grow Your Own (GYO) programs for actively recruiting secondary students or community members into education. A prime example of a GYO is the precollegiate teacher academy (TA) program provided in local high schools as a career and technical education (CTE) pathway. The TA is a “program that gives young people a chance to explore a career that needs them” (Berrigan & Schwartz, 2000, p. 5). The goal of TAs is to promote the idea of recruiting and informing individuals about a career in education at an early age. School districts have used the TA initiative to recruit students within their districts to become licensed teachers. The expectation is that the students who graduate from teacher education programs will return to their local communities to teach.

TAs’ objective is to foster students’ motivation in joining the teaching profession by fostering college and career readiness skills. The TA program provides students with incentives, such as guidance with the application process, scholarships, tuition waivers, dual-enrollment opportunities, opportunities to work with elementary-aged students, and teaching experiences (Berrigan & Schwartz, 2000). Students benefit from the TA incentives thus school districts proactively problem solve to decrease the number of future vacancies throughout the school year. Berrigan and Schwartz (2000) concluded that students enrolled in a TA could clarify their career

and academic plans early for an increased number of individuals in the teacher pipelines for school districts. The purpose of TA is to increase the number of teachers in the workforce meanwhile addressing the need to diversify the population of teachers. Purposeful recruitment and retention efforts are a way to enhance diversity in TA programs and the pool of teacher candidates. TAs are means of integrating future teacher candidates with individuals of color and Whites in teacher education programs (Rogers-Ard et al., 2019). Diversification efforts have commenced to match precollegiate implementation of TA programs with an emphasis on students of color, such as Nueva Generación, and recruit teachers of color, such as Hispanic men, into education through exposure to the field at an early age (Skinner, 2010). On the other hand, TA programs such as Pathway2Teaching increase the number of Black students to join the education field through developing skills to become qualified teachers and successfully graduate from college (Viesca et al., 2013).

Carver-Thomas and Darling-Hammond (2019) suggested that school districts shift their recruitment practices to include teacher attrition to strengthen the teacher pipeline. School districts across the United States have studied teacher attrition to solve current problems and retain teachers (Sutcher et al., 2019). Common reasons for teacher attrition include the desire to obtain a better job and overall dissatisfaction with the profession (Ingersoll et al., 2019). For example, teachers may leave the field because they feel dissatisfied with administration and testing, recurring student discipline problems, a lack of autonomy, poor working conditions, classroom intrusions, low salaries, large class sizes, and inconsistent teaching assignments (Ingersoll et al., 2019; Sutcher et al., 2019).

School district recruiters have examined their districts' efforts to improve teaching conditions. For example, recruiters highlight reduced teacher workload reduction, increased

administrative support, more collegial opportunities, and additional teacher input in the decision-making process (Sutcher et al., 2019). The TA program allows instructional recruiters to promote their school districts and utilize best practices. In Florida, the TA is a prototype for exploring how to recruit the next generation of teachers and foster capacity to individuals interested in the profession.

School districts must reflect on the current practices of recruiting and retaining TA participants to identify how to increase the teacher pipeline. Student of color are not encouraged or motivated to become teachers. Students of color reflect on their experience with the limited number of teachers who understood their experience in school (Bianco et al., 2011). The TA program, in conjunction with a variety of GYO initiative, actively recruit individuals of color into the classroom. GYO provides school districts with the opportunity to recruit individuals of color and build their capacity. GYO programs, such as TAs, are a way to foster students' college and career readiness skills to increase their likelihood of graduating from teacher education programs. Ultimately, TA is a way to open the teacher pipeline for school districts (Berrigan & Schwartz, 2000). This study is an exploration of the recruitment and retention efforts between school districts and a local high school TA.

Problem Statement

Human resources (HR) departments provide resources for recruiting and retaining teachers. School districts should utilize the best recruitment and retention practices to reduce the number of teacher vacancies. In the 2011–2012 school year, 68% of all U.S. school districts had at least one teacher vacancy (Carothers et al., 2019). HR professionals strive to implement the best recruitment and retention practices by relationship-building with district recruiters, supporting teacher growth, and providing applicants with instructional support before they

become teachers (Lee, 2005). Additional retention efforts include loan forgiveness programs, competitive compensation, and improved working conditions (McHenry-Sorber & Campbell, 2019). School districts in metropolitan areas have implemented various strategies to close the teacher recruitment and retention gap; however, the challenge of recruiting and retaining teachers, particularly teachers of color, remains. Thus, a need exists for comprehensive efforts for the implementation of precollegiate programs to address the lack of diversity in education.

Recruitment and retention efforts focus on the early stages of career decision-making to generate further interest in teaching as a career. HR professionals work closely with TA programs to recruit and retain students and create pipelines of teacher candidates who will return to their local school districts. The GYO model is a means of developing a pool of potential teachers of paraprofessionals, after-school staff, community members, and high school students (Martin & Mulvihill, 2016). GYO programs provide incentives for future teacher candidates and improved recruitment and retention efforts within local districts (Rogers-Ard et al., 2019).

Scholars have explored recruitment and retention issues, predominantly for teachers of color (Walker et al., 2019). In 2011–2012, 82% of teachers were White, while 7% were Black and 8% were Hispanic (Goings, Walker, & Cotignola-Pickens, 2018). School districts have begun looking to attract, support, and prepare teachers of color to impact underrepresented student learning outcomes (Goings, Walker, & Cotignola-Pickens, 2018; Irizarry, 2011; Smith-Kondo & Bracho, 2019b; Turner et al., 2017). Providing a support system for teachers of color is a way to reduce the vacancies in school districts to meet the needs of the increasing population of school-aged children.

The U.S. population continues to diversify as observed by the number and racial identity of students in a K-12 classroom. The demand for teachers, especially teachers of color, remains

because of uneven recruitment and retention efforts (Goings, Walker, & Cotignola-Pickens, 2018). Teacher shortages continue because of retirement or voluntarily leaving the profession. School districts struggle to identify teachers from racial, ethnic, and language minority groups (Burbank et al., 2005). As a result, district leaders and HR professionals have begun to reflect on the recruitment practices for teachers of color to mirror student demographics.

According to the literature, precollegiate TA programs address the national teacher shortages through proactive recruitment and close the widening gap between the number of students and teachers of color in school districts. GYO has two programs for recruiting and retaining future teachers: a precollegiate program and a specialized community program (Coffey et al., 2019). Precollegiate GYO programs focus on recruiting secondary students into the profession through CTE coursework in which students learn about the teaching profession, instructional strategies, and culturally relevant teaching in classrooms or internships.

A specialized GYO community program focuses on the recruitment of community members into the field of education. The community program provides coursework for teacher certification requirements and network opportunities so that preservice teachers have the tools they need to instruct all students in the classroom (Coffey et al., 2019). Furthermore, research on why participants join GYO programs, primarily TAs, has provided insight into students' motivation to stay in their communities. The TA program is a means of engaging educators and fostering interest in the teaching profession. As such, the TA program is a way to nurture students' perceptions and motivations to recruit them into the profession while providing the structure and resources they need to succeed. School districts' implementation of the TA program could contribute to closing the demographic gap between the student and teacher population and increasing the numbers of teachers of color.

Purpose of the Study

The purpose of this mixed methods study examines the relationship between the motivations and perceptions of secondary students interested in the teaching profession. Understanding students' motivations and perceptions could provide educational leaders with the information they need to improve motivation and enhance the teacher pipeline. This mixed methods study addresses the recruitment and retention efforts for fostering student participation in a precollegiate TA. The varied implementation strategies throughout metropolitan school districts indicates the need for comprehensive student recruitment and retention strategies. This mixed methods study addresses the intersection of the race and gender of the secondary students in a precollegiate TA interested in the teaching profession. Strategic recruitment and retention efforts that include students' motivations and perceptions could be the means of fulfilling TAs' purpose of fostering teachers of color at an early age.

Recruitment and retention efforts, combined with fostering humanistic commitment, could be a way to increase the number of students becoming educators. Humanistic commitment is defined as the dedication to make a difference in the lives of students (Ingersoll et al., 2019). The TA program is a means of harnessing the motivations and perceptions of students entering education. TA educators and HR professionals collaborate to increase recruitment and retention of students participating in the program. Professionals foster the student's motivation to join the teaching profession by introducing students at early age into teacher preparation meanwhile influencing their perception with real experience. Various recruitments and retention strategies provide the opportunity for collaboration with school districts' HR departments and local TA programs to increase enrollment in the CTE pathway. Students in TAs can join the teaching profession at an early age through coursework and internship experiences.

Creating awareness of how to recruit and retain members into education requires researching TA participants' motivations and perceptions. School districts should utilize the best retention and recruitment practices for their TA programs. For example, districts could use media strategies to highlight the success stories of TA graduates who have joined the education profession and received recognition for outstanding service (Klimek, 2019) defined the parameters for successfully retaining students in a CTE program: supporting students, exploring the profession, learning about the profession, and reducing pathway changes. Finally, research on how to recruit teachers of color by focusing on the role of race and gender in addition on how to recruit and retain precollegiate TA students by utilizing their perceptions and motivations.

Significance of the Study

The findings of this mixed methods study could have an impact on the recruitment and retention strategies for secondary students interested in the teaching profession. Also, this study's findings could provide information on how to target students of color by exploring their motivations to join and perceptions of the teaching profession. HR professionals use recruitment and retention strategies to increase teacher preparation program enrollment and grow the teacher pipeline (McHenry-Sorber & Campbell, 2019). Instructional recruiters can utilize the best practices for their districts by understanding their communities and individuals. HR professionals can proactively recruit future teacher candidates, particularly students of color, through a GYO program for secondary students. A collaboration between the HR department and the GYO programs involving the best recruitment and retention practices can foster positive relationships, culture, support, and teacher profession expectations. In addition to strategies, GYO programs should focus on students' motivations and perceptions of joining the profession to address the humanistic commitment to make a difference in their communities.

Building capacity in teacher candidates early in their careers could result in a larger pool of highly qualified teachers who return to their local school districts with cultural competencies (McHenry-Sorber & Campbell, 2019). The purpose of a TA program is to increase the number of applicants in districts with many teacher vacancies. Beginning teachers often fill the vacancies in rural schools. School districts can take a proactive stance by building the capacity of the preservice teachers who have completed teacher education programs and begun serving students in the community.

The objective of TAs is to prepare highly qualified teachers at an early age. The TA encourages essential college preparedness skills, such as helping with applying to and enrolling in college and paying tuition. Students who gain college preparedness skills may feel more prepared to graduate and return to their local school districts (Carothers et al., 2019). A desired result of the TA is increased numbers of students of color joining postsecondary institutions as education majors. Preparing students for college enables them to return to their school districts as highly qualified teachers. Therefore, TA programs in secondary schools can increase the number of individuals in the teacher pipeline and close the gap of vacancies in school districts.

Definitions of Terms

The following are the definitions of the proposed study's key terms.

Best practices: Teaching activities focused on the importance of activating expected outcomes (Collins & O'Brien, 2003).

Building capacity: The process of preparing teachers to have the instructional strategies and community understanding needed to ensure student learning.

Coursework completer: A student who has completed all the required coursework within a CTE pathway provided at the student's school.

Human resources best practices: Universal HR principles that provide HR departments, including those at school districts, with ways to optimize business performance in recruitment and retention (Miller et al., 2019).

Metropolitan area: An area with a population nucleus of more than 2.5 million individuals, a principal city, and adjunct communities (U.S. Census Bureau, 2013).

Micropolitan area: An area with at least one cluster with at least 10,000 but less than 50,000 in population (U.S. Census Bureau, 2013).

Motivation: The force that causes students to want to learn (Collins & O'Brien, 2003).

Perception: The information used to acquaint oneself of various elements of the environment and self through sight, sound, taste, smell, or touch (Collins & O'Brien, 2003).

Preservice teacher programs: Secondary GYO programs for exposing students to the teaching profession through CTE coursework.

Race: Categorizing a group of individuals by physical and inherited characteristics such as skin color and hair texture (Collins & O'Brien, 2003).

Recruitment: The process used to ensure that a school district has qualified candidates for a position vacant due to teacher attrition (Rebore, 2015).

Retention: Method of keeping educators engaged or employed in the education field (Rebore, 2015).

Student/teacher of color: Term for a student or teacher identifiable because of physical characteristics, including skin color. People of color often face discrimination in various forms. Historically, people of color were segregated or did not receive equitable learning opportunities at educational institutions (Collins & O'Brien, 2003). For this study, student and teacher who identify as Black, Hispanic, Asian, Pacific Islander, Other, and Multi-Racial.

Successful outcomes: “Statements of the desired outcome(s) of the education activity, naming what learners can expect to gain or be able to do as a result of the program or activity” (Collins & O’Brien, 2003, p. 202).

Teacher education programs: Higher education teacher preparation programs that prepare students for the profession aligned to the standards by the accreditation and state department of education.

Conceptual Framework

The conceptual framework presents the components that influence teacher education programs. The lens of professional standards-based expectations of teacher preparation programs approach was used to understand how the TA prepares students for the education field. The TA has the same expectation for professionalism as teacher candidate programs; therefore, it includes the Florida principles of teaching standards in the four levels of CTE coursework and internship opportunities.

As a precollegiate program, the TA provides students with the knowledge they need to succeed in teacher education programs and during their expected years of service within their home districts (Wronowski, 2018). As a result, teacher education programs focus on the structure and systems for preparing coursework. Professional standards, such as the Council for the Accreditation of Education Program (CAEP), and the system of curriculum-based instruction, are components of the guided TA coursework. The accreditation standards and coursework provide support for student learning and collegiate teacher preparation programs. Teacher education programs present the teacher standards for instructional and professional behavior required during years of service. Figure 1 shows the foundational standards of teacher education programs and the expected outcomes for the profession.

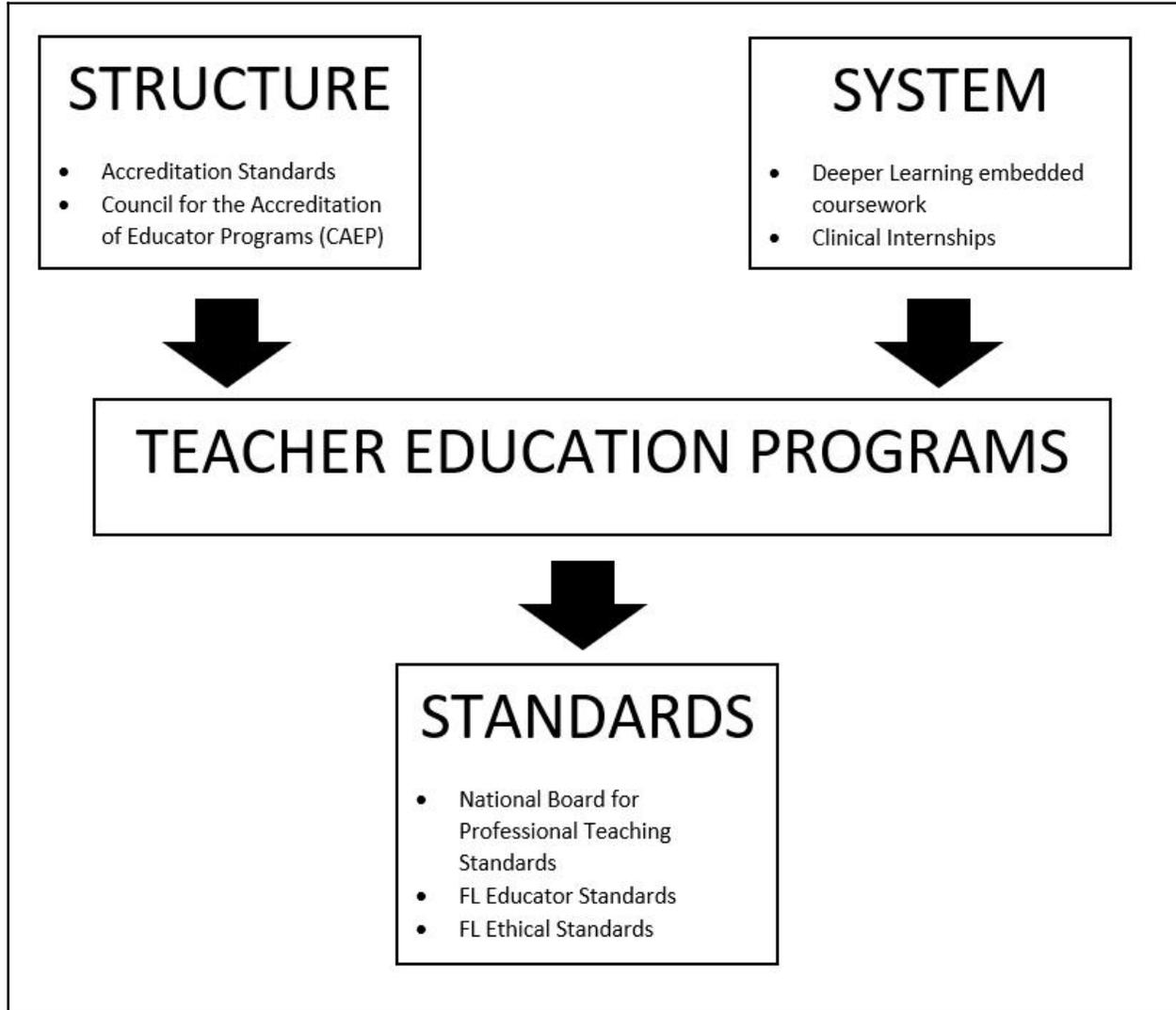


Figure 1

Teacher Education Programs as Standards for Implementation

Figure 1 shows the standards of teacher education programs and the structures and systems for preparing students for the teaching profession. An accreditation governing body outlines the desired outcomes of teacher education programs and regulates the structure of TA programs. Furthermore, the system, regarding the standards of implementation, provides

guidance for the teacher education program by including collegiate coursework and clinical experiences. Both structure and system contribute to the outcomes of TA programs and teacher candidates' foundational standards. The standards in Figure 1 are the professional and ethical components of the teaching profession. Each standard presents the expected professional behaviors and instructional strategies to implement in the classroom to enhance student learning. Figure 1 is a visual representation of the factors of teacher education programs that teacher candidates must practice.

Structural Components

Postsecondary institutions provide varied education curricula and pathways. Teacher education programs contribute to recruiting, preparing, and retaining a future teacher workforce by presenting students with instructional practices, clinical internships, and community-building (Floden et al., 2020). Unfortunately, the completion of teacher education programs dropped from 85% in 2005 to 79% in 2008 (Freeman et al., 2014). As a result, fewer preservice teachers have content knowledge of how to engage students and advocate for student equity and social justice (Floden et al., 2020). Teacher education programs require structural components for accreditation through a governing body.

Teacher education programs have professional standards and specialization requirements for accreditation from an approved institution, thus raising the standard for teacher preparation programs through guided evaluations by the state and federal government (Fla. Stat §§ 6A-4.003). An accreditation governing body for teacher education programs is the Council for the Accreditation of Educator Programs (CAEP). All CAEP-accredited institutions provide for certification purposes the annual reports required in the policy of the accrediting body (CAEP, 2019a). The annual reviews include a site visit for evidence of the self-study report; interviews

with administrators, faculty members, and staff members; and other investigations (CAEP, 2019a, 2020a).

Furthermore, CAEP accreditation requires that self-study reports contain evidence from preservice teachers' portfolios, such as lesson plans and student work samples (CAEP, 2020a). Additional data are collected and reported on the postsecondary institution's website for further compliance and to present teacher candidate performance and student completion rates. The CAEP accreditation council decides whether to grant, revoke, or deny accreditation to teacher education programs (CAEP, 2020b). The structural components of the CAEP are the standards for higher education institutions required to maintain accreditation.

Teacher education programs are means of fostering growth in the content area knowledge related to subject area certification (Fla. Stat § 6A-4.003) and state standards. Teachers' in-depth understanding of content matter correlates with the proper use of core standards for effective teaching. The content area's instructional level for the use of higher-order thinking mirrors the knowledge of preservice teacher candidates. As a result, educators who demonstrate both content knowledge and instructional capacities receive classification as highly qualified teachers (Cavalluzzo et al., 2014). Highly qualified teachers must address curriculum rigor required by state standards to improve student achievement and maintain student-centered classrooms (Fla. Stat §§ 6A-5.065; Freeman et al., 2014). Teacher candidates' programs prepare student with the need to meet students' academic needs. Therefore, a teacher education program's structural component includes the competencies needed for student learning. An educator must target student learning within the classroom to enhance student learning. A kindergarten to 12th grade (K-12) teacher's instructional capacity to achieve student learning goals in the classroom

indicates the teacher's impact (CAEP, 2013). Teachers must use instructional strategies to address student learning outcomes and diverse populations.

The CAEP provides bachelor's, master's, and doctoral programs with requirements outlined under the governing policy (CAEP, 2019a). Teachers progressing through their careers can advance into additional positions with the advanced degrees presented by the Florida Department of Education (FLDOE). For example, some Florida certifications require master's degrees or higher. CAEP requires a minimum of a bachelor's degree or higher completed for appropriate curriculum and content knowledge exposure (Fla. Stat §§ 6A-4.003). Advanced degree coursework addresses the accreditation standards and knowledge required to effectively support students.

Teacher education programs offer clinical internships under the supervision of qualified educators (Fla. Stat §§ 6A-4.003), who build partnerships with and provide strong clinical experiences to preservice teachers (CAEP, 2013). Clinical internships incorporate highly qualified field experiences via feedback and support (Fla. Stat. §§ 6A-5.065) from school districts and mentors. Preservice teachers in clinical internships adapt instructional strategies to enhance and align instruction with state-adopted standards through age-appropriate lessons. Additionally, preservice teachers learn the importance of school facilities, positive culture and environment, and the need to target student learning outcomes (Cavalluzzo et al., 2014). Therefore, Florida educator principles require educators to set high expectations for all students, have in-depth knowledge of content, and exemplify the profession (Fla. Stat. §§ 6A-5.065).

Postsecondary educators measure impact through outlined criteria to determine effectiveness. Teacher educators conduct retention and employment milestone surveys (CAEP, 2013) to determine the rate that students stay in education. Likewise, they administer a

completion survey so that students can reflect on their experiences, strengths, and growth. Per the CAEP accreditation policy, postsecondary institutions present the quantitative data of graduation rates, the students who become licensed teachers, and student loan default rates on their websites.

Systematic Components

The systematic components of teacher education programs include coursework and clinical requirements. The culmination of knowledge consists of candidates' ability to apply knowledge in diverse environments. Thus, teacher educators use the five principles of deeper learning as the foundation for clinical internships and coursework (Darling-Hammond & Oakes, 2019). The first principle is "learning that is developmentally grounded and personalized" (Darling-Hammond & Oakes, 2019, p. 13). Learning includes the content and pedagogical knowledge aligned with the standards for expected learning goals or outcomes (Floden et al., 2020). Teachers outline learning outcomes to deliver content to a diverse student body with culturally responsive pedagogical strategies. Teacher education programs provide candidates, especially candidates of color, with continuous improvement through coursework to ensure quality, recruitment, and selectivity (CAEP, 2013, 2019b).

The second principle is "learning that is contextualized" (Darling-Hammond & Oakes, 2019, p. 13). Preservice teachers acquire pedagogical knowledge through investigation into and reflection of video recordings and student work (Grossman & McDonald, 2008). Developing a theoretical concept presents preservice teachers with a model of expected student outcomes.

Additionally, the acquisition of pedagogical knowledge through enactment (Grossman & McDonald, 2008) requires students to reflect on instructional practices. For this reason, the third principle is "learning that is applied and transferred" (Darling-Hammond & Oakes, 2019, p. 13).

The coursework provides students with the foundation they need to apply content to the classroom. Clinical internships (Floden et al., 2020) enable preservice teachers to practice using their conceptual knowledge of learning to influence student outcomes. However, clinical internships are not sufficient to shape students' instructional practices (Floden et al., 2020); program educators must also combine content and pedagogical knowledge (CAEP, 2013, 2019b).

The fourth principle is “learning that occurs in productive communities of practice” (Darling-Hammond & Oakes, 2019, p. 14). Teacher educators instruct preservice teachers to collaborate with students and students' family members to support success (CAEP, 2013). Collaboration between educators and community members is a way to establish the support needed for student learning inside and outside the classroom. As a result, teacher educators teach, advise, and supervise students about professional education (CAEP, 2020b) and the standards and expectations for interacting with stakeholders. Teachers connect all stakeholders, provide support, and foster growth by continuously interacting with students, communities, new content, and instructional pedagogies (Floden et al., 2020).

The last principle of in-depth learning is “learning that is equitable and oriented to social justice” (Darling-Hammond & Oakes, 2019, p. 14). All students must feel safe, be able to express their feelings, learn to communicate and set boundaries, and grow socioemotionally and academically in their classrooms (Hamilton et al., 2019). Therefore, a welcoming classroom allows student learners to grow in an equitable and safe environment.

Equally important, teacher education programs must have diverse teacher candidates (CAEP, 2013) by recruiting secondary students of color. Teacher preparation programs reflect the district's needs by mirroring their local communities' demographics and needs (CAEP,

2019b). Postsecondary institutions implement recruitment strategies for increasing the number of people of color in the teacher pipeline.

Standards-Based Components

Teachers adhere to standards-based competencies for ethical and instructional matters. The FLDOE requires practicing teachers to follow the professional standards for ethical behavior and receive teacher certification. State policies vary based on teacher licensure, seniority, tenure, and pension (Floden et al., 2020). Therefore, the National Board for Professional Teaching Standards (NBPTS; 2000) has provided the gold standard for teacher certification for improved student learning. NBPTS is a professional organization that provides certification for accomplished educators (Cavalluzzo et al., 2014), dictating requirements and instructional strategies for teaching all students. The NBPTS mission is to maintain rigorous teaching standards, provide a national certified teacher standard, and advocate for educational reforms (NBPTS, 2000, 2016). The five core standards indicate what teachers should know and do (NBPTS, 2000) to ensure student achievement; they are: commit to students and learning, know the content, take responsibility for student learning, think about practice and learn from experience, and be members of a learning community (Cavalluzzo et al., 2014; NBPTS, 2000, 2016).

The first standard requires teachers to commit to student learning by recognizing students' differences and adjusting practice accordingly (NBPTS, 2016). Teachers should apply their knowledge of student learning to enhance the learning of all students in various settings (NBPTS, 2000, 2016). The standards indicate that teachers must have instructional strategies for diverse classrooms, drawing on human development, subject matter, instruction, and knowledge

of student learning to foster student achievement (NBPTS, 2000). Therefore, teachers must have the background knowledge needed to meet all students' learning needs (NBPTS, 2016).

The second NBPTS (2016) standard addresses teachers' mastery of content knowledge, in-depth subject area knowledge, and real-world application. Teachers should use their content knowledge to develop a multidisciplinary curriculum and create, organize, and connect subjects for practical application. It is also necessary that teachers understand Common Core standards to enhance student learning outcomes (CAEP, 2013) and facilitate student learning within their classrooms (NBPTS, 2000). Teachers support learning to ensure student engagement (NBPTS, 2016) and content acquisition. Teachers must assess students' progress and provide feedback for growth and content retention, which is a foundational strategy.

Another professional teaching standard is that teachers reflect on their teaching practices. The professional standards indicate that teachers must commit to ensuring that all students can learn (NBPTS, 2000). Thus, teachers must improve their instructional practices to teach students, regardless of their background or prior knowledge.

School and district social relations, material resources, and conditions have an influence on teachers' abilities to provide positive learning environments (Floden et al., 2020). Stakeholders often collaborate with teachers to support students and the learning process (NBPTS, 2016). A need exists to establish a learning community for community members and teachers to collaborate to foster student achievement. Various members of the learning community can build capacity to promote the progress and development of teachers and students (NBPTS, 2000). Community, faculty, and staff members must communicate and understand community expectations. Education professionals should also share expected student outcomes and potential needs to ensure student achievement.

NBPTS dictate requirements across the United States. However, states also have teaching and ethical standards and expectations for educators. In Florida, teacher standards are the means used to maximize resources and improve teaching practices and student outcomes (Fla. Stat. §§ 6A-5.071). Educators must analyze, prioritize, and plan for continuous improvement. For example, teachers have used research- and evidence-based learning designs in their classrooms to improve their practices and foster student learning. Teachers can employ strategies such as active engagement, application, assessment, reflection, feedback, and ongoing support.

Florida teachers' primary concern is the student (Fla. Stat. §§ 6B-1.006). Ethical standards for teaching require educators to act with their best professional judgment and integrity, including while collaborating with stakeholders. Teachers must also foster respect and confidence. Additionally, Florida teachers must follow policies and rules for the safety of the profession and faculty members, staff members, and students.

The standards provide students with protection from harmful conditions (Fla. Stat. §§ 6B-1.006). Students cannot learn in an environment with harassment or discrimination. The expectation is that educators must not violate students' legal rights. Professionals from the Education Practices Commission may impose probation, fines, or restrict the profession of teachers who violate ethical or student protection standards. Educators must follow the FLDOE standards of conduct, the violations of which could result in disciplinary action.

Figure 1 shows the factors that influence teacher education programs. Teacher education programs dictate the professional standards and actions required of practicing teachers. Ethical and professional standards indicate the daily expectations for teachers' behaviors and practices; therefore, they also influence student outcomes. Without teacher education programs, educators might not learn about professional standards, which could cause a disconnect with professional

norms. Thus, teacher education programs have a framework for incorporating a system and structure within higher education to prepare teacher candidates. Figure 1 shows the systems of the accrediting body used to maintain the standards of teacher preparation programs.

Teacher education programs provide theoretical and practical knowledge with instructional coursework and clinical experiences so preservice teachers can increase student learning. The system and structure of teacher education programs influence teacher candidates' standards. These components also affect teacher candidates' experiences and readiness to join the profession and impact student achievement.

Research Questions

This mixed methods study's guiding research questions focused on students' motivation and perception of the teaching profession for improved recruitment and retention strategies for a TA program. The research questions are:

1. What does the FIT-Choice scale show about the motivations and perceptions of the secondary students in metropolitan areas interested in the teaching profession?
2. Is there a relationship between demographic characteristics (i.e., race and gender) in the motivations and perceptions of the teaching profession of precollegiate TA students in metropolitan areas?

H2₀: There is no significant difference between demographic characteristics among secondary students interested in the teaching profession and participating in a precollegiate TA in metropolitan areas.

H2_a: There is a significant difference between the demographic characteristics of secondary students interested in the teaching profession and participating in a precollegiate TA in metropolitan areas.

3. What motivational and perceptual factors affect secondary students' recruitment and retention efforts participating in a precollegiate TA in metropolitan areas? What implications do these efforts have for enhancing overall participation in the teaching profession and increasing the participation of students of color?

Delimitations

This mixed method study's delimitations included three Florida school districts (District A, District B, and District C) with the TA as a GYO program. The study focused on the recruitment and retention strategies used by TA educators and school district HR professionals. The school districts' instructional recruiters communicate in a monthly meeting; however, each district has its own recruitment and retention strategy based on allocated resources. Educational leaders have expanded the implementation of the TA to include multiple schools in a singular district. Therefore, this study focused on schools with more than 3 years of program implementation or high numbers of students enrolled in TA.

Limitations

The number of years of TA program implementation was a limitation in this study. Nationally, the TA has curricula and handbooks for guiding the district-level implementation of the program. In Florida, the longest TA program implementation has been 8 years with the school district, local state college provider, and local 4-year institution with a teacher education program. Limited research has addressed the implementation or outcomes of teacher recruitment, without examination incorporating one full cycle, from high school to college graduation, in the three school districts with the TA program.

The final limitation was the different incentives provided by the counties after college graduation. Each school district offers incentives for recruiting student teachers. Florida school

districts may provide guaranteed interviews, automatic placement, and tuition waivers for the students who have completed the TA and graduated from teacher education programs.

Assumptions

This study had the following assumptions: (a) the students answered the surveys truthfully, (b) the students elected to join the TA, (c) the students intend to enter the teaching profession, and (d) the students intend to return to their local school district to teach.

The participating students completed the Factors Influencing Teaching Choice Survey (FIT-Choice) of their motivations and perceptions about the teaching profession. Therefore, an assumption is that the students answered the survey truthfully based on their experiences with, knowledge of, and motivations for entering the education profession. Another assumption is that the students elected to join the TA program and did not enroll because of filled electives or the lack of other available classes. As such, the students enrolled in the TA program intend to join the teaching profession after completing their teacher education programs. Also assumed is that students will return to their local school districts to teach using the knowledge they gained from years of experience in the district and postsecondary coursework.

Organization of the Study

The study has five chapters. Chapter One presented the study's background, problem statement, purpose statement, and significance. The chapter also included the study's definitions of terms, theoretical framework, research questions, limitations, delimitations, and assumptions. Chapter Two contains a literature review on teacher recruitment and retention; GYO, TA, and CTE program recruitment and retention; and motivation. Chapter Three presents the study's methodology, including the population, sampling, instrumentation, data collection, and data analysis. Chapter Four will include the study's findings and conclusions based on the research

questions, with Chapter Five subsequently presenting the findings, implications of the findings, recommendations for further research, and conclusions.

Summary of Chapter One

School districts across the United States, including those in Florida, are experiencing teacher shortages. As a result, there is a need to allocate resources to recruiting and retaining teachers to fill numerous vacancies across Florida (Lee, 2005). Florida school districts have begun collaborating with local colleges and universities to establish TA programs for high school students. For example, leaders from School Districts A, B, and C implemented TA programs and cooperated with district, state, college, and teacher education program leaders to implement the best practices for recruiting and retaining future teachers. District HR professionals have also partnered with local TA programs to implement effective recruitment and retention strategies. TA programs provide guidance to high school students considering the teaching profession. Students enrolled in TA programs receive encouragement and support for increased motivation to pursue careers as educators. A need also exists to understand how motivation is a factor for students of color versus non-students of color to increase teacher diversity.

The best recruitment and retention strategies indicate the best practices HR professionals can use to foster students' motivation to join the TA program. TA and GYO are means of increasing the pipeline of highly qualified teachers through recruitment and retention efforts for high school students. The goal of this study is to inform HR professionals and TA educators how to use students' perceptions and motivations to implement recruitment and retention strategies to increase participation. A need exists to increase the number of students entering postsecondary institutions as teacher candidates to grow the teacher pipeline in local school districts.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter presents a review of the literature related to the GYO programs and best practices for teacher recruitment and retention in higher education and the K–12 context. The chapter offers a holistic view of teacher education programs, a macrolevel view of GYO programs, and a microlevel view of CTE. Teacher education programs and a holistic view will enable a more in-depth analysis of the recruitment and retention programs in higher education and the K–12 context. The chapter also addresses district leaders’ diversification efforts to influence individuals of color. There is a discussion GYO programs as macrolevel initiatives, an overview of GYO programs, and practical applications across the United States. Finally, Chapter Three presents CTE programs with a microlevel view for further analysis of high school recruitment and retention and student motivation.

Teacher Education Program: A Holistic View

This section elaborates on the recruitment and retention efforts in the K–12 and higher education context in relation to the teaching profession.

Recruitment and Retention Within the Higher Education Context

Strategic Approaches

In the 1970s, educational leaders studied the increasing teacher shortage and the increasing U.S. population, as universities could not produce the number of teachers needed to fill school district vacancies (Reitman & Karge, 2019; Wronowski, 2018). Furthermore, National Educational Association professionals reported a gap of more than two million teachers in the

upcoming decade (Lee, 2005). U.S. public schools lack purposeful and strategic recruitment and retention efforts, particularly for teachers of color who match student demographics (Goings, Walker, & Cotignola-Pickens, 2018). Many teachers leave the field to pursue job satisfaction (Ingersoll et al., 2019). As a result, all U.S. school districts have reported a shortage of licensed teachers (Jameson et al., 2019).

Holistically, postsecondary institutions have various recruitment strategies for preservice teacher programs. Recruitment occurs as early as the first year of high school (Fletcher et al., 2019; Ginsberg et al., 2017; Wronowski, 2018). Precollegiate teacher education programs are an initial means of recruitment, often advertising in secondary institutions to generate interest. University or college faculty advisors and recruiters follow up with students, distribute fliers, and show video testimonials on their school websites (Hubbard et al., 2015). Recruiters may seek candidates with high SAT or ACT scores or alumni referrals or who have shown interest in preservice teaching programs (Goodlow et al., 2020; Wronowski, 2018). Relationships between recruiters and students enable further communication about joining the institution and program. Students continue to engage with recruiters throughout the school year, through information sessions on high school campuses during lunch periods, classroom visits, college fairs, and community information sessions. Recruiters invite students to on-campus tours or open houses to experience student life on campus therefore creating a familiarity that will influence their decision during enrollment. (Goe & Roth, 2019; Noonan & Bristol, 2020).

A different strategic approach consists of highlighting the benefits of joining teacher education programs, such as scholarships provided by private organizations and nonprofit organizations, grants, and loan forgiveness (Goodlow et al., 2020). For example, a college or university may provide a \$3,000 teaching grant to the students who accept enrollment offers and

commit to teach at the local school district (Miller et al., 2019). Teacher education programs might also provide college mentors, in-service teacher mentors, and financial support (Fisher-Ari et al., 2018; Hubbard et al., 2015; Turner et al., 2017). Postsecondary institutions may also provide technological incentives to students in teacher education programs, such as laptops or iPads (Miller et al., 2019).

Postsecondary institutions also offer summer education programs to recruit students. These institutions can contribute to students' motivation to join the field by providing a caring school environment during summer tutoring programs for interested students (Bergmark et al., 2018). Summer teaching programs may also cause students to consider the possibility of joining the teaching profession. One participant in Hubbard et al.'s (2015) study noted, "I already knew I did not want to teach. But having such a great group of kids has confused me." (p. 72).

Exposure to the education field in a formal setting challenges students' preconceived notion of a teacher and schools (Farkas et al., 2000; Fisher-Ari et al., 2018; Weber, 2017). Postsecondary institutions can promote their programs during or after summer education program by highlighting benefits, such as dual-enrollment credits in high school, fast-track programs (3-year programs), or the transition from a 2-year (community college/state college) to a 4-year institution (Carothers et al., 2019; Ginsberg et al., 2017).

Teacher education programs have additional strategies for retaining students to complete the education track. Teacher candidates at postsecondary institutions can learn how to teach content, collaborate with mentors, participate in professional learning communities, create a culture of collaboration, and develop a support network outside of campus (Hubbard et al., 2015). Teacher candidates who progress through the coursework are exposed to content and learn to model classroom expectations and collaborate or interact with peers. Mentors contribute to

student retention by providing additional coursework assistance or sharing their personal experiences with theoretical application in K–12 classrooms. Teachers must learn how to build a culture of collaboration with all stakeholders to understand the education profession and network for continuous support.

Teacher candidates may feel less prepared and less confident teaching, especially in urban schools (Siwatu, 2011). First-year teachers often feel unprepared due to limited support and a lack of instructional knowledge on teaching K–12 students. Thus, a need exists to adjust teacher education programs to provide preservice teachers with a curricular understanding of the teaching profession. Teacher education programs should focus on providing students with coursework, clinical experiences, and mentoring (Ingersoll, 2004; Whipp & Geronime, 2017). Coursework correlates to the requirements of the Department of Education. Teacher candidates must gain experience with various schools and student populations during their clinical experiences to learn to apply multiple teaching strategies (Hayden & Gratteau-Zinnel, 2019; Hubbard et al., 2015; Irizarry, 2011; Whipp & Geronime, 2017). Students should refer back to their coursework during clinical internships so that they can modify their instructional practices to meet all diverse learners' needs.

Mentorship is a tool for retaining teaching candidates. Mentors engage candidates through one-on-one meetings and provide them with safe spaces to talk about their experiences or learn new instructional strategies (Goe & Roth, 2019; Hayden & Gratteau-Zinnel, 2019). Quality mentorship programs enable teacher candidates to build strong relationships with faculty mentors with similar personalities and content (Fisher-Ari et al., 2018; Goe & Roth, 2019; Hubbard et al., 2015; Miller et al., 2019). Mentors provide meaningful feedback and training to build preservice teachers (Fisher-Ari et al., 2018). Additionally, students are exposed to the

teachers who look like them and share experiences that are unique between both mentor and mentee. Brockenbrough (2012) noted the experience of a Black male adult mentoring a Black male youth created a positive male role model in the life of the youth thus increasing the likelihood of academic success such as high school graduation.

Another student retention strategy is to provide workshops for certification tests. Certification tests are means of reducing test anxiety and improving study skills and test-taking abilities (Ginsberg et al., 2017; Goe & Roth, 2019). Book clubs are a tool for discussing diversity in open forums (Weber, 2017). Discussion provides diverse teacher candidates with the opportunity to provide background knowledge of their experiences to enhance their learning and understanding.

Students who participate in nonacademic college life or activities have high retention rates in preservice teacher programs (Irizarry, 2011). Building a sense of community and support system for students within and beyond the program is a way to increase retention. Cohort models are means of developing a sense of community inside and outside of academics (Goe & Roth, 2019). Preservice teachers must have supportive and connected networks during their postsecondary education and early teaching years (Fisher-Ari et al., 2018; Ingersoll, 2004; Irizarry, 2011), as situations may occur when teachers must call upon peers or mentors to solve or verbalize their problems.

Therefore, the connection of mentor-mentee relationship creates a perception of the teaching profession. If a student in a teacher education program feels supported and satisfied with their preparation of the teaching profession, the student is more likely to stay and join the profession (Hultman & Eadens, 2020). Additionally, the practical application of a teacher education student influences the perception of a teacher candidate. As students gain experience

in conjunction with mentoring and feedback, the results outline a greater form of perception of themselves as educators and the education profession as studied by Sales et al. (2014).

Diversification Efforts

Postsecondary institutions have begun focusing on recruiting teachers of color into their preservice teacher programs (Goings, Walker, & Cotignola-Pickens, 2018). Higher education programs seek to produce teachers of color to mirror the diversity of students in K–12 classrooms. Preservice teacher candidates of color have a 50% postsecondary dropout rate (Ginsberg et al., 2017). As a result, institutional leaders have begun actively recruiting students of color into the teaching profession from the small population of teachers of color. University faculty members often speak to diverse classrooms about attending colleges (Goodlow et al., 2020). Active recruitment strategies include marketing the profession while providing students with exposure for increased engagement. Additionally, institution leaders may connect with various businesses or nonprofits to market to diverse student populations. Collaboration with multiple stakeholders is a way to market teacher education programs to students in a variety of mediums.

Minority-serving institutions provide summer, tutoring, and mentorship programs to prepare students for postsecondary coursework (Carothers et al., 2019; Ginsberg et al., 2017; Goe & Roth, 2019). Students in such programs receive exposure to the college environment and build their college and career readiness skills. The programs provide information about financial aid options, educational coursework, scholarships, campus tours, and waived standardized test requirements to increase the pool of diverse students in higher education institutions (Ginsberg et al., 2017; Goe & Roth, 2019; Irizarry, 2011; Turner et al., 2017). Higher institutions build high school students' college readiness skills to improve their chances to finish their programs and

graduate with college degrees. In a study conducted by Hobson, Harris, Buckner-Manley, and Smith (2012), concluded the biggest obstacles for pre-service teachers are poor mentors or role models, ineffective time management skills, and lack of classroom experience. Therefore, building a pre-service teacher's capacity with the necessary skills and experience at an early age in their collegiate career creates a successful classroom teacher, especially in minority-serving institution.

Financial assistance is a way to attract candidates with personal, financial, and familial burdens that would prevent their participation in teacher preparation coursework (Fisher-Ari et al., 2018; Ginsberg et al., 2017; Irizarry, 2011). Institutions often provide support, such as financial assistance, childcare, coursework advice for completion and certification, and test preparation for the teacher certification exam (Goe & Roth, 2019; Irizarry, 2011). With such assistance, students are more likely to complete the program and succeed.

Additional support provided for students of color includes inclusive environments focused on social justice (Smith-Kondo & Bracho, 2019a) to reduce discrimination and oppression (Irizarry, 2011); such environments can increase the retention of students of color in postsecondary institutions. Students of color, especially Latinx students, have similar experiences in their teacher education programs as in K–12 education (Irizarry, 2011). Pre-service teachers of color reflect on how to build an inclusive environment in their classrooms to create a supportive and positive experience.

Recruitment and Retention Within the K-12 Context

Strategic Approaches

Solving teacher shortages requires districts to modify their recruitment and retention practices. School districts must create recruitment and retention plans with strategic approaches

to fill vacancies. The first step in addressing the teacher shortage is understanding how to recruit aspiring teachers and why teachers leave the profession (Goings, Brandehoff, & Bianco, 2018). Teacher salary increases, recruitment fairs, and professional development and mentorship opportunities are the best practices for recruitment and retention (Burbank et al., 2005).

Districts struggle to recruit teachers in science, technology, engineering, mathematics, and special education (Cross, 2016). Therefore, a need exists for strategic approaches to address the subsequent impact in the K–12 context. Luft et al. (2011) argued that recruiting educators begins with creating a framework for teacher recruitment.

The monetary incentives for interested candidates include compensation, salary, and financial assistance with career changes (Fisher-Ari et al., 2018; Whipp & Geronime, 2017). School districts use financial incentives to attract individuals from a variety of fields by offering competitive compensation packages, including salary, retirement, sick days, and educators' insurance (Milanowski et al., 2009). Additionally, potential teachers have the opportunity for loan forgiveness as an incentive to join the teaching profession (Miller et al., 2019). The U.S. Department of Student Financial Aid provides forgiveness up to a certain amount after several years of service in low-income areas.

Advertising campaigns are means of promoting the teaching profession and enticing individuals to enlist as educators (Miller et al., 2019). School districts can advertise through media, such as the internet, newspapers, or television. Technology provides the opportunity to engage in various media and locations to recruit a broader population of individuals into the teaching profession. Districts' web presence includes websites, Facebook profiles, and Google AdWords, used to show vacancies or provide information to interested educators. A web presence enables school districts to promote recruiting events, workshops, or community job

fairs. Members of the community can learn about the field of education via virtual or physical engagement, including emailing or chatting with instructional recruiters.

Community job fairs enable school-based administrators to speak with interested educators and advertise their schools with promotional items (Miller et al., 2019). School leaders and recruiters engaging with applicants can develop a pool of teachers from the community, and applicants can refer to their prior experience when reapplying for positions within the same district. Another way to recruit individuals interested in teaching, word of mouth is a way to provide individuals with firsthand experiences about the profession, inspiring the participants to pursue more information.

Educators have begun promoting the teaching profession to career changers. Alternative certification pathways have shown how quickly candidates can transition to full certification (Whipp & Geronime, 2017), indicating that an undergraduate degree in education is not the only path to certification. Similarly, strengthening interstate recruitment efforts can increase the number of preservice teacher candidates. School districts should focus on out-of-state preservice and in-service teachers willing to relocate (Adams, 2015). Individuals frequently migrate to other states, indicating the need to offer resources and points of contact to answer certification and placement questions.

K–12 recruiting focuses on secondary students. One example is the TA program, which is a means of preparing and motivating high school students to join the teaching profession (Goe & Roth, 2019). TA program enrollees learn about the teaching profession and components, such as classwork, experience, and networking, similar to postsecondary teacher education program students.

Teacher retention requires addressing instructional burnout by focusing on school leadership, workplace relationship, and job design (Ansley et al., 2019). A positive environment is a way to foster teacher retention and reduce the number of teacher vacancies. Ronfeldt and McQueen (2017) found that the teachers who received induction support were less likely to leave. School leaders can provide teachers with continuous support by producing an environment of capacity-building with individualized approaches. Aspects of induction support include professional development in lesson planning, standards-based instruction, and instructional strategies (Reitman & Karge, 2019; Ronfeldt & McQueen, 2017).

Another aid is teacher mentors who sustain mentee relationships inside and outside the classroom (Reitman & Karge, 2019; Ronfeldt & McQueen, 2017). Teachers, especially those early in their careers, should receive mentoring and administrative support (Wronowski, 2018). Principals and assistant principals should conduct meetings to build relationships with faculty members to discuss the profession and provide coaching for instructional strategies and cultural awareness (Edwards-Moore, 2018). With such support, teachers learn various instructional practices and receive the resources to implement those practices in the classroom.

Ronfeldt and McQueen (2017) found that the administrators who provided collaboration time reduced migration from 27% to 16%. A cohort model is a way to help teachers reduce physical barriers and feel less isolated (Ginsberg et al., 2017; Goe & Roth, 2019; Hasselquist & Graves, 2020). Mediums such as Facebook enable teachers to connect outside of the classroom (Hasselquist & Graves, 2020). Teachers who receive additional support from their colleagues may have lower levels of stress due to a collaborative and positive work environment (Ansley et al., 2019; Hasselquist & Graves, 2020). Administrators can build constructive work environments through supportive communication, such as “Thank you” and “Good luck”

messages before events and testing (Miller et al., 2019). Fostering a culture of support and celebrating individual success are ways to establish welcoming environments and retain teachers.

Moreover, administrators must understand why teachers leave the profession. One way of doing so is to conduct exit surveys or conferences (Goings, Walker, & Cotignola-Pickens, 2018) to investigate why educators have decided to leave the profession. Work–life balance is a common concern mentioned by departing teachers (Hasselquist & Graves, 2020). Teachers have cited limited creativity in the classroom, the inability to set boundaries and change priorities, and a lack of networks as additional factors in their decisions to leave the profession. Such barriers prevent teachers from engaging in the profession fully.

School administrators have sought to combat negative attitudes about the profession by empowering teachers and building capacity through education program sponsorship. Education programs allow teachers to give or receive feedback and enable administrators to foster the motivation for a respectful culture through community-building (Hasselquist & Graves, 2020; Miller et al., 2019; Ronfeldt & McQueen, 2017; Turner et al., 2017). Providing professional development and support systems to teachers is a way to improve retention practices and foster further growth. Retention in K–12 education is the responsibility of a district’s HR department in conjunction with a school principal (Goings et al., 2021). Leaders must work to create supportive environments for educators from the start of the recruitment process to their years of active service as an educator.

A supportive environment and a positive experience influence the perception of education for educators in the K-12 classroom (Allred et al., 2016). Teachers who are reflective of their own experience create a positive perspective of the field of education. Student outcomes play a role in the perception of educator in conjunction with wage, environment, policy, and

working conditions (Karaca, 2011). If teachers feel they are providing a strong impact and dedication, therefore their perception of the field is positive and are likely to remain in the classroom (Sural et al., 2018). Therefore, the role of perception is vital to the recruitment and retention of teachers in the K-12 classroom.

Diversification Efforts

Public K–12 institution leaders must attract, support, and prepare teachers of color to impact underrepresented students (Goings, Walker, & Cotignola-Pickens, 2018; Irizarry, 2011; Smith-Kondo & Bracho, 2019b; Turner et al., 2017). Teacher demographics do not match the K–12 student population. Thus, marketing directly to teachers of color is a way to conduct targeted recruitment efforts to align the demographics of the teacher and student populations (Goodlow et al., 2020; Miller et al., 2019).

School districts have begun actively recruiting teachers of color to create a diverse workforce and support students of color in the classroom. Teachers of color are often recruited in schools to serve low-income urban students (Ingersoll et al., 2019). Teachers of color have similar experiences to students of color, with prior knowledge of the environment and a similar cultural heritage. Hence, teachers of color can relate to diverse students in ways that non-teachers of color cannot (Turner et al., 2017). Recruiting and retaining teachers of color requires providing them with support when they enter the field such as financial assistance (scholarship and bonuses), childcare (Ginsberg et al., 2017), classroom autonomy (Ingersoll et al., 2019), and culturally relevant professional development are utilized to combat the disparaging feelings of teachers (Carter-Andrews et al., 2019). School districts can improve retention rates by creating an inclusive environment to help teachers of color feel part of their communities.

School-based administrators must recruit teachers of color and correctly place them in a supportive environment to increase retention (Goings, Walker, & Cotignola-Pickens, 2018). Creating positive school conditions is a way to retain teachers of color. School-based leaders set the school's culture and climate by providing the resources needed for successful teaching. A supportive environment with preservice programs of induction, professional development for student discipline, and input in decision-making enable teachers of color to feel prepared to succeed (Carter-Andrews et al., 2019; Ingersoll et al., 2019).

Creating an inclusive community means purposeful representation of diverse stakeholders' during the decision-making process. Diversifying the teacher pipeline through policy changes has an impact on students of color. Teachers of color provide students the opportunity to grow academically and build relationships with diverse mentors who understand or have lived through similar challenges and experiences (Ingersoll et al., 2019; Irizarry, 2011; Turner et al., 2017). District leaders who can retain teachers of color help students build relationships with teachers who have similar experiences or challenges.

Grow Your Own Programs: A Macrolevel View

Foundational Components

A macrolevel view of the GYO program requires addressing its foundational principle for demographic and informational perspectives. K–12 students of color comprise more than 45% of the current population, while only 17.5% of teachers come from diverse backgrounds (American Association of Colleges for Teacher Education, 2013; Ingersoll et al., 2019). When teachers and students do not have similar demographics, there can be an imbalance of ethnic groups. Of the teacher population, 82% are White, with just 8% Hispanic and 8% Black (Carter-Andrews et al., 2019; Ginsberg et al., 2017; Rogers-Ard et al., 2019; Turner et al., 2017). The nation's teachers

do not reflect the demographics of the United States (Carter-Andrews et al., 2019; Ginsberg et al., 2017).

The teacher vacancies will increase along with student populations, as the number of teachers joining the profession does not meet the number of students reaching school age (Carothers et al., 2019), resulting in a diverse student–teacher demographics gap. Both urban and rural school districts must find teachers to fill their vacancies (Swanson, 2011). School districts strive to close the gap by actively recruiting individuals to join the teaching profession. Recruitment begins when a student or individual expresses interest in becoming a teacher (Luft et al., 2011). The GYO program provides information and a pathway to licensure for anyone interested in the education profession. The GYO program is a response to the education system’s inability to produce enough teachers from different racial, ethnic, and language minority backgrounds (Burbank et al., 2005). Teacher assistants, community partners, and high school recruitment programs contribute to the GYO programs in each state.

The GYO program is a collaborative effort to recruit, prepare, place, and retain future teachers with intensive support from the school district (Rogers-Ard et al., 2019). The program includes collaboration between school districts and state universities to fill vacancies (Carothers et al., 2019). The GYO program is a means of recruiting teachers in regions with significant shortages (Bianco & Marin-Paris, 2019; Gist et al., 2019; Miller et al., 2019; Skinner, 2010). GYO programs are not an alternative to teacher certification programs, nor a fast track to certification; instead, they are means of ensuring education for all without barriers (Madda & Schultz, 2009). Through GYO programs, individuals interested in teaching become knowledgeable of instructional practices through structured support.

Students in the GYO program gain field experiences, reflect on teaching, self-assess, and conduct classroom observations (Valenzuela, 2017). Despite having coursework similar to teacher education programs, the GYO program focuses on the recruitment of teachers of color and provides an embedded curriculum with culturally relevant practices. The curriculum focuses on the principles of teaching, learning, and culturally responsive teaching (Fletcher et al., 2016; Rogers-Ard et al., 2019). GYO participants learn the importance of meeting the needs of diverse learners, providing access for all, and respecting and caring for learners. They also acquire instructional strategies for diverse learners and improving student learning outcomes (Fletcher & Diccio, 2017; Madda & Schultz, 2009). GYO participants learn to transform schools through racial and linguistic diversity (Haddix, 2017). Teachers become culturally competent by implementing and reflecting on their practices and addressing students' diverse needs.

GYO addresses teacher shortages, retention problems, and diversity issues through the recruitment of a pool of diverse candidates (Garcia et al., 2019; Valenzuela, 2017). Each GYO program has a different format based on recruitment opportunities, assistance, curricula, and social and financial support (Fluckinger & Thompson, 2000; Gist et al., 2019; Goings, Brandehoff, & Bianco, 2018; Gonzalez et al., 2018; Valenzuela, 2017). The GYO program's community relationships and expected outcomes contribute to the program's overall goal of preparing students for the teaching profession. GYO recruiting and marketing materials present the program's expected outcomes, the benefits for program completers, and financial support options during coursework. Financial support can assist with tuition, fees, and books based on the GYO program's setting and type (Madda & Schultz, 2009). The budget allocation provided by the state has an influence on the strength and implementation of the GYO program.

There are two types of GYO programs: a specialized community program and a precollegiate high school program (Coffey et al., 2019). Community programs are means of recruiting paraprofessionals, substitutes, community activists, religious leaders, custodial staff, parents, and local community members to become teachers (Gist et al., 2019; Goodlow et al., 2020; Rogers-Ard et al., 2019; Valenzuela, 2017). The GYO community-oriented program focuses on recruiting individuals from nontraditional backgrounds to contribute to the upward mobility of marginalized groups and the professional development of the community (Gist, 2019; Gonzalez et al., 2018). The community based GYO program provides all individuals with the opportunity to join the teaching profession.

Community-based initiatives usually provide a 2+2 program (Morales, 2019). In the 2+2 program, students spend 2 years at a local state college or community college and 2 years at a neighboring university to complete their teaching requirements at a lower cost. The community-based programs may also provide a teacher quality enhancement grant so that paraprofessionals can become teachers and continue growing community members into teachers (Coffey et al., 2019; Morales, 2019). District leaders have begun building capacity within their paraprofessionals to enhance their knowledge for improved student learning.

In the GYO precollegiate program, community members encourage students to become teachers (Coffey et al., 2019; Gist, 2019; Goodlow et al., 2020; Mada & Schultz, 2009). The program includes the recruitment of high school students into teaching (Carothers et al., 2019; Coffey et al., 2019; Valenzuela, 2017). Most importantly, the precollegiate GYO program is an internal program for recruiting students of color (Gist et al., 2019; Goings, Walker, & Cotignola-Pickens, 2018). The intent of GYO programs is to close the diversity gap between teachers and

students at the precollegiate level; therefore, initial exposure begins in middle or high school with either a summer program or year-long coursework (Valenzuela, 2017).

A goal of the GYO program is to foster and increase students' interest in education (Swanson, 2011) by exposing them to the profession. Furthermore, GYO programs provide college life exposure to students who may not want to enroll or need additional skills to succeed at postsecondary institutions (Kamler & Goubeaud, 2018). The GYO program allows students to pursue undergraduate degrees after they complete their coursework in structured environments and receive support from secondary and postsecondary institutions.

The GYO program is a way to prepare preservice teachers to educate diverse students with various needs in a community or precollegiate setting (Cochran-Smith, 2004). Programs in both settings focus on the humanistic commitment of giving back to others (Ingersoll et al., 2019). At the same time, they are culturally responsive programs that enable the integration of teachers of color with White teachers to address the all-too-frequent segregation of teacher education (Rogers-Ard et al., 2019). Preservice teachers who participate in GYO programs learn culturally relevant practices to teach students with diverse backgrounds and needs.

The GYO program is one proposed solution to the teacher shortage in the United States (Carothers et al., 2019) and the need for targeted recruitment for students of color (Gist et al., 2019; Goe & Roth, 2019). The GYO program is a reimagining of education as a career choice (Gist, 2019) by creating a realistic vision and expectation (Carothers et al., 2019). Carothers et al. (2019) found that 63% of students had increased interest in becoming teachers at the end of a GYO program. GYO programs have a similar teacher development continuum for recruitment, preparation, retention, and mentorship (Gist et al., 2019; Kamler & Goubeaud, 2018). As a result,

the programs are means of elevating the teaching profession and recruiting and retaining students of color through exposure and educational justice (Goings, Brandehoff, & Bianco, 2018).

Similarly, GYO programs provide college access and readiness with a focus on inclusion (Goings, Brandehoff, & Bianco, 2018). Students reflect on diversity (Edwards-Moore, 2018) during coursework to foster a sense of community. School districts that implement GYO programs increase their minority K–12 faculty and staff (Fluckinger & Thompson, 2000).

Students in the GYO programs learn how to apply, enroll, and pay for college (Carothers et al., 2019). Students also meet with advisors for postsecondary goals, long-term retention, and program completion (Fluckinger & Thompson, 2000). The programs produce teacher candidates interested in pursuing the profession and, potentially, graduate studies. Teachers who enter the education field may find opportunities to become school counselors, psychologists, or administrators, all of which require advanced degrees.

GYO programs have a positive impact on students, schools, and communities (Gist, 2019; Goings, Brandehoff, & Bianco, 2018). The partnership between communities and school districts is common (Goodlow et al., 2020), as a mutual connection exists for all stakeholders (Garcia et al., 2019). The program focuses on partnerships and community investments for the recruitment and retention of teachers (Gist, 2019). Because family and community engagement is essential, GYO programs provide participants with role models and mentors to motivate them to pursue higher education (Goings, Brandehoff, & Bianco, 2018). Networking with community members enables school leaders to recruit highly qualified mentors who guide students in joining the profession (Fluckinger & Thompson, 2000). Building relationships with community stakeholders is a way to enhance teachers' competencies so they work better with students in the community. Mentors may share stories or experiences in the community to support or understand students. A

GYO program's mentorship process must include screening for appropriate student-mentor matches and a symbiotic relationship between the school and community (Gist et al., 2019).

The goal of the GYO program is to provide positive learning environments and experiences modeled after expectations in the classroom environment (Fletcher et al., 2016). Students in the program become motivated to create social change in an environment that enables student growth (Fluckinger & Thompson, 2000; Goings, Brandehoff, & Bianco, 2018). In addition to culturally responsive teaching, GYO students must complete all requirements and coursework for teacher certification in intensive classrooms and via professional development (Fluckinger & Thompson, 2000; Madda & Schultz, 2009). The GYO program provides the coursework students need for teacher certification. In addition, the program offers additional support to the preservice teachers who need help passing their certification exams to ensure program completion.

GYO programs have inconsistent funding, leadership, and legislative support (Coffey et al., 2019). School districts are cutting funding for programs who do not have an adequate or clear return on investment. Thus, a need exists for additional research on the outcomes of GYO programs. School district leaders have continuously seen fewer teachers joining the profession and fewer students enrolling in teacher preparation programs because of low salaries and micromanagement (Carothers et al., 2019). Researchers must strive to understand how GYO programs can address teacher turnover rates in the United States. Successfully reducing teacher turnover could enable school leaders to allocate funds toward supporting student outcomes (Gist, 2019). However, school leaders must allocate funds to support new teachers in the profession. Fewer teacher vacancies could enable moving the funding stream toward supporting student achievement.

Practical Applications

GYO programs focus on preparing preservice teachers to become teacher candidates. All states and districts have individual applications of GYO programs (Garcia, 2020). Community-based programs, such as Project Nueva Generación (Skinner, 2010), New Teacher Project-Fellowship Programs, Urban Teacher Enhancement Programs, Educators Rising, and North Carolina Teaching Fellowship Scholarship Programs, are means of recruiting from the community to increase the teacher pipeline (Goe & Roth, 2019). Each applicant serves the unique community needs with the resources provided by the state. Teach Tomorrow Oakland (TTO) is a community-based GYO program for increasing the number of special education teachers and recruiting career changers (Rogers-Ard et al., 2019). TTO is a 9-year program that focuses on students receiving their undergraduate degrees and provides a summer of professional development (Gonzalez et al., 2018) for classroom instruction preparedness. The summer professional development consists of 2 weeks of intensive training that candidates must take before becoming teachers on record (Gonzalez et al., 2018). Teachers build their knowledge of precise instructional and community competencies to support students in the district.

Additionally, the TTO program provides preservice teachers with the skills and knowledge needed to obtain their certifications through support programs (Rogers-Ard et al., 2019). Oakland Unified School District and three local universities (Gonzalez et al., 2018) have a collaboration to provide professional development for certification and instructional strategies to improve student outcomes (Rogers-Ard et al., 2019). Furthermore, TTO participants receive mentors who were previous TTO teachers. TTO receives funding from a state grant, foundation grant, and the school district (Gonzalez et al., 2018). The California Department of Education

provides funds to support and foster GYO programs across the state and recruit individuals into the teaching profession.

The Western Oregon University Bilingual Teacher-Scholar Program (Turner et al., 2017) focuses on the recruitment of Latinx students into the teaching profession. Latino citizens comprise one fourth of Oregon's population; however, they account for only 4% of teachers. The program's foundational pillars are academic, financial, and cocurricular. The goal of the pillars is to ensure students' success in the education field. Another program, the Bilingual Teacher-Scholar Program, provides all students with a \$4,000 scholarship each year. Students go through the program in a cohort model and participate in professional development to maintain certification (Turner et al., 2017). Oregon's GYO program offers a sense of community and addresses the area's demands for diversifying the teaching profession.

Griot Graduate Program focuses on the recruitment of Black candidates in urban school districts (Okezie, 2018). The program is a 2-year, full-time graduate program in which students work as substitute teachers to understand and gain exposure to the field of education. The Griot Graduate Program enables students to develop intellectually, morally, socially, culturally, and spiritually. As a result, students create their understanding of the education profession to succeed in the classroom. The goal of the Griot Graduate Program is to build capacity in students as teachers and leaders. Individuals graduate from the program with the instructional tools they need to support students in urban school districts and diversify the teacher population. As stated by Walker, Goings, and Wilkerson (2019), only 2% of public-school teachers are Black males. Therefore, the need to adequately prepare preservice teachers of color for the classroom is essential during teacher preparation programs during pre-service coursework. Teachers of color

are successful when exposed to various classroom environment by obtaining the capacity to support all students (Szecsi & Spillman, 2012).

Precollegiate programs, such as Project Teach, focus on the recruitment of high school students into education (Irizarry, 2011). Similarly, Pathway2Teaching (P2T) is a program for high school students exploring teaching as a career choice and examining educational justice (Goings, Walker & Cotignola-Pickens, 2018). P2T provides high school students with the opportunity to earn paraprofessional certificates, allowing them to work while earning their education degrees.

The P2T began in the 2010–2011 school year in a single low-performing high school (Valenzuela, 2017). All the students who enrolled in the P2T program successfully graduated high school with certifications. The program provides students in the 11th and 12th grades with college-level coursework (Bianco & Marin-Paris, 2019). Students can harness their academic writing skills in welcoming or safe spaces for youth (Bianco & Marin-Paris, 2019; Goings, Brandehoff, & Bianco, 2018). Program attendees learn how to become educators as well as diverse and community-responsive leaders (Goings, Brandehoff, & Bianco, 2018; Goings, Walker, & Cotignola-Pickens, 2018). Students participate in weekly classroom field experiences while engaging in a curriculum focused on student achievement and culturally responsive education (Bianco & Marin-Paris, 2019). P2T disrupts the education inequalities and enables students to become teachers by pursuing higher education degrees. The program also provides for preservice teachers' financial and personal needs by allocating scholarship and grants to pay for housing, tuition, childcare, or textbooks.

In conjunction with the University of Colorado Denver, the goal of P2T is to promote teacher education so that students return to their home districts and serve as educators (Goings,

Brandehoff, & Bianco, 2018; Valenzuela, 2017). P2T is similar to the Teaching Cadet program provided by the University of Colorado Denver, as it has no distinction for high- or low-achieving students (Valenzuela, 2017). The Teacher Cadet marketing focuses on high-achieving high school students. The program's participants have above-average standardized test scores and competitive GPAs. Both the P2T and Teacher Cadet programs provide students with college preparatory coursework for the teaching profession; Teacher Cadet also offers tutoring so that students gain exposure to and awareness of teaching as a career choice at an earlier age (Coffey et al., 2019). A widely adopted GYO program (Gist et al., 2019), Teacher Cadet has a mission and coursework aligned with preservice teacher preparation.

The Charlotte Teacher Early College program focuses on the recruitment of first-generation high school students interested in education (Coffey et al., 2019). The program's curriculum has the foundations of education and pedagogy. The Charlotte Teacher Early College program has an accelerated studies curriculum for students receiving their high school diplomas and Associate of Arts degrees. The program selects students via a lottery process to avoid restricting enrollment based on GPA and academic skills.

In the Charlotte Teacher Early College program, students receive college readiness skills and mentors so that they complete the program (Coffey et al., 2019). Mentorship is an essential component of the program. Ninth- and 10th-grade students receive mentors who are high school students; 11th- and 12th-grade students' mentors are college students. With adequate academic and social preparation, students can succeed and grow their interest in the teaching profession.

Localized Implementation

In Florida, GYO programs have various formats based on local implementation. However, the programs also vary by district and educator interpretations of the standards associated with

the career pathway. In Florida, most GYO precollegiate TA programs are 4-year curricular pathways for students looking to become educators (FLDOE, 2020; Fletcher, 2014, 2016; Fletcher & Diccico, 2017; Fletcher et al., 2016; Garcia, 2020). The program's goal is to prepare students for the education field and recruit students of color to return to the district and teach (Fletcher & Diccico, 2017; Garcia, 2020). TA focuses on Southern states. Florida's precollegiate GYO program focuses on eighth graders and their interest in becoming educators (Coffey et al., 2019; Fletcher & Diccico, 2017; Garcia, 2020). The TA provides students with incentives for joining and returning to their school districts to teach (Fletcher, 2014, 2016; Fletcher & Diccico, 2017), such as scholarships and guaranteed job interviews after graduation with teacher certifications. In the state of Florida, one school district is in its current fourth year of implementation of the TA program in the 2017-2018 school year. Currently in the 2021-2022 school year, there are 15 school districts in the state of Florida participating in the TA program in conjunction with the University of Central Florida.

In the state of Colorado, 50% of all students enrolled in the Pathway2Teaching (P2T) program elected to pursue a degree in education at the University of Colorado (Hanover Research, 2019). As certain states are working towards completing a complete cycle in their state, the state of South Carolina has seen the outcome of students from participation to a TA program to becoming educators for their state. Using the Teacher Cadet program in South Carolina, resulted in 25% of total students becoming educators in the state. (Hanover Research, 2019).

School districts utilize an application and interview process to enroll students into TAs (Fletcher, 2014). High school students begin to engage in the education profession (Fletcher & Diccico, 2017) through learning activities, such as instruction, bookwork, discussion, field and clinical experience, and reflection (Fletcher et al., 2016). TA coursework includes Introduction to

the Teaching Profession, Human Growth and Development, Foundations of Curriculum and Instruction, and Principles of Teaching Internship (FLDOE, 2020). The curriculum presents culturally relevant pedagogy and topics interesting to students (Fletcher & Diccico, 2017). The TA standards are diversity, the basic theory of education, career planning, professional code of conduct, relationship with stakeholders, student organization, child growth and development, classroom management, learning theory, and technology competencies (FLDOE, 2020).

As a career and technical course, students in the TA can receive Microsoft Office Suite certifications (Fletcher, 2016) and participate in the Florida Educators Club (Garcia, 2020). Students also gain 200 hours of field experience (FLDOE, 2020) in elementary, middle, and high schools (Fletcher et al., 2016). Additionally, students create a portfolio with current events articles, pictures of their field experiences, reflective journal entries, personal accomplishments, letters of recommendation, community service involvement, and lesson plans (FLDOE, 2020). Students also learn transferable skills to apply to all fields (Fletcher & Diccico, 2017). Most importantly, students build relationships with educational institutions to continue to bring future teachers into the pipeline.

Students who understand their educational institutions' supports continue to enroll in undergraduate coursework. GYO program participants gain the foundational academic knowledge they need for self-efficacy and teacher education program completion. High school students who graduate from the program go on to diversify higher education, especially in higher education (Fletcher & Diccico, 2017). GYO programs focus on increasing the number of teachers of color, as high school students from diverse populations could close the current gap. Students who have positive learning experiences have increased chances of succeeding in higher education careers. Early exposure to college and career readiness is the foundation of

undergraduate work, as students in the GYO program complete all coursework to receive undergraduate degrees.

Career and Technical Education Programs: A Micro-Level View

High School Student Recruitment

A microlevel view of CTE programs offers a focused perspective of high school student recruitment and retention and the influences on student motivation. Students can choose from various elective CTE courses in secondary schools. CTE course providers use multimedia (Gaylor & Nicol, 2016; Squires & Case, 2007) to expose students and parents to the program. Similarly, CTE course providers can use social media to inform and recruit students (Faulkner, 2018; Graves & Hasselquist, 2018). Most CTE courses are technology courses with digital classwork; thus, hosting a technology show is a way to recruit members into the community (Nikirk, 2007). Advertising is a way to reach a larger population, such as family members who discuss course selection with secondary students, and enable enrollment conversations.

Students have a pivotal role in recruiting their peers into CTE programs. Students can leave positive reviews, serve as ambassadors to promote the program to peers and community members, or host during career exploration days and school-sponsored dining events (Faulkner, 2018). Students in leadership roles build their self-efficacy by becoming role models on campus as proof of the success of CTE programs. Also, students can speak about technical careers with guests visiting the school. Stakeholders continuously look for ways to get involved in their local schools; thus, having knowledge about current programs is a way to provide direct support and improve student success.

Students in CTE courses learn about different career choices during their secondary school experiences (Brand et al., 2013). CTE providers can begin recruiting students in their

fifth-grade year for middle school or their eighth-grade year for high school (Nikirk, 2007). Teachers can discuss the curriculum and the skills that students can gain from taking the course on parent night or transition night (Brand et al., 2013; Nikirk, 2007). Parents and students can also visit CTE classrooms to explore the program's equipment or setting (Squires & Case, 2007), with teachers discussing how the course provides students with college and career readiness skills (Nikirk, 2007).

Students and parents who cannot attend CTE or visit CTE classrooms can receive letters about the program (Faulkner, 2018). CTE teachers can also follow up with students after their visits or letters to answer questions, build relationships for future recruitment, or maintain interest to ensure coursework enrollment (Squires, & Case, 2007). Similarly, school counselors can attend information sessions (Nikirk, 2007), which provide information on student requirements, coursework details, activities, expected outcomes, potential certifications, college and career options for program completers, associated clubs and organizations, and community networking opportunities. CTE programs are a unique opportunity to recruit students in the school setting and during community events. Students in CTE courses can showcase their community projects to recruit other students and inform parents of the jobs or skills gained.

Finally, CTE providers can market their courses as having as much rigor as advanced coursework (Aliaga et al., 2012). The misconception of rigor presents a divided pathway, where high-achieving students go to college and below-average students enroll in career courses. Through curricular changes, the rigor and standards of the CTE coursework provide advanced-level coursework. Students can earn dual-enrollment credit at local postsecondary institutions for degrees or certificates (Brand et al., 2013). School districts and postsecondary institutions have

articulation agreements that enable students to enroll in higher education coursework above their secondary school courses.

High School Student Retention

The microlevel view of high school retention enables further analysis of how school districts recruit students into CTE courses. The curriculum is a pivotal component in retaining students in CTE courses. Students must understand how the CTE coursework aligns between each level of coursework and real-world application (Plank et al., 2005). Students progressing through the coursework complete certification programs (Kotamraju, 2007) and receive awards and incentives for their success (Plank et al., 2005). CTE providers also offer extracurricular activities to promote the program and skills learned, enabling students to strengthen their leadership through professional development, competitions, and community service (Alfeld et al., 2006).

Another benefit of CTE programs is dual-enrollment courses, allowing students to transfer credits to postsecondary institutions (Bishop-Clark et al., 2010; Dare, 2006) to pursue degrees or certifications. Postsecondary coursework contributes to the self-efficacy of a student (Brand et al., 2013). CTE programs also provide remediation for postsecondary coursework (Bragg & Ruud, 2007; Dare, 2006) if a student has yet to show the skills needed to master a higher rigor level.

Ultimately, students in CTE courses receive exposure to higher levels of coursework and are less likely to drop out of high school (Aliaga et al., 2012). Plank et al. (2005) found that the students who were not academically retained and had combined student schedules with CTE and academic coursework had increased chances of graduating. CTE teachers can mitigate the chances of students dropping out of high school by keeping students engaged and goal-oriented

toward high school completion (Dare, 2006). Teachers who actively engage students to complete their coursework foster accountability and community for increased student retention.

Students in CTE courses receive on-the-job training and learn about the workplace (Brand et al., 2013; DeFeo, 2015). They can engage in job shadowing, internships, or paid work (Brand et al., 2013) to advance what they have learned in the classroom. CTE teachers foster students' interest in the subject and the career to retain them in the prospective field (DeFeo, 2015). Students who can pursue their career interests are more likely to get higher grades than noncareer pathway seekers (Alfeld et al., 2006).

CTE students gain college and career readiness to use their workforce skills when they complete the program (Brand et al., 2013). The CTE program provides an opportunity for students to learn about their interests, aptitudes, and career alignments (DeFeo, 2015). Students can also improve their self-efficacy by showcasing their work to the community (Bishop-Clark et al., 2010; Plank et al., 2005).

The relationship between the school community and the CTE program also has an impact on student retention. Mentorships allow students to build community relationships to understand the classroom (Bishop-Clark et al., 2010). Mentors provide students with the knowledge or skills they need to succeed. Community partnerships are opportunities for students to participate and build stronger connections to content and application. Community members in the field who host events and conferences (Graves & Hasselquist, 2018) can foster student retention by exposing students to outside themes or tools not included in the classroom.

A school's internal community of teachers and peers also has an impact on student retention (Bishop-Clark et al., 2010). The community relationships between teachers, peers, and students provide a support system for retaining high school students. Students collaborate inside

the classroom and during extracurricular competitions to enhance and enforce their CTE learning (Threeton & Pellock, 2010). Career-based student organizations also enable students to apply their classroom knowledge in various ways, such as competitions and on-the-job-training, for increased engagement and retention.

Student Motivation

A microlevel perspective of student motivation provides an understanding of why students enroll in particular CTE courses when registering for the following year. Intrinsic and extrinsic motivation are students' primary reasons for entering CTE programs, especially those on teacher education (Gaylor & Nicol, 2016; Malmberg, 2006; Manuel & Hughes, 2006). Motivation is not a universal factor; cultural background (Klassen et al., 2011) provides explicit guidance for understanding motivation. The motives for enrolling in education programs stem from prior experience of education and teachers (Bergmark et al., 2018). Students may feel motivated to enroll in a precollegiate TA because of the humanistic commitment of "paying it forward." Students may also want to give back to the community or share their K–12 experiences. In the future, students can make a difference by working with people and fostering "upright" human beings.

Students create goals to pursue the careers that they find interesting and search for ways to give back or make positive changes. Motivated students can create aligned plans to meet their career goals (Bragg & Ruud, 2007). Students can make plans to achieve or modify their goals due to changes or barriers. The motivation for career goals requires students to have problem-solving skills for how to complete their degrees, certifications, or job duties and responsibilities.

Students can build confidence (Bishop-Clark et al., 2010; Dare, 2006; Kotamraju, 2007) and increase their motivation by staying and completing the CTE program and postsecondary

coursework. Students find the value of CTE when completing coursework and engaging in a higher level of rigor (Kotamraju, 2007; Plank et al., 2005). Students learn how to apply standards and connect their knowledge to real-world applications practically.

CTE teachers strive to foster students' motivation in their programs to keep them on track for graduation (DeFeo, 2015). Courses where students learn something useful with practical applications have increased student attendance. In conjunction with CTE teachers, peers play an important role in motivating other students who share their experiences. Students may actively seek out the program and find ways to fit it into their schedules with encouragement from their friends and teachers. Further, CTE courses can contribute to students' social motivation through peers and academic motivation with increased odds of graduating from high school and pursuing postsecondary education (Alfeld et al., 2006). Students who build a sense of community and accountability are more likely to finish high school and pursue higher education in their chosen fields.

Summary of Chapter Two

Analysis of teacher education programs with a holistic view, GYO programs with a macroview, and CTEs with a microlevel view showed the need to recruit students into programs to address enrollment shortages. Teacher shortage is a concern for educational leaders each year, with many classes canceled without highly qualified instructors. Educational leaders have begun working toward standard practices for addressing teacher recruitment and retention at the local and school levels.

Teacher recruitment focuses on bringing in teachers by providing them with information and sessions to attract them into the profession. A need exists to holistically look at the various strategies of recruiting and retaining teachers in K–12 and higher education. Schools struggle to

retain teachers of color and teachers in their first 5 years. Additionally, higher education institutions seek to recruit students into preservice teacher programs before students' junior or senior year of high school. A need exists to retain the students interested or enrolled in the program. The curriculum and academic support that students receive have an impact on their successful completion of the program.

State leaders have used GYO programs to bridge the gap and bring diverse candidates to local school districts. A macrolevel analysis showed that GYO is a way to increase the teacher pipeline for all school districts, especially those with various candidates. GYO programs are community-based or precollegiate academies meant to help individuals pursue careers in education. Colorado, Washington, and Oregon have GYO programs for attracting students and community members to the teaching profession. The curriculum focuses on the foundational teaching principles and culturally responsive teaching to produce instructors who value diversity and return to their home districts to teach. Although Florida provides an increasing number of TA programs to address the teacher pipeline, TA is still in its early years of implementation. A need exists for further research on the long-term effects and influence of TAs on students pursuing careers in education. In the short term, students receive exposure to education for increased interest in the profession.

A microlevel view of the CTE programs presented student recruitment and retention strategies. CTE program retention requires that students understand how to fulfill their needs and access avenues of growth. Students face challenges, such as developing long-term career goals without experience or in-depth knowledge of a field. CTE courses enable students to begin considering which field they would like to join. Students can actively pursue a CTE track to receive exposure and attain the skills they need to achieve their long-term career goals.

Many secondary schools offer CTE programs and courses; thus, teachers must focus on student recruitment and retention. CTE teachers recruit students by showing them the field, environment, and equipment needed to grasp the curriculum and expected outcomes. CTE students can speak to interested peers and recruit them into the program; in addition, relationships with teachers and peers contribute to student retention. CTE teachers can foster a sense of community and student motivation to produce program completers who pursue postsecondary education or succeed in the workplace.

CHAPTER THREE: METHODOLOGY

Introduction

The purpose of GYO programs is to increase the teacher pipeline and fill teacher vacancies in local school districts. The TA program is a means of attracting students into education by exposing them to the career early with the standards and practices needed to engage all students (Murdock, 2008). The TA program is a way to introduce students to the teaching profession at an early age, providing the standards and practices needed to actively engage all students through learning challenges, rewards, and CTE coursework (Burbank et al., 2005).

This triangulation mixed methods study focused on three metropolitan school districts in Florida. School District A has 90 students in the TA, School District B has 210 students in the TA, and School District C has 90 students in the TA. The goal of the study will be to close the research gap on national TA implementation by focusing on the recruitment and retention strategies used to attract secondary students into teaching. This chapter presents the study's purpose, research question, research procedures, design, population, instrumentation and protocol, data collection and analysis, and summary.

Purpose of the Study

The purpose of this mixed methods study examined the relationship between the motivations and perceptions of secondary students interested in the teaching profession. Educational leaders could use this study's findings to increase motivation and enhance the teacher pipeline. This mixed methods study addresses the factors in the recruitment and retention efforts for student participation in a precollegiate TA. The implementation of recruitment and retention strategies varies throughout metropolitan school districts, necessitating a comprehensive strategy for recruiting and retaining students. This study focused on the

intersection of the race and gender of the secondary students interested in the teaching profession who participate in a precollegiate TA program. Strategic recruitment and retention efforts must address students' motivations and perceptions to achieve the TA purpose of fostering teachers of color at an early age.

Recruitment and retention efforts, combined with fostering the humanistic commitment, are means of increasing the number of students joining the education field (Ingersoll et al., 2019). The TA program strengthens motivational and perceptual factors of students seeking to enter the education field. TA educators and HR professionals should cooperate to recruit and retain students into the teacher pipeline at an early age. School HR professionals and TA educators can collaborate on recruitment and retention strategies to increase student enrollment in the CTE teaching pathway. Students may feel motivated to join the teaching profession at an early age through coursework and internships.

Creating awareness of how to recruit and retain members into education requires researching student motivations for and perceptions. School districts should utilize the best retention and recruitment practices for the TA program. Districts can employ strategies, such as media, to highlight the success stories of those who have joined the education profession and received recognition for outstanding service (Klimek, 2019). Wronowski (2018) defined the parameters for successfully retaining students in a CTE program as supporting students, exploring the profession, learning about the profession, and reducing pathway changes. A need exists to research opportunities for recruiting teachers of color, the role of race and gender for secondary students, and how to recruit and retain by utilizing students' perceptions and motivations.

Research Procedures and Design

The goal of this mixed methods study was to be able to understand the motivations and perceptions of students joining the teaching profession. A triangulated mixed methods study includes qualitative and quantitative data for a holistic view of a topic (Fraenkel et al., 2015). The collection of qualitative data occurs through a naturally occurring phenomenon, contributing to the written or nonnumerical data points. Data collection required the participants to reflect on factors recruiting and retaining them into the TA and examples of recruitment and retention strategies for increasing enrollment, especially among students of color. This study's qualitative data collection commenced with a five-question questionnaire on the recruitment and retention strategies for secondary students. In addition, qualitative data was gathered from TA teacher focus group through interview questions related to student motivation, perception, recruitment, and retention. The quantitative data was gathered utilizing the FIT-Choice survey motivation and perception. Quantitative data are measurable numeric data with a specified amount or along a continuum. Quantitative researchers collect data numerically to fulfill the purpose of a study. Therefore, this study included the FIT-Choice to address the TA students' perceptions of and motivations for entering the teaching profession.

The Institutional Review Board (IRB) of the University of Central Florida reviewed the research proposal, with the study commencing upon receiving IRB and parental consent (see Appendix A). Participant selection entailed contacting teachers and school-based administrators from the three school districts to discuss the study's purpose and the stakeholders' roles in collecting the data. The teachers and school-based administrators received an explanation of the study's purpose and the potential outcomes, after which they can either accept or decline to participate in the study. If they agree, the teachers met with the researcher during a zoom call to

discuss the overall research and answer specific questions regarding distribution of consent and questionnaires to students. TA teachers received the opportunity to provide verbal and electronic consent to be recorded for the transcript to allow the researcher to analyze the data. The focus group was conducted at this time by the research asking the TA teachers questions similar to the students related to student motivation, perception, recruitment, and retention. The TA teachers explain their experience and interaction with the TA students. The conversation focused on the teaching profession and how the program influences their profession in addition to teaching the content of the TA Career and Technical Education blueprint. Afterwards, the teacher discussed the research with students or had the researcher introduce the study via a virtual or in-person presentation, addressing the purpose of the study and the students' role in the data collection process. Following the presentation, the students took home consent forms to participate for their parents or guardians to sign. The following week, the students received the Qualtrics link for the FIT-Choice survey and recruitment and retention questionnaire. The students had 45 minutes to complete both sections, 30 for the survey and 15 for the questionnaire.

Qualtrics was used to collect the survey and questionnaire data. The participants had the opportunity to review the purpose of the instruments. The participants had a week to return the consent to participate voluntarily in the research and an additional week to complete the survey, receiving daily reminders until submission. The quantitative and qualitative data collected from School Districts A, B, and C and the TA focus group will remain safe for 5 years and then destroyed.

Quantitative Instrumentation and Qualitative Protocol

Quantitative Instrumentation

The FIT-Choice is a measure of the factors influencing preservice teachers' desire to teach (Leech, Haug, & Bianco, 2019; Watt & Richardson, 2007). The research commenced in Australia with the expectancy-value theory framework (Nesje et al., 2018; Richardson & Watt, 2006). The expectancy-value theory is a way to examine the complexity of teacher motivation and identify patterns (Alexander et al., 2020). The research produced an understanding of preservice teachers' motivational factors with an influence on school district recruitment and retention efforts. There is an underrepresentation of teachers of color in the classroom. The FIT-Choice motivational and perceptual subfactors focus on recruitment challenges (Leech, Haug, & Bianco, 2019; Nesje et al., 2018). Therefore, scholars can use the survey to understand the motivations and perceptions of training and preservice teachers (Leech, Haug, & Bianco, 2019; Leech, Schnittka, & Haug, 2018).

The FIT-Choice survey has four higher-order factors of task demand, task return, personal utility values, and social utility values (Fokkens-Bruinsma & Canrinus, 2012) divided among the three factors of motivation for teaching, perception of education, and reasons to become teachers (Leech, Haug, & Bianco, 2019; Nesje et al., 2018). Accordingly, statistical analysis involving the perceptual and motivational sub-factors influence the recruitment and retention strategies used to increase the overall number of teachers in a school district. The first section of the survey has 38 items for the motivational construct. The second section includes 20 items on the perception of teaching (Fokkens-Bruinsma & Canrinus, 2012). The participants in this study are secondary students on the path toward becoming preservice teachers; therefore, the survey questions are in the future tense.

The survey-takers can rate items on motivation on a Likert-type scale of 1 (*not important in your decision*) to 7 (*extremely important in your decision*; Leech, Haug, & Bianco, 2019; Leech, Schnittka, & Haug, 2018). The participants reflected on the sub-factors and rated them along the Likert scale. Motivational factors are intrinsic values, such as the interest in and desire to teach (Leech, Haug, & Bianco, 2019; Nesje et al., 2018; Watt & Richardson, 2007). Participants can also rate the topics of beliefs, perception, social dissuasion, and satisfaction on a Likert scale from 1 (*not at all*) to 7 (*extremely*; Leech, Haug, & Bianco, 2019; Leech, Schnittka, & Haug, 2018). The personal utility value, or subjective attainment value, focuses on topics such as time for family, job security, and job transferability (Leech, Haug, & Bianco, 2019; Watt & Richardson, 2007). Researchers can use the survey to understand the perceptions and motivations of preservice teachers of color entering the field to fight an oppressive system that presented them with limited opportunities (Leech, Haug, & Bianco, 2019).

Reliability and Validity

The FIT-Choice survey has undergone reliability and validity procedures in different countries and teacher education programs (Fokkens-Bruinsma & Canrinus, 2012). Studies using the survey have occurred in Australia, Turkey, the United States, and the People's Republic of China, indicating that the survey has construct validity across diverse settings (Nesje et al., 2018). Foreign Countries and multiple United States post-secondary institutions have utilized this survey with pre-service teacher candidates and first-year teachers to quantify the perception and motivation of the participants in regard to the teaching profession. Research has shown that the 17 factors and three subconstructs have reliability with a Cronbach's alpha between 0.62 and 0.92 (Watt & Richardson, 2007).

Qualitative Protocol

In this study, the TA student recruitment and retention questionnaire (see Appendix D) presented the students with five questions for insight into one of the research questions on TA student recruitment and retention. The short-answer questionnaire produced data of secondary students' motivation and perceptual factors which influence the participation in a precollegiate TA in a metropolitan area. The data was the means used to explore the recruitment and retention of students of color into the TA. The first section of the questionnaire produced information about the students' backgrounds (i.e., gender, race, and grade level). The remaining five short-answer questions focused on the factors that attract students to the TA and why students stay in the program. Similarly, the questionnaire required the participants to provide suggestions for strategies to recruit and retain more students into the TA. The data collected produced the factors and specific strategies needed to answer the broader research questions.

Interview Protocol

The purpose of this study is to understand how student motivation and perception influence recruitment and retention of secondary students into a TA program. The students enrolled in the TA program are interested in joining the teaching profession thus understanding how to utilize the motivation and perceptual sub-factors of students to create strategies for recruitment and retention as mentioned in research question three. Therefore, to better learn about students enrolled in the TA program, a focus group was conducted to gather additional data regarding motivation and perception.

The focus group has been designed with four open-ended questions to guide the conversation. The responses were collected from three school districts who elected to participate in the focus group and student research. The answers will remain confidential with the researcher

having the access to the data through a transcript provided of the focus group session. Therefore, the focus group was recorded to transcribe the conversation in relation to the questions provided to answer the research questions. Before the focus group continued, the teachers were presented with the purpose, background, and protocol for collection of student data.

Research Question 3: What motivational and perceptual factors affect secondary students' recruitment and retention efforts participating in a precollegiate TA in metropolitan areas? What implications do these efforts have for enhancing overall participation in the teaching profession and increasing the participation of students of color?

1. What motivated students to join the teaching profession and the teaching academy program?
2. What strategies could be used to recruit more students into the Teaching Academy?
3. What strategies could be used to retain students into the Teaching Academy?
4. What is student's perception of the teaching profession?

The questions were presented one at a time and each teacher was given time to respond to each question. Once the responses were collected, the transcript was sent to the participants to ensure accuracy of their response to the focus group question.

Validity

The TA student recruitment and retention strategy questionnaire underwent a validation process, in which individuals outside of the study population reviewed and evaluated the questions (Fraenkel et al., 2015). Pilot interviews occurred with professionals who lead TAs in their local school districts at the college or district level: two administrative coordinators from the College and Career Readiness Department, the College and Career Readiness Department's director, four program specialists in the College and Career Readiness Department and Central

Florida's TA program coordinator. The pilot study participants determined the clarity and the comprehension of the questions using Google Forms.

Population

The target population for this research was secondary students enrolled in TA coursework in Florida. The sample for this study included high school TA students from three Florida metropolitan school districts. The study had 132 TA participants, meeting the minimum 99 participants per sample size calculations in G*Power, in metropolitan School Districts A, B, and C. Cluster sampling (Fraenkel et al., 2015) commenced, dividing the data between three school districts to represent each group (see Appendix E).

Research Questions and Mixed Method Measures

This triangulated mixed methods study focused on the influence of students' motivations for and perceptions of the teaching profession on TA recruitment and retention strategies. The study's guiding research questions are as follows.

Quantitative Measures and Analysis for Research Question 1

1. What does the FIT-Choice scale show about the motivations and perceptions of secondary students in metropolitan areas interested in the teaching profession?

Conducting descriptive statistics is a way to look at the means and standard deviations of students within the motivational and perceptual subfactors (Fraenkel et al., 2015). Classification and clustering of the respondents entailed the following motivation factors: ability, intrinsic career values, fallback career, job security, time for family, job transferability, shape future of children, enhance social equity, make a social contribution, work with children, prior teaching-learning experiences, and social influences. Classifying and clustering of the respondents

occurred with the following perception constructs: expertise, difficulty, social status, salary, social dissuasion, and choice satisfaction.

Quantitative Measures and Analysis for Research Question 2

2. Is there a relationship between demographic characteristics (i.e., race and gender) in the motivations and perceptions of the teaching profession of precollegiate TA students in metropolitan areas?

H₂₀: There is no significant difference between demographic characteristics among secondary students interested in the teaching profession and participating in a precollegiate TA in metropolitan areas.

H_{2a}: There is a significant difference between demographic characteristics among secondary students interested in the teaching profession and participating in a precollegiate TA in metropolitan areas.

A multivariate analysis of variance (MANOVA) test occurred to determine the difference between the means of various sample groups and dependent groups (Fraenkel et al., 2015).

Division of the sample group was based on to the background questions in the TA recruitment and retention questionnaire on gender and race. The sample groups enabled a comparison of the respondents' (secondary students participating in the TA program) motivation factors and perception constructions by demographic categories.

Qualitative Measures and Analysis for Research Question 3

3. What motivational and perceptual factors affect secondary students' recruitment and retention efforts participating in a precollegiate TA in metropolitan areas? What implications do these efforts have for enhancing overall participation in the teaching profession and increasing the participation of students of color?

A qualitative/quantitative (Q/Q) research design includes the coding of qualitative data for common themes (Fraenkel et al., 2015; Mills & Gay, 2009). The TA recruitment and retention questionnaire provided data on the recruitment and retention strategies used for TA programs. In addition, the TA teacher focus group responses are utilized in conjunction with the FIT-Choice survey to further understand recruitment, retention, motivation, and perception of secondary students interested in the teaching profession. The questionnaire and focus group elicited data on the common themes and factors that attract and cause secondary students to remain in the TA program and the strategies used to recruit and retain students into the program

Data Collection and Analysis

This study had a Q/Q model, as the data had equal weight and concurrent collection (Mills & Gay, 2009). With the Q/Q model, neither methodology is dependent on the other for creation. The purpose of the Q/Q model is to reveal similar findings to offset the weaknesses within the research, whether they are quantitative or qualitative. The research questions yield information determined through the use of various statistical tests and a qualitative protocol. The data collected from the survey responses was uploaded to SPSS Version 27 and NVivo 11 for statistical analysis. Table 1 shows the key components of the research question, data sources, and statistical test-related measures of this study.

Table 1*Research Questions Matrix*

Research question	Instrumentation	Variable	Statistical analysis
1. What does the FIT-Choice scale show about the motivations and perceptions of secondary students in metropolitan areas interested in the teaching profession?	FIT-Choice survey	Not applicable	Descriptive statistics
2. Is there a relationship between demographic characteristics (i.e., race and gender) in the motivations and perceptions of the teaching profession of precollegiate TA students in metropolitan areas?	FIT-Choice survey	IV: Race and gender DV: Perception and motivation	MANOVA
3. 3. What motivational and perceptual factors affect secondary students' recruitment and retention efforts participating in a precollegiate TA in metropolitan areas? What implications do these efforts have for enhancing overall participation in the teaching profession and increasing the participation of students of color & gender?	Qualitative questionnaire & TA Focus Group	Not applicable	Triangulate qualitative and quantitative analysis (i.e., coding/theme)

Summary of Chapter Three

The purpose of this mixed methods study was to examine the relationship between the motivations and perceptions of secondary students interested in the teaching profession. As a Q/Q model study, the collection of the quantitative data occurred via the FIT-Choice survey of TA secondary students' perceptions and motivations. A correlation and *t* test commenced for the quantitative data.

Qualitative data collection occurred via a teacher academy questionnaire on the recruitment and retention efforts for getting secondary students to join the TA program. In

addition, the qualitative data was collected from the focus group of TA educators through questions related to perception, motivation, recruitment, and retention. The study included 132 secondary students enrolled in a TA program as required per sample size calculations by G*Power, in metropolitan School Districts A, B, and C. The researcher partnered with the TA teachers and school administrators to investigate the local schools. The secondary students received access to the Qualtrics link to complete the survey upon providing consent to participate from their parents or guardians. SPSS Version 27 was the software used for statistical analysis of the quantitative data. The qualitative data underwent transcription and coding to identify significant themes utilizing NVivo11. The quantitative and qualitative results underwent examination together, with triangulation used to search for overlapping patterns of significance.

CHAPTER FOUR: RESULTS

Introduction

The study was a means to show the perceptual and motivational factors that influence students to pursue the teaching profession. Participating secondary students were enrolled in a TA program in their local school district in Florida. The overall perception and motivational factors underwent examination using the FIT-Choice survey, student questionnaire, and a focus group with TA teachers.

The purpose of this mixed methods study was to examine the relationship between the motivations and perceptions of secondary students interested in the teaching profession. School districts are not hiring the teachers needed in the workforce, especially teachers of color, to match student demographics. GYO programs are a way to help school districts and communities build a teacher pipeline by providing the resources for teacher certification with the tools to be successful. This study can contribute to closing the gap between teacher vacancies and the number of new teachers joining the workforce through an understanding of how to recruit secondary students to the TA as an example of a GYO program. This chapter presents the data collected to answer the following three research questions and the statistical analysis presented in the research question matrix (see Table 2).

Table 2*Research Questions Matrix*

Research question	Instrumentation	Variable	Statistical analysis
1. What does the FIT-Choice scale show about the motivations and perceptions of secondary students in metropolitan areas interested in the teaching profession?	FIT-Choice survey	Not applicable	Descriptive statistics
2. Is there a relationship between demographic characteristics (i.e., race and gender) in the motivations and perceptions of the teaching profession of precollegiate TA students in metropolitan areas?	FIT-Choice survey	IV: Race and gender DV: Perception and motivation	Multivariate analysis of variance (MANOVA)
3. What internal and external factors affect secondary students' recruitment and retention efforts participating in a precollegiate TA in metropolitan areas? What implications do these efforts have for enhancing overall participation in the teaching profession and increasing the participation of students of color & gender?	Qualitative questionnaire & TA Focus Group	Not applicable	Triangulate qualitative and quantitative analysis (i.e., coding/theme)

Descriptive statistics of the participant demographics are in Table 3. Qualitative and quantitative methods were appropriate to collect and analyze the data. Answering the first research question entailed using descriptive statistics from quantitative data. A MANOVA was the statistic used to answer the second question. Lastly, triangulating the quantitative results from the previous two research questions and qualitative data from the student questionnaire and TA focus group provided an answer to the third research question.

Descriptive Statistics

The TA Student FIT-Choice Motivation Construct Survey (see Appendix B) and FIT-Choice Perception Construct Survey (see Appendix C) were the measurements used to categorize a student’s motivation and perceptions about the teaching profession. Collecting quantitative data from secondary students entailed administering the TA Student Recruitment and Retention Questionnaire (see Appendix D). Table 3 shows the descriptive statistics for demographic variables of secondary students in School Districts A, B, and C.

Participant Demographics

The participants in this study were students who took part in a TA program, asynchronous and synchronous, during Spring 2021. Participants completed the FIT-Choice survey and the TA Student Recruitment and Retention Questionnaire. Based on the feedback from a professional statistician, students who identify as Black, Hispanic, Asian, Other and Multi-racial are group as students of color to conduct the statistical analysis. Table 3 presents the school district, race, and gender demographics of the participating students ($N = 132$).

Table 3

Student Demographics

Demographic	Characteristics	Frequency	Percentage	Overall District Percentages
School district	A	7	5.3	--
	B	33	25.0	--
	C	92	69.7	--
Race	White	96	72.7	61.8
	Students of Color	36	27.3	38.2
Gender	Male	19	14.4	51.0
	Female	113	85.6	49.0

Completing the TA Student Recruitment and Retention Questionnaire were 132 secondary students actively enrolled in a TA program. Participants answered questions about their current school district, race, and gender (see Table 3). School District A had seven participants (5.3%), School District B had 33 participants (25.0%), and School District C had 92 participants (69.7%). Students reported their race as White or a Students of Color. Out of the 132 students, 96 (72.7%) identified as White and 36 (27.3%) as a Students of Color. Finally, students selected their gender identity as male or female on the questionnaire. Overall, 113 students (85.6%) identified as female, and 19 students (14.4%) identified as male. In comparison to overall district percentages, the overall data showed similar percentages in higher number of white students. Meanwhile, the number of female students was higher than male students unlike the district percentage whereas the number of male students is higher than female.

FIT-Choice Motivation Construct Survey

Data collection from the FIT-Choice Motivation Construct Survey (see Appendix B) was via Qualtrics, as presented by the TA teacher during a class period or assigned as homework during the 2021 spring semester. The questionnaire utilized a 7-point Likert scale ranging from 1 to 7, with 1 = *not at all important in your decision*, 4 = *somewhat important in your decision*, and 7 = *extremely important in your decision*. In addition, students indicated their level of decision-making according to the following motivational subfactors: (a) ability, (b) intrinsic career values, (c) fallback career, (d) job security, (e) time for family, (f) job transferability, (g) shape the future of children/adolescents, (h) enhance social equity, (i) make social contribution, (j) work with children/adolescents, (k) prior teaching and learning experiences, and (l) social influence. The students outlined their motivation to join the TA program and the teaching profession.

FIT-Choice Perception Construct Survey

Data collection from the FIT-Choice Perception Construct Survey (see Appendix C) was via Qualtrics, with the survey presented by the TA teacher during a class period or assigned as homework during the 2021 spring semester. The questionnaire utilized a 7-point Likert scale ranging from 1 = *not at all agree with the statement*, 4 = *somewhat agree with the statement*, and 7 = *extremely agree with the statement*. In addition, students were to reflect on and rate the statement based on the items associated with each of the following subfactors: (a) expertise, (b) difficulty, (c) social status, (d) salary, (e) social dissuasion, and (f) satisfaction with choice. The student responses showed their perceptions of the teaching profession. Participants rated the motivation and perceptual subfactors about their construct of the teaching profession. Table 4 outlines the reliability statistics for the FIT-Choice student responses about motivation and perception:

Table 4

Reliability Statistics

Cronbach's alpha	<i>N</i>
.881	18

The findings in Table 4 show that the 12 motivational and six perceptual subfactors had a Cronbach's alpha of $\alpha = .881$, resulting in acceptable interrater reliability.

Testing the Research Question

Research Question 1

Examined in this section is the question, “what is the relationship between the motivation and perception of secondary students in metropolitan areas interested in the teaching profession?” Analyzing Research Question 1 entailed comparing the 132 students' responses to

the FIT-Choice Motivation and Perception construct survey. Designed for students currently pursuing a degree in teaching, the original survey included statements in the present tense; however, for this study, there was a modification of the instrument to be in the future tense to align with students' expectations (Appendix F). In addition, the researcher clarified the Likert scale in the motivation construct survey (1 = *not at all important in your decision*, 4 = *somewhat important in your decision*, and 7 = *extremely important in your decision*) to align with the perception survey (1 = *not at all agree with the statement*, 4 = *somewhat agree with the statement*, and 7 = *extremely agree with the statement*). Table 5 shows the descriptive statistics of the FIT-Choice motivation construct survey.

Table 5

Descriptive Statistics for FIT-Choice Motivation Construct Survey

Subfactors	Min	Max	Mean	SD
Ability	1	7	5.28	1.18
Intrinsic career values	1	7	4.49	1.71
Fallback career	1	6	2.78	1.10
Job security	1	7	4.56	1.44
Time for family	2	7	4.91	1.07
Job transferability	1	7	4.21	1.47
Shape the future of children/adolescents	1	7	6.07	1.21
Enhance social equity	1	7	5.62	1.41
Make social contribution	1	7	5.64	1.36
Work with children/adolescents	1	7	5.28	1.63
Prior teaching and learning experiences	2	7	5.89	1.17
Social influences	1	7	4.13	1.91

Table 5 presents an analysis of the average of the items within the subfactor of students' response to the motivation survey as expressed in the FIT-Choice survey. Students had the highest mean ($M = 6.07$, $SD = 1.21$) regarding shape the future of children/adolescents, an

important decision for motivating students to join the teaching profession. Prior teaching and learning experiences ($M = 5.89$, $SD = 1.17$), making social contribution ($M = 5.64$, $SD = 1.36$), enhance social equity ($M = 5.62$, $SD = 1.41$), ability ($M = 5.28$, $SD = 1.18$), and work with children/adolescents ($M = 5.28$, $SD = 1.17$) rated an average of 5.01 to 5.99 on the 7-point Likert scale. Also, because the subfactors of time for family ($M = 4.91$, $SD = 1.07$), job security ($M = 4.56$, $SD = 1.44$), intrinsic career values ($M = 4.49$, $SD = 1.71$), job transferability ($M = 4.21$, $SD = 1.47$), and social influences ($M = 4.13$, $SD = 1.91$) fell between an average of 4.01 to 4.99, they were somewhat important in students' decision to pursue the teaching profession. The lowest subfactor mean was fallback career ($M = 2.78$, $SD = 1.10$), as students did not agree with statements about perceiving teaching as a fallback career. All motivational subfactors, except for time with family and prior teaching and learning experiences, received a minimum average score of 1, and all but fallback career received an average maximum score of 7.

The FIT-Choice motivational subfactors that the students reported as shaping the future of children and adolescents ($M = 6.07$) as the highest factor when deciding the join the teaching profession. The opportunity for TA students to work with student's outsider of the classroom creates a higher opportunity to foster the decision for the student to join the teaching profession. On the other hand, secondary students do not have the perspective of teaching as a fallback career ($M = 2.78$). A majority of TA students view teaching as primary career instead of a fallback incase their primary choice does not occur, or the student is not successful.

Table 6 shows the descriptive statistics for the FIT-Choice perception construct survey.

Table 6*Descriptive Statistics for FIT-Choice Perception Construct Survey*

Subfactors	Min	Max	Mean	SD
Expertise	1	7	4.94	1.24
Difficulty	2	7	5.44	1.05
Social status	2	7	4.34	1.05
Salary	1	7	2.69	1.51
Social dissuasion	1	7	4.76	1.18
Satisfaction with choice	1	7	4.54	1.70

Table 6 presents an analysis of the average of the items within the subfactor of students' responses to the FIT-Choice perception survey. Based on the data shown, students had the highest mean ($M = 5.44$, $SD = 1.05$) regarding difficulty as a high level of perception of the teaching profession. Expertise ($M = 4.94$, $SD = 1.23$), social dissuasion ($M = 4.76$, $SD = 1.18$), satisfaction with choice ($M = 4.54$, $SD = 1.70$), and social status ($M = 4.34$, $SD = 1.05$) were subfactors that fell between 4.01 and 4.99 average and thus somewhat aligned with the subfactors in relation to the teaching profession. Finally, the lowest subfactor mean was salary ($M = 2.69$, $SD = 1.10$), as students did not agree with statements about teachers receiving a high salary. All perceptual subfactors, except difficulty and social status, received a minimum average score of 1. On the other hand, all perceptual subfactor received at least one average maximum score of 7 from secondary TA students.

Based on the experience of teaching, their perception of the teaching profession as a difficult ($M = 5.44$) profession. Students understand the perception of teaching as a challenging compared to other jobs. Additionally, students view the teaching profession as a low paying job ($M = 2.69$). As TA students reflect on their personal comparison of the teaching profession versus other potential career choices, the perception of education is below other jobs.

Research Question 2

This section presents the response to the question, “Is there a significant difference in race and/or gender among secondary students who are interested in the teaching profession and participate in a precollegiate TA in metropolitan areas?” Equality of variances matrix assumptions were the statistics used to test the null hypothesis that the observed matrices of the motivational subfactors are equal across groups. Table 7 shows the equality of variance for motivational subfactors.

Table 7

Results of Box’s M Test of Equality of Variance for Motivation Subfactor

Homogeneity of Covariance Matrices	Values
Box’s M	317.46
<i>F</i>	1.44
<i>df</i> 1	156
<i>df</i> 2	3,783.84
Sig.	<.001

Checking this assumption was accomplished a Box’s M test. For the motivational subfactors, the p value for the test was significant (<.001), which means the null hypothesis was rejected and the assumption was violated (see Table 7). Therefore, the data does not meet the assumption that all co-variances are equal. As a result, additional multivariate test will be run because of the lack of normality of the distribution of data.

Answering the second research question required comparing motivational subfactors with the combination of dependent variables of gender and race. The MANOVA results were not statistically significant in gender, $F(12, 117) = 1.39, p = .183$, Pillai’s trace = .124, Wilks’ lambda = .876, Hotelling’s trace = .142, Roy’s largest root = .142 (see Table 8). In addition, the results of race were also not significant, $F(12, 117) = 1.19, p = .302$, Pillai’s trace = .108, Wilks’

lambda = .892, Hotelling's trace = .122, Roy's largest root = .089 (see Table 8). The overall model (gender * race) indicated no statistical significance, $F(12, 117) = .96, p = .496$, Pillai's trace = .911, Wilks' lambda = .098, Hotelling's trace = .098, Roy's largest root = .098 (see Table 8).

Table 8

Multivariate Statistics for Gender and Race for Motivation Subfactor

Effect	Test	Value	<i>F</i>	Hyp. diff	Error diff	Sig.
Gender	Pillai's trace	.124	1.39	12	117	.183
	Wilks' lambda	.876	1.39	12	117	.183
	Hotelling's trace	.142	1.39	12	117	.183
	Roy's largest root	.142	1.39	12	117	.183
Race	Pillai's trace	.108	1.19	12	117	.302
	Wilks' lambda	.892	1.19	12	117	.302
	Hotelling's trace	.122	1.19	12	117	.302
	Roy's largest root	.089	1.19	12	117	.302
Gender * Race	Pillai's trace	.911	0.96	12	117	.496
	Wilks' lambda	.098	0.96	12	117	.496
	Hotelling's trace	.098	0.96	12	117	.496
	Roy's largest root	.098	0.96	12	117	.496

As the data does not show significant utilizing multivariate statistics, there is no significant difference in gender and race for student motivation of the teaching profession. Therefore, the researcher conducted a univariate analysis to explore further student motivation. The study examined the individual subfactors to determine significance based on the FIT-Choice motivational subfactors with gender and race.

The univariate statistics showed that there was no statistical significance in relation data by gender for all motivational (see Table 9).

Table 9*Univariate Statistics: F Statistics by Motivational Subfactors*

Source	Subfactor	<i>F</i>	<i>df</i>	<i>p</i>	
Gender	Ability	.03	1	.87	
	Intrinsic career values	2.59	1	.11	
	Fallback career	1.88	1	.17	
	Job security	.00	1	.99	
	Time for family	.00	1	.96	
	Job transferability	.06	1	.81	
	Shape the future of children/adolescents	.12	1	.73	
	Enhance social equity	.54	1	.46	
	Make social contribution	.00	1	.96	
	Work with children/adolescents	.25	1	.62	
	Prior teaching and learning experiences	1.83	1	.18	
	Social influences	.55	1	.46	
	Race	Ability	.33	1	.57
		Intrinsic career values	.09	1	.77
		Fallback career	4.37	1	.04
Job security		.56	1	.46	
Time for family		.39	1	.53	
Job transferability		.10	1	.75	
Shape the future of children/adolescents		1.04	1	.31	
Enhance social equity		.83	1	.36	
Make social contribution		.00	1	.97	
Work with children/adolescents		1.53	1	.22	
Prior teaching and learning experiences		1.01	1	.32	
Social influences		2.13	1	.18	
Gender * race		Ability	1.96	1	.17
		Intrinsic career values	5.05	1	.03
		Fallback career	5.00	1	.98
	Job security	.00	1	.44	
	Time for family	.00	1	.98	
	Job transferability	.23	1	.63	

Source	Subfactor	<i>F</i>	<i>df</i>	<i>p</i>
	Shape the future of children/adolescents	.38	1	.54
	Enhance social equity	1.45	1	.23
	Make social contribution	.00	1	.97
	Work with children/adolescents	1.97	1	.16
	Prior teaching and learning experiences	.05	1	.83
	Social influences	.42	1	.52

In comparison, the univariate statistics showed statistical significance in race to the motivational subfactor race for fallback career $F(1) = 4.37, p = .04$. All other motivational subfactors did not show statistical significance (see Table 9).

Comparatively, the univariate statistics showed statistical significance in gender and race to the motivational subfactor intrinsic career values, $F(1) = 5.00, p = .03$. All other motivational subfactors in relation to gender and race did not show statistical significance (see Table 9).

Therefore, the data collected by secondary students in a TA program show significant difference in a particular ethnic group in relation to viewing teaching as a fallback career and a significant difference in gender by ethnic for *intrinsic career values* within the motivation sub-factors.

Estimated marginal means and standard deviation values for gender with motivational subfactors appear in Table 10.

Table 10*Estimate Marginal Means by Gender for Motivational Subfactors*

Subfactor	Gender	<i>M</i>	<i>SD</i>
Ability	Male	5.21	.29
	Female	5.15	.12
Intrinsic career values	Male	4.90	.41
	Female	4.18	.18
Fallback career	Male	3.25	.26
	Female	2.86	.11
Job security	Male	4.45	.36
	Female	4.45	.15
Time for family	Male	4.85	.27
	Female	4.87	.11
Job transferability	Male	4.29	.37
	Female	4.19	.16
Shape the future of children/adolescents	Male	6.01	.30
	Female	6.12	.13
Enhance social equity	Male	5.38	.35
	Female	5.46	.15
Make social contribution	Male	5.65	.34
	Female	5.63	.14
Work with children/adolescents	Male	4.88	.39
	Female	5.09	.17
Prior teaching and learning experiences	Male	6.19	.29
	Female	5.77	.12
Social influences	Male	3.59	.46
	Female	3.96	.20

Students who identified as male displayed greater means in prior teaching and learning experiences ($M = 6.19$, $SD = .29$) and shape the future of children/adolescents ($M = 6.01$, $SD = .30$) as extremely important motivational factors in decision-making. Additionally, make social contribution ($M = 5.65$, $SD = .29$), enhance social equity ($M = 5.38$, $SD = .25$), and ability ($M =$

5.21, $SD = .29$) as subfactors taken into account were somewhat important considerations. Comparatively, female-identifying students had similar subfactor classification with the expectation of shape the future of children/adolescents ($M = 6.12$, $SD = .13$) as the top motivational subfactor in the teaching field following prior teaching and learning experiences ($M = 5.77$, $SD = .12$). Similar to male students, female students' ratings on the Likert scale showed making social contribution ($M = 5.63$, $SD = .14$), enhance social equity ($M = 5.46$, $SD = .15$), and ability ($M = 5.15$, $SD = .12$) as in the top half of subfactors in decision-making. Motivational subfactors unimportant in the decision for male-identifying students were viewing teaching as a fallback career ($M = 3.25$, $SD = .26$), social influences ($M = 3.59$, $SD = .46$); job transferability ($M = 4.29$, $SD = .37$), job security ($M = 4.45$, $SD = .37$), and time for family ($M = 4.85$, $SD = .27$). Similarly, female students identified fallback career ($M = 2.86$, $SD = .11$), social influences ($M = 3.96$, $SD = .20$), job transferability ($M = 4.19$, $SD = .16$), and job security ($M = 4.45$, $SD = .15$) as nonessential motivational subfactors. Intrinsic career value ($M = 4.18$, $SD = .18$) scored in the lowest five motivational subfactors. The estimated grand means for motivation outlines higher motivational subfactors for males with prior teaching and learning experiences ($M = 6.19$) and females rated higher in shaping the future of children and adolescents ($M = 6.12$). Contrary males ($M = 3.25$) and females ($M = 2.86$) signify teaching as a fallback career lower as a motivational subfactor.

Table 11 shows the marginal means by race for motivational subfactors for White and a Students of Color students.

Table 11*Estimate Marginal Means by Race for Motivational Subfactors*

Subfactor	Race	<i>M</i>	<i>SD</i>
Ability	White	5.27	.17
	Students of Color	5.09	.24
Intrinsic career values	White	4.60	.25
	Students of Color	4.47	.37
Fallback career	White	2.76	.16
	Students of Color	3.36	.24
Job security	White	4.60	.22
	Students of Color	4.31	.32
Time for family	White	4.95	.16
	Students of Color	4.77	.24
Job transferability	White	4.18	.22
	Students of Color	4.30	.33
Shape the future of children/adolescents	White	5.90	.18
	Students of Color	6.23	.27
Enhance social equity	White	5.34	.21
	Students of Color	5.69	.32
Make social contribution	White	5.64	.21
	Students of Color	5.65	.31
Work with children/adolescents	White	5.24	.23
	Students of Color	4.73	.35
Prior teaching and learning experiences	White	6.14	.17
	Students of Color	5.82	.26
Social influences	White	4.14	.28
	Students of Color	3.41	.42

Prior teaching and learning experiences ($M = 6.19$, $SD = .17$) scored the highest mean of all motivational subfactors for White students. Meanwhile, shape the future of children/adolescents ($M = 6.23$, $SD = .27$) was high for A Students of Color students. Additionally, for White students, shape the future of children/adolescents ($M = 5.90$, $SD = .18$), make social

contribution ($M = 5.64, SD = .21$), enhance social equity ($M = 5.34, SD = .21$), and work with children/adolescents ($M = 5.24, SD = .23$) were top motivational subfactors. Students of Color scored prior teaching and learning experiences ($M = 5.82, SD = .26$), make social contribution ($M = 5.65, SD = .31$), enhance social equity ($M = 5.69, SD = .32$), and ability ($M = 5.09, SD = .24$) as essential motivational subfactors. Both White and Students of Color students scored low motivation factors in social influences (White, $M = 4.14$; Students of Color, $M = 3.41$) and fallback career (White, $M = 2.76, SD = .28$; Students of Color, $M = 3.36, SD = .42$). In addition to social influences and fallback career, White students ranked the following motivation subfactors low on the Likert scale: job transferability ($M = 4.18, SD = .22$), job security ($M = 4.60, SD = .22$), and intrinsic career values ($M = 4.60, SD = .25$). Students of Color provided rankings similar to White students with a mean difference in job security ($M = 4.31, SD = .32$), job transferability ($M = 4.30, SD = .33$), and intrinsic career values ($M = 4.47, SD = .37$). The estimated grand means for motivation outlines higher motivational subfactors for white students with prior teaching and learning experiences ($M = 6.14$) and Students of Color rated higher in shaping the future of children and adolescents ($M = 6.23$). On the contrary, white ($M = 2.76$) and Students of Color ($M = 3.36$) signify teaching as a fallback career lower as a motivational subfactor.

The estimated marginal means by gender and race (see Table 12) provided detail for male and female students in conjunction with White and Students of Color race.

Table 12*Estimate Marginal Means by Gender * Race for Motivational Subfactors*

Subfactor	Gender	Race	<i>M</i>	<i>SD</i>
Ability	Male	White	5.08	.32
		Students of Color	5.33	.48
	Female	White	5.46	.13
		Students of Color	4.84	.21
Intrinsic career values	Male	White	4.46	.46
		Students of Color	5.33	.68
	Female	White	4.79	.18
		Students of Color	3.61	.30
Fallback career	Male	White	2.95	.27
		Students of Color	3.56	.44
	Female	White	2.56	.18
		Students of Color	3.16	.20
Job security	Male	White	4.46	.40
		Students of Color	4.44	.59
	Female	White	4.73	.16
		Students of Color	4.17	.20
Time for family	Male	White	4.94	.30
		Students of Color	4.77	.44
	Female	White	4.96	.12
		Students of Color	4.77	.20
Job transferability	Male	White	4.13	.41
		Students of Color	4.44	.61
	Female	White	4.22	.16
		Students of Color	4.16	.27
Shape the future of children/adolescents	Male	White	5.74	.33
		Students of Color	6.28	.50
	Female	White	6.06	.13
		Students of Color	6.19	.22

Subfactor	Gender	Race	<i>M</i>	<i>SD</i>
Enhance social equity	Male	White	4.97	.39
		Students of Color	5.78	.58
	Female	White	5.71	.16
		Students of Color	5.63	.26
Make social contribution	Male	White	5.64	.38
		Students of Color	5.67	.56
	Female	White	5.64	.15
		Students of Color	5.63	.25
Work with children/adolescents	Male	White	4.85	.44
		Students of Color	4.92	.64
	Female	White	5.65	.17
		Students of Color	4.53	.24
Prior teaching and learning experiences	Male	White	6.39	.32
		Students of Color	6.00	.48
	Female	White	5.89	.13
		Students of Color	5.64	.21
Social influences	Male	White	3.80	.52
		Students of Color	3.39	.76
	Female	White	4.49	.21
		Students of Color	3.43	.34

In summary, male White students had higher means for prior teaching and learning experiences ($M = 6.39$, $SD = .32$) in motivation subfactors. White male students who have prior teaching and learning experience have higher levels of motivation to join the teaching profession. Male Students of Color, female Students of Color, and female White respondents displayed higher means in shape the future of children/adolescents, 6.28 ($SD = .50$), 6.19 ($SD = .22$), and 6.06 ($SD = .13$), respectively. In contrast, female White ($M = 2.56$, $SD = .18$), male White ($M = 2.95$, $SD = .27$), and female Students of Color ($M = 3.16$, $SD = .20$) respondents rated teaching low as a fallback career, with comparable means to social influences of male Students of Color students ($M = 3.39$, $SD = .79$). Overall, the data showed higher means for male white students in

the motivation subfactor of prior teaching and learning experiences ($M = 6.39$) but female white students showcased the lowest mean in fallback career ($M = 2.56$) as a motivational sub-factor in relation to the teaching profession.

An equality of variance matrix assumptions was the statistic used to test the null hypothesis that the observed matrices of the perceptual subfactors were equal across groups.

Table 13

Results of Box's M Test of Equality of Variance for Perceptual Subfactors

Homogeneity of Covariance Matrices	Values
Box's M	70.5
<i>F</i>	1.45
<i>df</i> 1	42
<i>df</i> 2	4,167.93
Sig.	<.001

Checking the equality of variance assumption entailed running a Box's M test. For the perceptual subfactors, the p value for the test was significant (<.001), which meant the null hypothesis was rejected and the assumption was violated (see Table 13). Therefore, the data does not meet the assumption that all co-variances are equal. As a result, additional multivariate test will be run because of the lack of normality of the distribution of data.

Additionally, answering the second research question required comparing perceptual subfactors with the combination of dependent variables of gender and race, as shown in Table 14.

Table 14*Multivariate Statistics for Gender and Race for Perceptual Subfactors*

Effect	Test	Value	<i>F</i>	Hyp. diff	Error diff	Sig.
Gender	Pillai's trace	.06	1.31	6	123	.256
	Wilks' lambda	.94	1.31	6	123	.256
	Hotelling's trace	.06	1.31	6	123	.256
	Roy's largest root	.06	1.31	6	123	.256
Race	Pillai's trace	.06	1.23	6	123	.294
	Wilks' lambda	.94	1.23	6	123	.294
	Hotelling's trace	.06	1.23	6	123	.294
	Roy's largest root	.06	1.23	6	123	.294
Gender * race	Pillai's trace	.02	0.52	6	123	.794
	Wilks' lambda	.98	0.52	6	123	.794
	Hotelling's trace	.03	0.52	6	123	.794
	Roy's largest root	.03	0.52	6	123	.794

The MANOVA results were not statistically significant in gender: $F(6,123) = 1.31, p = .256$, Pillai's trace = .06, Wilks' lambda = .94, Hotelling's trace = .06, Roy's largest root = .06 (see Table 14). In addition, the results of race were also not significant: $F(6,123) = 1.23, p = .294$, Pillai's Trace = .06, Wilks' lambda = .94, Hotelling's trace = .06, Roy's largest root = .06 (see Table 14). The overall model (gender * race) indicated no statistical significance: $F(6,123) = .52, p = .794$, Pillai's trace = .02, Wilks' lambda = .98, Hotelling's trace = .03, Roy's largest root = .03 (see Table 14). As the data does not show significant utilizing multivariate statistics, there is no significant difference in gender and race for student perception of the teaching profession. To explore further student's perception, a univariate analysis was appropriate to determine significance in individual subfactors.

The univariate statistics presented in Table 15 showed that there was a statistically significant difference in gender for the perceptual subfactor of salary, $F(1) = 16.22, p = .01$. On the other hand, all other perceptual subfactors did not show statistical significance (see Table 15).

Table 15

Univariate Statistics: F Statistics by Perceptual Subfactors

Source	Subfactor	<i>F</i>	<i>df</i>	<i>p</i>
Gender	Expertise	.29	1	.59
	Difficulty	.21	1	.65
	Social status	1.56	1	.23
	Salary	16.22	1	.01
	Social dissuasion	.51	1	.55
	Satisfaction with choice	2.92	1	.31
Race	Expertise	2.20	1	.23
	Difficulty	.64	1	.45
	Social status	1.07	1	.33
	Salary	1.83	1	.37
	Social dissuasion	.04	1	.88
	Satisfaction with choice	1.66	1	.44
Gender * race	Expertise	.42	1	.61
	Difficulty	.01	1	.92
	Social status	.30	1	.60
	Salary	1.87	1	.36
	Social dissuasion	.15	1	.75
	Satisfaction with choice	7.26	1	.11

The univariate statistics displayed no statistical significant racially for all of the perceptual subfactors (see Table 15). According to the univariate statistics, all perceptual subfactors in relation to gender and race did not show statistical significance: expertise, $F(1) = .42, p = .61$; difficulty, $F(1) = .01, p = .92$; social status, $F(1) = .30, p = .60$; salary, $F(1) = 1.87, p = .36$; social dissuasion, $F(1) = .15, p = .75$; and satisfaction with choice, $F(1) = 7.26, p = .11$

(see Table 15). Therefore, the data collected by secondary students in a TA program show significant difference in a particular gender group in relation to salary as a perceptual factor in the teaching profession.

Estimated marginal means and standard deviation values for gender with perceptual subfactors appear in Table 16.

Table 16

Estimate Marginal Means by Gender for Perceptual Subfactors

Subfactor	Gender	<i>M</i>	<i>SD</i>
Expertise	Male	5.16	.31
	Female	4.98	.13
Difficulty	Male	5.38	.26
	Female	5.51	.11
Social status	Male	4.53	.26
	Female	4.20	.11
Salary	Male	3.64	.37
	Female	2.55	.16
Social dissuasion	Male	4.59	.30
	Female	4.78	.13
Satisfaction with choice	Male	4.73	.41
	Female	4.27	.18

Students who identified as male displayed higher means in difficulty ($M = 5.38, SD = .26$) and expertise ($M = 5.16, SD = .31$) as strong perceptual factors in the career field of education. Additionally, satisfaction with choice ($M = 4.73, SD = .41$), social dissuasion ($M = 4.59, SD = .30$), and social status ($M = 4.53, SD = .26$) were subfactors somewhat average in the perception of educators. With a mean of 3.64, salary was the lowest perceptual subfactor, thus indicating male students' perceptions of educators receiving poor compensation. Females had the same perception regarding salary with a mean of 2.55 ($SD = .16$) and difficulty with a mean of

5.51 ($SD = .11$). Comparatively, female-identifying students had somewhat similar perceptual subfactor classification, with expertise ($M = 4.98, SD = .13$), social dissuasion ($M = 4.78, SD = .13$), satisfaction with choice ($M = 4.27, SD = .18$) and social status ($M = 4.20, SD = .11$) among perceptual subfactors. The estimated grand means for motivation outlines difficulty as higher perceptual subfactors for males ($M = 5.38$) and ($M = 5.51$). Contrary males ($M = 3.64$) and females ($M = 2.55$) signify salary as lower perceptual subfactor.

The data underwent comparison and analysis. Table 16 shows the estimated grand means of the perceptual subfactors by race (White and Students of Color).

Table 17

Estimate Marginal Means by Race for Perceptual Subfactors

Subfactor	Race	<i>M</i>	<i>SD</i>
Expertise	White	4.87	.19
	Students of Color	5.27	.28
Difficulty	White	5.34	.16
	Students of Color	5.55	.24
Social status	White	4.51	.16
	Students of Color	4.23	.23
Salary	White	2.91	.22
	Students of Color	3.28	.33
Social dissuasion	White	4.66	.18
	Students of Color	4.71	.27
Satisfaction with choice	White	4.67	.25
	Students of Color	4.33	.37

Overall, White students on the estimated marginal means ranked satisfaction with choice ($M = 4.67, SD = .25$) above social dissuasion ($M = 4.66, SD = .18$); in comparison, Students of Color reversed the responses, placing social dissuasion ($M = 4.71, SD = .18$) above satisfaction with choice ($M = 4.33, SD = .27$). Similar to gender, the perception of difficulty (White, $M = 5.34, SD = .16$; Students of Color, $M = 5.55, SD = .24$), expertise (White, $M = 4.87, SD = .19$; Students of Color, $M = 5.27, SD = .28$), and salary (White, $M = 2.91, SD = .22$; Students of Color, $M = 3.28, SD = .33$) were the lowest for both racial categories. The estimated grand means for perception outlines higher subfactors for white students ($M = 5.34$) and Students of Color ($M = 5.55$) for difficulty. Likewise, white ($M = 2.91$) and Students of Color ($M = 3.28$) signify salary as a lower perceptual subfactor.

Finally, the estimated marginal means for male and female students categorized by White and Students of Color showed a high perceptual subfactor and a low perceptual subfactor similar to overall race and gender.

Table 18

*Estimate Marginal Means by Gender * Race for Perceptual Subfactors*

Subfactor	Gender	Race	<i>M</i>	<i>SD</i>
Expertise	Male	White	4.87	.35
		Students of Color	5.44	.51
	Female	White	4.86	.14
		Students of Color	5.09	.23
Difficulty	Male	White	5.26	.24
		Students of Color	5.50	.43
	Female	White	5.41	.12
		Students of Color	5.60	.19

Subfactor	Gender	Race	<i>M</i>	<i>SD</i>
Social status	Male	White	4.60	.29
		Students of Color	4.47	.43
	Female	White	4.41	.12
		Students of Color	3.94	.19
Salary	Male	White	3.27	.41
		Students of Color	4.00	.61
	Female	White	2.55	.16
		Students of Color	2.55	.27
Social dissuasion	Male	White	4.51	.33
		Students of Color	4.67	.49
	Female	White	4.81	.13
		Students of Color	4.76	.22
Satisfaction with choice	Male	White	4.54	.46
		Students of Color	4.92	.68
	Female	White	4.80	.18
		Students of Color	3.73	.30

The difficulty perceptual subfactor was the highest ranked among female Students of Color ($M = 5.60$, $SD = .19$), male Students of Color ($M = 5.50$, $SD = .43$), female White ($M = 5.41$, $SD = .12$), and male White ($M = 5.26$, $SD = .24$) respondents (see Table 18). In contrast, salary was the lowest perceptual factor for the categories of students identifying as female Students of Color and female White, with a mean of 2.55 for both groups and standard deviations of .16 and .27, respectively. Male White in relation to salary scored a mean of 3.27 ($SD = .41$) in comparison to male Students of Color expressed low means for satisfaction of choice ($M = 3.73$, $SD = .30$) (see Table 18). Overall, the data showed higher means for female Students of Color students in the perceptual subfactor of difficulty ($M = 5.60$), but female white students and Students of Color showcased the lowest mean in salary ($M = 2.55$) as a perceptual sub-factor in relation to the teaching profession.

Research Question 3

This section presents a discussion of the findings in relation to Research Question 3, What perceptual and motivational factors affect the recruitment and retention efforts of secondary students participating in a precollegiate TA in metropolitan areas? What implications do these efforts hold for enhancing overall participation in the teaching profession and for increasing the participation of students of color?

The computer software program NVivo 11 for Mac was used to analyze the Student Recruitment and Retention Questionnaire responses and the TA teacher focus group transcript. Tables 19 through 22 present the themes for student motivational and perceptual factors in the questionnaire and focus group. In each table, the item and theme indicate the common themes in the responses and examples of each. A designation of “S” means a student response with an assigned number based on the time entered into Qualtrics; “E” signifies an educator with an assigned number based on the comment order during the focus group session. Additionally, an asterisk signifies questionnaire responses by students of color.

TA students responded to the question, “What motivational factors affect secondary students into a precollegiate TA?”; in comparison, TA teachers responded to the question during the focus group, “What motivational factors affect secondary students participating in a precollegiate TA in metropolitan areas?” Based on the frequencies of words, 12 themes emerged on the motivational subfactors of the FIT-Choice survey questionnaire. Challenging the ideology of teaching as a fallback career was a common theme for students to explain their experiences of educators out in the field. Student responses—including “I was motivated by the TA teacher,” “my principal told me about the program,” “my counselor when I was selecting classes,” and “my AVID teacher in middle school”—are examples of how educators encourage students to

participate in the teaching program. The TA focus group teachers made similar observations, one identifying a teacher as a motivational factor to enroll and pursue the teaching profession. Focus group responses included “personally touched by a great teacher,” students “talk about the teachers and...know who love to teach and like kids,” and “teachers influence their view.”

Similarly, prior teaching and learning experience was a common thread in the responses, supporting the theme of prior teaching and learning experiences as exposure to education at an early age. Students identified their father, mother, or grandmother as influencing their motivation to join the TA, with one reporting being “born into a family of teachers.” Educators made similar comments during the focus group. Educators 1 and 2 saw a trend of TA students having educators as parents. Additionally, work with children/adolescents indicated the motivational subfactors influencing students’ decisions to pursue a career in education. Twenty-two students expressed some variation of “I like working with children” when answering the question about motivational factors to join the TA. Educators mentioned wanting to be an educator at an early age, making a difference in a student’s life, and choosing a helper path. The final common theme of student motivation was related to the social influences of the teaching profession.

Table 19

Theming for Student Motivation Factors

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor
S26*	I was motivated by a TA teacher, and now I’ve been in the academy for 4 years.	Influence of educators	Fallback career
E3	Personally touched by a great teacher Someone who is a model, I think they will bond to that person, and then they want to emulate that path.		
S57	I really want to go into the educational field, and my middle school principal told me about		

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor
	the program.		
S99*	My AVID teacher in middle school encouraged me to join.		
E2	When they talk about teaching, they will talk about the teachers that they know who love to teach and like kids.		
E1	Teachers influence their view of the profession.		
S110	My counselor when I was choosing courses as a new student		
E2	Influenced by...parents who are teachers.	Family influence	Prior teaching and learning experiences
S22	My dad is a teacher.		
E1	A lot of them have a parent who is a teacher.		
S23, 78	My mom was a teacher.		
S92	I've wanted to be a teacher my whole life. My grandma was a teacher, and I wanted to follow in her footsteps, so I wanted to join the TA.		
S122	I was born into a family of teachers, so I heard the change that needs to happen, and I want to be part of it.		
S2*	Working with little kids and meeting new people along the way	Working with children	Work with children/adolescents
E3	I hear students say, "I want to make a difference in the child's life."	Helping children	
E2	Internal sense that they would be teachers since they were young		
S5	My love for children and my friend		
S51*	They chose teaching as a helper path		
S14, 104	Joined the TA program because ever since I was young, I wanted to be a teacher.		
S15, 90, 115, 116	When I was little, I used to act like a teacher as in play around with dolls and stuff. I've always loved the thought of teaching, and once I heard about the program, I wanted to		

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor
	join.		
S10	I wanted a career path toward working with kids, adolescents, and the TA was the closest profession to what I have in mind.		
S16	To inspire the younger generation to become better people		
S17*	What motivated me is thinking about my future. I didn't know what my future job was 'til I got in the program.		
S18	I have always wanted to work with kids. Volunteering with children 5 and under really inspired me, and I have no doubt I want to be a teacher.		
S19*	My love for being around kids		
S20, 42	I always wanted to be a teacher growing up, and I thought this could help me determine whether or not I liked this career path since I would be working with kids and learning what it's like to be a teacher.		
S21, 38*, 39, 46, 52, 82, 87*, 101	I like working with children.		
S3*	My sister had joined when she was in 10th grade. She had brought me to Hudson Elementary when I was in 7th [grade]. I worked with the kids, so I joined the academy in 8th grade.	Influence of friends	Social influence
E3	Influential person...almost building an intrinsic motivation	Influence of family	
S9, 48	Friend has told me about it, and it seemed fun and exiting	Interactions with teachers	
S28.	I've always wanted to be a teacher and my friends told me about this class.		
E5	Knowing somebody influential who has inspired them Families support your choices and career path.		
S35, 80	I really enjoy this class, and many of my		

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor
	friends told me it was fun. I also could have a guaranteed spot for teaching after completing my years in the academy.		
S37, 65, 99*	My parents told me they thought it would be an interesting academy to try.		
E2	Personal interactions in actual school situations with teachers		

Note. “S” represents a response from a student. “E” represents a response from an educator. The asterisk (*) represents a Students of Color student’s response.

Table 20 presents the student perceptual subfactors of the teaching profession. Students responded to the question, “What perceptual factors affect secondary students into a precollegiate TA?” and TA teachers responded to the question, “What perceptual factors affect secondary students participating in a precollegiate TA in metropolitan areas?” Commonalities of the responses show intrinsic career values as a perceptual subfactor for both students and educators. Students stated, “uncredited work but can lead to burnout,” “good job...that push[es] kids to be the best version of themselves,” “teachers doing a lot for students,” and “teachers save lives and change them.” These comments aligned with those of educators, who discussed the commitment to the work, the need for passion to influence students about the profession, and “the difference a teacher can make in the lives of students.” Uniquely, the social status of teachers allowed students and educators to express their positive and negative views of educators. Overall, seven out of the 132 students explained the respect and prestigious career while noting that not all people looked down on teachers and their work. Educators discussed similar situations during the focus group, particularly male teachers who had seen parents refuse to enroll their children in a class because of the teacher’s gender.

Another topic of conversation was the social expectation of teachers being White females versus individuals of color or males. One educator echoed a male student’s words— “That’s okay for girls, but not okay for me”—in a discussion of the different expectations of male and female teachers providing comfort to female students during difficult times. The comments reflected the social status of teaching in today’s society based on the gender norms and views of males entering the teaching profession versus females.

In addition, the participants spoke about the social contribution of teachers and the difficulty of the profession. Educators commented on their experience, remarking, “We have to

love kids, regardless of the hard work.” Many students have limited experiences with teachers of color. One teacher remarked, “The only African American males that my students have experienced were coaches and PE teachers.” The participants reported struggling with negative media portrayals of educators, saying, “Teachers are getting arrested. The teachers are doing bad things.”

Students expressed how education is an underrated profession that is hard with minimal compensation. Thus, the final theme for students’ perceptual subfactor was salary, which shapes the future of children/adolescents. One educator remarked, “Students learn it’s about the student. It’s not about the teacher nor the salary.” This comment was similar to statements from students in the TA program about teacher salary. Each student discussed the difficulty of the profession with minimal or no extra pay while suggesting how to value the contribution of teachers.

Table 20

Theming for Student Motivation Factors

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
S59	My teachers do a lot of uncredited work. People don’t realize, but they can also get burnt out, and that will negatively affect students.	Hard work from educators	Intrinsic career values	
E3	Someone who’s really committed; it’s a lot of work and so on.	Difference a teacher makes		
S47	My teachers do a good job at teaching children the best they can. Also, they are good at pushing kids to be the best version of themselves.			
E2	Wrong person into these positions—that is very, very damaging to the career.			
S83	I wouldn’t do it personally, but I admire my teachers.			

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
E5	Making a difference within the high school			
S118	I believe my teachers do a lot for students in the sense that they are teaching the future generations and saving them, [turning them] into bright minds who will be leading the world one day.			
S7	I believe that teachers save lives and change them, as well. Without the teaching profession, there wouldn't be very creative and innovative ways of learning.			
S10	I think that teachers are respected but not respected enough. As in people don't think of how teachers feel and what they got through. I think that teachers are doing a very important job and should be respected a lot more.	Respect associated with teaching		Social status
E3	[White] females are the ones that take care of the little ones, and so I'm working on trying to change that, too.	Males vs. females in education		
S11	I see the teaching profession as a respectable field, although many people look down upon it in one way or another.	Students' personal view of teachers		
E2	Moms refuse to register the student in the class because they make assumptions about males and you teach elementary. A student stated, "That's okay for girls, but not okay for me."			
S14, 121	I feel that too many people don't realize how much teachers do daily. They are in charge of shaping our future generations while they're still looked down upon. Once I am a teacher, I hope to change this.			

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
E1	If a female student is having a bad day, a female teacher hugging the students [is] okay, but if a man hugged the young girl, that is not okay.			
S26*, 104.	I believe teaching is a very prestigious and rewarding career.			
S96*	I view the teaching profession as an extra field to go into			
S105, 106	Molding the new generation, influencing their values, beliefs, and more. Doing all this hard work for little pay.	Low salary	Shape the future of children/ adolescents	Salary
E3	Students learn it's about the student, it's not about the teacher or the salary.	Influence of teachers on students		
S8	I believe that teachers can have a huge impact on a student's life with little to no pay.			
S13, 30*	I think teachers are the single most important aspect to our future of society and the key to new advances, although I believe they are underappreciated and not paid well despite everything they do for society.			
E1	We have to love kids regardless of the hard work. Teachers in the news and in the media are negative.	Media perception of educators		Difficulty
S3 *	I think it's such an underrated profession, and it doesn't get enough recognition from people.	Work difficulty		
S6, 122	I feel that it's a hard job, and it requires a lot of hard work.			
S17*	I think it's a hard but fun profession and that you could help so many students.			
S105, 106*	Molding the new generation, influencing their values, beliefs, and			

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
E5	more. Doing all this hard work for little pay. Teachers are getting arrested. The teachers are doing bad things.			

Note. “S” represents a response from a student. “E” represents a response from an educator. The asterisk (*) represents a Students of Color student’s response.

Students answered the question “What factors assist with recruiting students into the teaching profession or the teaching academy program?” and educators responded to “What recruitment efforts assist students in joining the teaching profession or the teaching academy program?” The motivational and perceptual subfactor recurring themes from the student recruitment and retention questionnaire and the TA focus group were social influences, fallback career, job security, shape the future of children/adolescents, and salary (see Table 21). Students and educators discussed salary as a perceptual factor and job security as a motivational factor that could assist with recruiting individuals into the teaching profession. Table 15 shows statistical significance in the univariate analysis, $F(1) = 16.22, p = .01$, for gender in salary. Male students view educators as having low salaries ($M = 2.55$; see Table 20). Job security showed similar averages for male and female students ($M = 4.45, M = 4.45$; see Table 10) as low subfactors in the FIT-Choice motivational construct survey (see Appendix B). Students discussed the TA and the importance of receiving a job after completing the program’s requirements, although mentioning the low pay of teachers (Students 8, 9, 29, 36, 47, 50, 69, 85, 88, 100, 102, and 110). Educators discuss how “money is a factor” for career decision-making (Educator 4) and that they expected “new pay raises for beginning teachers” (Educator 1) as perceptual factors in recruitment. In addition to the importance of salary, it was important to remind TA program

students about the benefit of job security—in other words, receiving a job as an educator after completing the requirements (Educator 5).

Fallback career displayed univariate statistical significance $F(1) = 4.37, p = .04$ (see Table 9) for race. Whites showed a low mean of 2.76 (see Table 11) for the motivational subfactor of fallback career, as in selecting education as an alternative career. Although teachers observed that educators influenced students in making teaching a fallback career, students identified teaching as a primary choice based on the internal and external benefits. A common benefit cited by students and educators was the theme of shape the future of children/adolescents. Although the data did not present notable statistical significance, the estimated average means were high for female students ($M = 5.09$) when reviewing motivation factors in choosing education as a future profession (see Table 10). As students overall had a higher motivation for working with children, there was a suggestion for marketing the opportunity to work with children/adolescents and engage in activities with younger students. Similarly, educators discussed how working with children can serve as a “test drive” (Educator 5) to solidify the motivational factor of choosing education as a career path.

The final common theme regarding student retention in the TA program and the teaching profession was the social influences of students and educators in the education field. Male, female, White, and Students of Color students were low in motivational factors, with means of 3.56, 3.96, 4.14, and 3.41, respectively (see Tables 10 and 11), for individuals believing they should join the teaching profession. Students and educators had a common theme of using other students or advertising to help with recruitment. The responses—including “last year, people came into my class,” “having students in the academy give other recommendations,” “my students are my recruiter and go after the top kids,” and “motivated by friends, mostly if you

have high-power people”—suggested the common theme of using students to recruit others into the TA program. Additional types of recruitment cited were advertising and social media.

Table 21

Theming for Student Recruitment

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
S32*	Last year, people came into my class as a choice for high school electives, and I thought it would be a fun opportunity, so I chose it.	Advertisement of program	Social influence	
E4	How to help Hispanic and African American male students to see themselves as teachers	Students as recruiters		
S14, 38*, 59, 84*	The best way to recruit students is by advertising. Many people think that it’s only for people who know they want to be taught when, in reality, it’s for anyone.			
E3	My students are my recruiter and go after the top kids.			
S39, 41, 61, 66, 117	Getting the word out there, posters, social media, in conversations. Many students don’t know what the academy is truly about.			
E1	Motivated by friends, mostly if you have some high-power people			
S43	Definitely having students in the Academy gives other recommendations to the Academy. Also, by letting students come in to watch what happens.			
S27	I’ll tell others about the program, how fun it is, and beneficial. Also gives you an idea to make education my first choice.	Conversations with teachers	Fallback career	
E2	Teachers are telling my students to not become teachers and not encouraging it as a first-choice			

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
	career.			
S23	Ask questions, such as: Do you like working with children? Do you have patience? Are you interested in becoming a teacher? If you answered yes, make education your first choice.			
S8, 9, 36*, 69*	Tell them about all of the fun experiences that they would be a part of and that you would be a guaranteed teacher by the end of high school.	Benefits financial	Job security	Salary
E5	Making a difference in...the high school as a future teacher	Benefits of the TA program		
S29, 85, 100, 102, 110	I say include them working with kids and how they will be teachers after			
E4	Money is a factor...and supporting families.			
E1	New pay raise for beginning teachers			
S47, 88	Strategies would be explaining to other students how beneficial the academy is, such as getting a teacher job after			
S50	I would tell them what we do and how us becoming teachers can better our education system so they have more young teachers.			
S5	It is a very valuable job, and they should get paid more because they contribute to society so much.			
S63	I was at a career fair, and I saw a poster for it and thought it might be interesting because I like working with kids.	Opportunities to work with children	Shape the future of children/ adolescents	
S2*, 13, 18, 24*	I would let them know all of the fun activities we do and let them know they belong.	Activities		

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
S34	<p>Maybe just telling you about the activities you do and how you could become more social through the class period because I know people through the pandemic lost the ability to socialize.</p> <p>E5: Give kids an opportunity to test-drive teaching...to see if they really like it.</p>			

Note. “S” represents a response from a student. “E” represents a response from an educator. The asterisk (*) represents a Students of Color student’s response.

Table 23 presents the answers to the student question, “What factors assist with retaining students into the teaching profession or the teaching academy program?” and teacher question, “What retention efforts assist students in joining the teaching profession or the teaching academy program?” The common themes related to this question were the motivation subfactors of intrinsic career values, shape the future of children/adolescents, and classroom environment, although not included in the FIT-Choice survey sub-factors, as the social contribution of the teaching profession and perceptual subfactor of difficulty (see Table 22). Intrinsic career value showed significant statistical significance in the univariate analysis, $F(1) = 5.05, p = .03$ (see Table 9), for gender and race subgroup. Male Students of Color showed the highest mean of 5.33 for intrinsic career values within the motivational subfactors (see Table 12). In contrast, difficulty showed higher means for perception in race and gender with a mean score of 5.38 for males, 5.51 for females, 5.34 for White, and 5.55 for Students of Color (see Tables 16 and 17). Students discussed the importance of the end goal and skills received while enrolled in the TA program. Focusing on the end goal and the difficulty of the career path to create a positive

change was a topic mentioned by nine students. Educators are motivating students to return to the TA; students are returning because of the focus on the skills obtained through the TA.

Although the motivational subfactors shape the future of children/adolescents, prior teaching and learning experiences, and social contribution did not have a significant statistical impact in the univariate analysis, the estimated grand means were high for a variety of demographic groups. Shape the future of children/adolescents resulted in high means for females ($M = 6.12$) and White students ($M = 6.23$; see Tables 10 and 11), and prior teaching and learning experiences scored the highest means of male ($M = 6.19$) and female ($M = 5.77$) students (see Table 10). Students 10 remarked, “The academy is already really fun and I enjoy it. I think my teacher is doing plenty of good things for students.” Students are learning how to shape other students’ future, and the TA teachers are motivating the future teachers. Student questionnaire responses included opportunities to work in the curriculum, activities, and internship as retention techniques to keep students in the academy and motivated to join the profession. Educators were similarly focused on the teacher chosen to be part of the TA program, with one teacher remarking, “The most damage that a district can possibly do is hire the wrong person to go into a program like this.” Activities and assignments create the tools for future educators to shape students’ lives.

Similarly, to shape the future of children/adolescents, the social contribution is a motivational factor for student retention. The social contribution educators provide resulted in high means for all individual demographic categories of male, female, White, and Students of Color, with respective means of 5.65, 5.63, 5.64, and 5.65 (see Tables 10 and 11). The TA teachers provide a place for future teachers to learn and an environment of belonging (Student 12, Student 123, and Educator 1). TA teachers creating an environment of learning with choice and

control will create an atmosphere of learning, thus making social contributions in future educators. Producing an environment inclusive for all students allows younger students of color to see diversity in the future of education. Internships should include “high school kids pairing with elementary school students and Hispanic boys seek[ing] Hispanic males...[and] Black boys...try[ing] to have Black male partnering” as mentioned by teacher 3. In this way, the effects of the role students play in the lives of younger students will become apparent.

Table 22

Theming for Student Retention

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
S8,9 27, 44*, 71*, 80, 98, 119, 127	I would say that you would be able to be a teacher if you complete the program and work hard.	Hard work of teaching	Intrinsic career values	Difficulty
S30*	This class is not just about teaching; this class teaches you life skills.	Benefits of the class		
S58, 68	Having a strong teacher and support like my teacher			
E1	I surveyed them at the beginning of the year about maybe a third of them wanted to be teachers and now we have 100% returning to the teaching academy next year.			
S10, 105	The academy is already really fun and I enjoy it. I think Mrs. X is doing plenty of good things for students who want to come back.	Activity completed in class	Shape the future of children/ adolescents	
S63	Students helping the teacher with retaining strategies	Activity with children	Prior teaching and learning experiences	
S3*, 4*, 5,	Just having hands-on and fun activities for students to work on	Helping students		

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
129, 130*	and always having the opportunities to work with kids			
S29, 74	Keep fun activities involved and work with peers and children. Introduce how teachers work and build a rapport with them until they trust you to become close with you and your classroom.			
S32*, 64, 88, 40, 44*, 45, 59, 109*	Allowing students to visit lower-grade schools (such as elementary and middle schools) as a field trip			
S94 *	Keep our fun Fridays and the way we learn in the class [group projects]			
S53*, 62, 84*	Let them experience the teaching career; do things relating to teaching, like lesson planning, presentations, and collaborating in group work			
E5	Inviting families and students to see the good work that we're doing and maybe doing a Q&A session			
E1	The social skills of teaching; we're getting to know each other			
E4	The types of assignments that you provide for them also have built a lot of confidence, and being able to present and share			
S7, 76	Students work better with you when they feel heard and respected. Also being welcome to all students and being a friend while also being a teacher.	Learning environment	Make social contribution	
S13, 123	I believe our program at our school allows for unique fun experiences along with classroom environments that feel like family. I believe this is super important because it makes	Classroom experiences		

Item	Example data from questionnaire or transcript	Theme	Motivational subfactor	Perceptual subfactor
	you want to do better for your class.			
S18, 60*	Having a positive and fun learning environment with choice and control			
E1	Teaching academy classroom, it's a place for them to fit in.			
E3	High school kids pairing with elementary school students and Hispanic boys seek Hispanic male...Black boys make a dive to try to have Black male partnering.			

Note. “S” represents a response from a student. “E” represents a response from an educator. The asterisk (*) represents a Students of Color student’s response.

Summary of Chapter Four

This chapter presented the data collection process, sample demographics, and data analysis results to answer the three research questions about student motivation and perception concerning recruitment and retention strategies. Data were from 132 secondary students in TA programs in three Florida public school districts who completed the FIT-Choice Motivation Construct survey (see Appendix B), FIT-Choice Perception Construct Survey (see Appendix C), and Student Recruitment and Retention Questionnaire (see Appendix D). There was also a focus group of three TA teachers and a representative of the University of Central Florida faculty who works closely with the TA teachers statewide. The focus group encompassed answering four questions related to student motivation, perception, recruitment, and retention within the perception of TA teacher related to research question 3.

Answering the first research question entailed using descriptive statistics to review the comprehensive data collected about secondary students. The results showed the highest means

for the motivation subfactor shape the future of children/adolescents. In contrast, fallback career had the lowest mean of all subfactors for secondary students in the motivational subfactors outlined utilizing the FIT-Choice survey. Regarding the perceptual subfactors, difficulty scored the highest regarding the average perception of the teaching profession. Meanwhile, salaries scored the lowest on average for secondary students in the three school districts.

Answering the second research question entailed conducting a MANOVA and univariate ANOVA for the individual motivation and perceptual subfactors. The results showed no statistical significance in gender and race for student motivation and perception. The univariate ANOVA conducted in SPSS showed three statistically significant subfactors: fallback career for race, intrinsic career values for gender and race, and salary for gender.

For the third research question, the researcher conducted coding and theming for the student recruitment and retention questionnaire and TA teacher focus group responses using NVivo 11. The results indicated the following recurring themes for motivation by students and educators: fallback career, prior learning and teaching experiences, work with children/adolescents, shape the future of children/adolescents, societal contribution, intrinsic career values, and social influences. Furthermore, regarding perception, social status, salary, and difficulty as common subfactors appeared the most frequently in the questionnaire. Data triangulation indicated recruitment strategies to address social influences, fallback career, job security, salary, and work with children/adolescents. Finally, data triangulation indicated retention strategies to address intrinsic career values, difficulty, shape the future of children/adolescents, prior teaching and learning experiences, and social contributions within the classroom environment.

CHAPTER FIVE: SUMMARY, DISCUSSION, RECOMMENDATIONS, AND CONCLUSION

Introduction

The present study was a means to understand the motivation and perception subfactors of the teaching profession for secondary students in the TA program. GYO programs, such as TA, allow secondary students to explore the education profession. In addition, GYO programs address teacher shortages, retention problems, and diversity issues by recruiting teachers to create a diverse pool of candidates (Garcia et al., 2019; Valenzuela, 2017). Therefore, investigating the perceptions and motivations of TA students could increase the number of College of Education graduates, especially individuals of color, filling school district openings (Martin & Mulvihill, 2016).

A literature search of GYOs across the United States centered around recruiting paraprofessionals, substitutes, community activists, religious leaders, custodial staff, parents, and local community members to become teachers (Gist et al., 2019; Goodlow et al., 2020; Rogers-Ard et al., 2019; Valenzuela, 2017). The current study focused on secondary students and motivational and perceptual subfactors to better address recruitment and retention across TA programs. This mixed methods study used qualitative data from the FIT-Choice motivational and perceptual construct survey and qualitative data from a student recruitment and retention questionnaire and a focus group of TA teachers in three Florida school districts.

The quantitative analysis included descriptive statistics, MANOVA, and univariate analysis to understand the relationships outlined by the FIT-Choice Motivation and Perceptual construct survey subfactors. Furthermore, the qualitative analysis entailed theming to identify

repetitive words and phrases for motivation and perceptual subfactors to address recruitment and retention strategies for secondary students into the TA and the teaching profession.

Summary of the Study

The TA program nurtures perception and motivation in recruiting students into the profession while providing the structure and resources to prepare future teachers for success. Therefore, a school district's implementation of a TA program could target a particular race or gender therefore beginning to diversity the teacher pipeline to better reflect the diversity of the student body. In addition, by understanding the motivation and perceptions of students considering the teaching profession, educational leaders increase student enthusiasm to enhance the district's teacher pipeline.

This mixed methods study was an exploration of factors that served as recruitment and retention efforts for student participation in a precollegiate TA program. Additionally, there was an examination of the intersection of race and gender of secondary students interested in the teaching profession and participating in a precollegiate TA program. The findings could help school districts with strategic recruitment and retention efforts emphasizing motivation and perception, fulfilling the TA purpose of fostering teachers of color at an early age.

Research Questions

The research questions of this study were:

1. What does the FIT-Choice scale show about the motivations and perceptions of secondary students in metropolitan areas interested in the teaching profession?
2. Is there a relationship between demographic characteristics (i.e., race and gender) in the motivations and perceptions of the teaching profession of precollegiate TA students in metropolitan areas?

3. What motivational and perceptual subfactors affect secondary students' recruitment and retention efforts participating in a precollegiate TA in metropolitan areas? What implications do these efforts hold for enhancing overall participation in the teaching profession and for increasing the participation of students of color?

The conceptual framework outlined specific components influencing teacher education programs. The lens of professional standards-based expectations of teacher preparation programs allowed for further understanding of how the TA program's structure prepares students for the education field.

The mixed methods approach was appropriate to provide a thorough understanding of the motivation and perceptions of students joining the teaching profession through qualitative and quantitative data. Collecting the qualitative data was through a five-item questionnaire focusing on recruitment and retention strategies for secondary students. Qualitative data collection occurs by studying a naturally occurring phenomenon in its entirety (Fraenkel et al., 2015); thus, the data are written or nonnumerical. The questionnaire and focus group required participants to reflect on what recruited and retained them in the TA. Students and educators also provided examples of recruitment and retention strategies to increase enrollment, especially among students of color. Quantitative data are valued by a numerical continuum of being motivational and perceptual factors influencing participants strongly to having no impact. Researchers collect data numerically to determine the factors which correlate to the purpose of the study. Therefore, the present study utilized the FIT-Choice survey to categorize educators' perceptions and motivation for secondary TA students.

Summary and Discussion of Findings

Research Question 1

The first research question targeted the difference in means for the overall sample size in motivational and perceptual subfactors. The results of the descriptive statistics indicated a higher mean ($M = 6.07$; see Table 5) in shape the future of children/adolescents for motivational factors. Overall, the results of this study were consistent with the research, particularly as explained by Bergmark et al. (2018), and the opportunity for teachers to impart valuable information for students at an early age and foster the skills to a good citizen. In addition, the results showed a higher mean in the perceptual subfactor of the teaching profession's difficulty ($M = 5.44$; see Table 6). Thus, students are "preparing for the worst and expecting the best" (Bergmark et al., 2018, p. 127) regarding their first year in the profession and the high levels of accountability in PK–12 schools.

In addition, the results indicated a lower mean for fallback career ($M = 2.78$; see Table 5) among the motivational factors. The results aligned with Alexander et al. (2020), as fallback career was the lowest motivational subfactors for in-service teachers. Alternately, the data collected showed lower means of salary ($M = 2.69$; see Table 6) for perceptual factors of choosing education as a career. Among the data provided by urban high school students of color, salary had the lowest mean, corresponding with the perceptions of teachers receiving low pay (Leech et al., 2019).

Research Question 2

Answering the second research question required examining the ANOVA utilizing a MANOVA and a univariate approach for the motivation and perceptual subfactors in the FIT-Choice survey. The MANOVA did not show statistical significance for gender and racial groups

(see Table 18). In comparison, Alexander et al. (2020) found statistical significance in gender for preservice teachers. Overall, this study did not show significance when conducting a MANOVA compared to Alexander et al. (2020) study.

A univariate analysis was the statistic used to explore the individual subfactors in the motivational and perceptual construct survey in response to the lack of statistical significance. Fallback career resulted in statistically significant results for race, $F(1) = 4.37, p = .04$ (see Table 9). The estimated mean was lower for Whites ($M = 2.73$; see Table 11) versus Students of Colors ($M = 3.36$; see Table 11), although both data points were the lowest in the overall perceptual subfactor. An instructor in Hubbard et al.'s (2015) study said, "I already knew I did not want to teach but having such a great group of kids has confused me" (p. 72). The data from this study, and particularly a student quote mentioned above, showed similar results when exposing students to the field of education. Creating awareness for students of teaching as a potential career choice can challenge the ideology of teaching as a fallback career or last resort (Coffey et al., 2019).

This research study showed statistical significance in gender and race to the motive subfactor intrinsic career values, $F(1) = 5.00, p = .03$ (see Table 9). An analysis of the estimated marginal means showed male Students of Colors as having higher mean intrinsic career values ($M = 5.33$; see Table 12) versus other ethnic and gender groups (i.e., female Students of Color, female White, and male White). Thus, intrinsic motivation is the primary reason for entering teacher education (Gaylor & Nicol, 2016; Malmberg, 2006; Manuel & Hughes, 2006). As a result, the inherent satisfaction drives Students of Color males to join the field of education. A Latino participant in Irizarry's (2011) study stated, "Many Latinos don't have the opportunity to go to college and be a teacher. I want this for me and for those kids to come behind me"; another student explained, "I want to be a teacher to help kids like me and to improve education in my

community” (p. 2825). The two quotes from male Latinx students showed the challenges they faced in the United States, which led to their motivation to make a difference in students’ lives by joining the teaching profession.

The final subfactor with statistical significance was the perceptual subfactor of salary, $F(1) = 16.22, p = .01$, for gender (see Table 15). The estimated marginal means showed low averages for female ($M = 2.55$) and male ($M = 3.64$) students who scored salary as the lowest in all perceptual subfactors (see Table 16). Alexander et al. (2020) conducted a similar study with mostly female participants and found salary was one of the lowest perceptual factors. Likewise, in the first study to validate and develop the FIT-Choice survey, Watt and Richardson (2007) presented similar data with a majority-female sample who held a low perception of salary in the United States.

Research Question 3

The third research question pertained to the common themes from the Student Recruitment and Retention Questionnaire and the TA focus group. Frequent themes in motivational and perceptual subfactors for students to join the teaching profession and the TA were prior teaching and learning experiences, fallback career, work with children/adolescents, and social influences. Furthermore, the common themes for retention encompassed motivation and perceptual subfactors, such as intrinsic career values, social status, shape the future of children/adolescents, salary, and difficulty. All the motivational and perceptual subfactors presented thus far in the chapter appear in the following section on triangulation, except for social status. The social status subfactor emerged from the quantitative data but remained average in the qualitative data compared to the other subfactors.

Data triangulation showed trends from the qualitative (FIT-Choice motivational construct survey and FIT-Choice perceptual construct survey) and quantitative data (Student Recruitment and Retention Questionnaire and TA focus group). The subfactors that emerged for recruitment were social influences, fallback careers, job security, salary, and work with children/adolescents. The social influences of the study did not show significance, contrasting with Leech et al. (2019), who found statistical significance. The social influences in both studies indicated low means of believing that friends, family, and other students should become teachers.

The overall notion of promoting positive experiences led to a higher number of students joining the teaching profession (Fletcher & Diccio, 2017; Fletcher et al., 2016). As a result, as students explore career options, conversations with family members, peers, and especially teachers are vital to recruiting students into the TA program and the teaching profession. Another factor was teaching as a fallback career instead of a primary choice. The present study showed statistical significance for Whites not viewing education as a fallback career, which aligned with Richardson and Watt's (2006) findings of similarly lower means among preservice teachers. Meanwhile, a study conducted of students in the TA showed higher means of teaching as a fallback career (Leech et al., 2019).

Marketing is an essential component of recruiting students into a TA program to provide exposure to a career field that needs more individuals. After students joined a TA program, there was a 65% increase in students changing their thinking and ranking becoming teachers a top priority (Carothers et al., 2019). Therefore, exposure into the teaching profession at an early age can influence secondary students to consider education as a main profession.

Job security was a subfactor commonly mentioned in the questionnaire and focus group. Although this study showed above average means for job security, Leech et al.'s (2019) research

with secondary students in a TA program showed higher means for job security. In Leech et al.'s study, the students received guaranteed employment after graduation. In the current study, only one of three school districts guaranteed a job; the other two school districts only promised an interview with the district. The goal of the TA program is for students to seek employment in their home district after graduation (Bianco & Marin-Paris, 2019). Therefore, the data displayed the inequity of job security based on the benefits of completing the TA program.

In addition to job security, salary was a common subfactor in the qualitative and quantitative data. In line with a study of secondary students in a TA (Leech et al., 2019), the participants in the current study showed a low mean on the perception of salary for the teaching profession. As stated in the study conducted by Karaca (2011), the role of wages influences the perception of educators in the K-12 classroom. Students in this study mentioned the lack of adequate pay for the hard work teachers do, as salary does not correlate with the number of hours teachers invest in helping their students every day. Carothers et al. (2019) attributed the low number of students joining the teaching profession to the low salary of educators. As school districts recognize the pay incongruity, they might provide salary incentives to help offset the imbalance and recruit more students into teaching (Whipp & Geronime, 2017).

One of the highest means for students' motivational and perceptual subfactor in this study and Leech et al.'s (2019) was the opportunity to work with children/adolescents. Manuel and Hughes (2006) found that although most individuals expect teaching to be a challenging career, 70% of teachers expect to be in the profession within 10 years because of the opportunity to work with students. TA program enrollees can work with students in a classroom setting. A student who participated in a TA program told Fisher-Ari et al. (2018), "The more time I spent in

education, the more it grew on me. I guess it was a sort of hidden talent that I had not realized” (p. 65).

The following subfactors were considerations related to retention: intrinsic career values, difficulty, shape the future of children/adolescents, prior teaching and learning experiences, and make social contribution. Intrinsic career values and difficulty were subfactors when discussing retention for the teaching profession. Manuel and Hughes (2006) and Richardson and Watt (2006) established intrinsic career values and difficulty as high factors for preservice teachers’ motivation. Students acknowledged the challenge of the teaching profession and the internal satisfaction of making a difference because of their internal actions. Students also recognized the need to foster this intrinsic motivation to provide students with the tools necessary to become impactful teachers. The precollegiate model identifies eighth graders and cultivates their interest in becoming educators while building their teacher toolbox to be successful in the field (Coffey et al., 2019). Therefore, the opportunity to shape the future of children/adolescents with prior teaching and learning experiences helps with retaining students in the academy and the teaching profession. Both subfactors had higher means in a study by Watt and Richardson (2006). The subfactors pertained to the hard work and activities in the TA classroom to assist with creating instructional pedagogy to impact students. The TA program disrupts the education inequalities and empowers students to become teachers, especially students of color (Bianco & Marin-Paris, 2019).

As students experience the reality of inequalities in education, the opportunity to work with students helps shape the mindset of future educators. Utilizing their experience in a TA program allows students to strengthen their motivation to shape the future of children/adolescents (Brand et al., 2013; DeFeo, 2015). As a result, make social contribution was the final

subfactor when considering student retention based on the data collected from the survey, questionnaire, and focus group. The current study showed make social contribution as one of the top three motivational subfactors, findings similar to Richardson and Watt (2006) and Leech et al. (2019). Students' desire to make a social contribution is a motivational factor in pursuing the TA and the field of education. The humanistic commitment to make a difference in the lives of disadvantaged children allows students to understand they make a difference (Ingersoll et al., 2018).

Implementation of Practice and Policy

This section addresses the implications of the current study. The findings present the motivation and perceptual subfactors significant to secondary students by race and gender. Quantitative and qualitative data analysis indicated that school districts' recruitment and retention strategies increased the enrollment of secondary students in the TA program and fostered an interest in the teaching profession while focusing on diversification. The purpose of this study was to explore the motivational and perceptual factors of recruitment and retention strategies to address the low number of individuals joining the teaching profession.

Regarding recruitment, receiving positive feedback for becoming a teacher at an early age can lead students to pursue the profession. Teachers, administrators, and school counselors having conversations with students about teaching as a possible career choice could motivate more students to join the TA and the teaching profession (Miller et al., 2019; Nikirk, 2007). In addition to formal discussions, students' prior teaching and learning experiences influence recruitment into the TA program (Fletcher et al., 2019).

Conversations with both adults and other students can provide interested youth with a better understanding of the teaching profession and the opportunity to explore a new career

choice. Friends in the TA program can recruit more students into the program and the teaching profession (DeFeo, 2015); similarly, alumni referrals increase the number of students considering joining the TA (Goodlow et al., 2020). Students in the TA promote the program during information sessions at the local high school and middle schools by talking about their experiences (ETS, 2019). In addition to word-of-mouth recruitment, advertising strategies focused on promoting the TA program can increase students' awareness of the TA and teaching as a possible career choice (Hubbard et al., 2015; Miller et al., 2019). Increasing TA program awareness and outreach can also be through a website, Facebook, Google AdWords, television commercials, or even the school or local newspaper (Miller et al., 2019; Nikirk, 2007).

TA program enrollment facilitates early recruitment of students to the teaching profession, as TA students can work with children and adolescents. The TA can foster passion and fulfillment through education (Fisher-Ari et al., 2018). The TA curriculum provides instructional strategies and tools for students to give back to other students. As a result, the early teaching experience and internship increase the recruitment of students into the education profession (Fletcher et al., 2019). In conjunction with the curriculum, community outreach and projects are recruitment opportunities involving interacting with students at school and community events (Faulkner, 2018; Nikirk, 2007).

Motivational and financial incentives assist with increasing student recruitment into the TA program and education profession. Some districts offer \$3,000 grants for students to teach in their home districts (Miller et al., 2019). The TA students in this study had guaranteed jobs or interviews after graduating from a College of Education program. Not only were students offered financial incentives when joining the teaching profession, but they could also offset their postsecondary tuition cost through dual enrollment, earning both high school and associate's

degrees (Bishop-Clark et al., 2010; Carothers et al., 2019; Dare, 2006). The skills students gain in the TA program allow them to be successful as teachers, making teaching a possible first-choice career. Students can also earn Microsoft Office Certification in the program (Fletcher, 2016). In addition, professional skills, such as challenging social justice and combating misalignment of values, contribute to the intrinsic motivation to make a social contribution (Smith-Kondo & Bracho, 2019a).

The findings from this study suggested the need for tools and understanding to improve retention in TA programs and the teaching profession. Supporting preservice candidates with mentors and training on how to teach content enables them to participate in professional learning communities, create a culture of collaboration, and develop a network of support outside of campus (Hubbard et al., 2015). The intrinsic career value to help students support students in the future motivates youth to stay in the program and receive personal enjoyment. Students will need to build upon their pedagogical knowledge through internship experiences in an elementary, middle, and high school with varied student populations to feel confident in their skills to become teachers (Irizarry, 2011; Whipp & Geronime, 2017).

Additionally, the opportunity to shape the future of children and adolescents assists with the retention of students into the TA program and the education profession. Students have the opportunity to work in classrooms to create positive relationships with students and mentoring teachers (Ronfeldt & McQueen, 2017). The skills learned in the TA program can build capacity in secondary students to develop confidence in their abilities to shape the lives of children at an early age. Students experiencing internships at the start of the program through classroom visits or community events are more engaged to stay in the program (Fletcher et al., 2016). Additionally, the societal contribution assists with the retention of students in the TA program

and education field. TA program attendees can feel empowered by seeing other students succeed as classroom teachers (Hasselquist & Graves, 2020; Ingersoll, 2004). A TA program's design focuses on coursework, clinical experiences, and mentoring (Ingersoll, 2004; Whipp & Geronime, 2017), providing a foundation for students to obtain the knowledge to be successful teachers. Therefore, a mentor or TA teacher plays an essential role in students entering the education field (Goings, Brandehoff, & Bianco, 2018).

School districts seek to recruit and retain teachers of color to return to their communities (Garcia, 2020; Goodlow et al., 2020; Miller et al., 2019), focusing on individuals of color to understand their needs in the profession. In addition, school districts can provide role models and mentors to TA students of color to help them develop goals and transition to college, acquiring fundamental problem-solving and college skills to succeed at postsecondary institutions (Bragg & Ruud, 2007; Kotamraju, 2007). Most importantly, many students of color decided to join the teaching profession based on prior teaching and learning experiences. Irizarry (2011) found that Latinx students have similar experiences in their teacher education programs and K–12 education. As a result, educators must model expected behaviors to recruit and retain students of color into the TA and the education field.

Recommendation for Further Practice and Policy

There are several recommendations for further research. The current study had a sample of 132 students across three Florida school districts. A larger sample comprised of predominantly male students of color would provide a more diverse understanding of motivation and perceptual subfactors for this group. A greater sample size can strengthen the assumptions of a normal distribution. Similarly, a study conducted by Adams and Woods (2015) who explored the

recruitment and retention strategies for Teachers in Alaska by exploring the data within the northern rural areas to better explore practical implications.

This study focused on the categorical demographics of secondary students by gender and race. Adding the demographic categories of metropolitan and micropolitan locations could assist school districts in remote areas. Sexual orientation could be another demographic, as teachers have LGBTQ+ students in their classrooms (Brockenbrough, 2012). As the TA program aims to increase the teacher pipeline, it is crucial to understand various groups' motivation and perceptual factors and any statistical differences aside from gender and race.

Data collected in this study were from secondary students focusing on gender and race. Additional factors to explore would be students' grade levels and number of years of TA program participation to see if these influence motivation and perception (Bianco et al., 2011). The curriculum outlined in the TA program provide unique experiences for secondary students. For example, students in their fourth year into the TA program are provided with an internship to instruct younger grades (FLDOE, 2020). As increase exposure of the teaching profession may provide further influences related to student motivation and perception within the years of enrollment in the program.

The students participating in the study were in a TA program. Future researchers could collect data from students not in a TA program to explore any additional subfactors statistically significant, especially in the perception of the teaching profession. Therefore, a researcher could conduct a comparison study exploring the influence of the TA in student's motivation and perception in reference to the teaching profession. Similarly, to a study conducted in the United Kingdom, Giersch (2019) researched the motivation of students entering a teaching education program versus non-education majors.

Researchers could expand the sample population and compare precollegiate TA programs, students presently enrolled in teacher preparation coursework, and current teachers in the field. In addition, a larger sample size would allow for the exploration of educators' perspectives at different stages of their careers. Such a study could show the motivational and perceptual subfactors and their statistical significance in teachers' number of years in service. As researched by Bianco, Leech, and Mitchell (2011), discussed how students who enrolled in a first-year college course (Introduction to Urban Education) created or enforced their motivation to join the field of education as represented in the FIT-Choice survey analysis. Therefore, exploring the number of years in a teacher preparation program influence a student's motivation and perception based on the criteria set by the FIT-Choice survey.

Implementation and fidelity of the TA is essential to the success of generating more students into the teaching profession. As expressed in the results, the TA teacher played a significant role in retaining and recruiting students into the program. Therefore, school districts can use this study to inform policy regarding an allocation for a TA teacher. An allocation dedicated to a TA teacher allows for someone to actively recruit and retain students therefore increasing the number of future teachers. As most TA teachers are currently teaching additional courses or have additional responsibilities, time and effort cannot go towards the intent of the TA program. If an educator does not have the proper resources or time to allocate towards a developing a program, the program implementation becomes ineffective and fails within the first five years (Johnson et al., 2017).

Conclusion

The present research was a study of the motivation and perceptual subfactors of secondary students in a TA program. In addition, there was an examination of the demographic

categorizations of gender and race to understand the statistical significance of both groups. The results presented an analysis of recruitment and retention strategies for students based on the motivation and perceptual subfactors outlined within the FIT-Choice survey created by Helene Watt and Paul Richardson (2007).

Data analysis did not show any statistical significance in the MANOVA between race and race for secondary students. However, a univariate ANOVA analysis indicated significance in fallback career for racial groups, intrinsic career values for gender and race group, and salary for gender groups. The quantitative analysis of the student recruitment and retention questionnaire and the TA focus group produced common themes for motivation and perception. Fallback career, prior teaching and learning experiences, work with children/adolescents, and social influences were repetitive themes emerging from the motivation of students and educators participating in this study. In contrast, intrinsic career value, social status, shape the future of children/adolescents, salary, make social contribution, and difficulty were perceptual subfactors commonly expressed in the quantitative data.

Triangulating the quantitative and qualitative data allowed for investigating recruitment strategies with the subfactors of social influences, fallback career, job security, salary, and work with children/adolescents as a primary focus to address when recruiting students at the secondary level. For this reason, recruitment strategies, such as providing grants, offsetting postsecondary costs, benefits (job opportunity after graduation), and marketing the TA program at the middle-school level could increase the number of students interested in the program. Financial incentives are used as to recruit new teachers into the profession (Whipp & Geronime, 2017). In addition, the opportunity for students to be offered a job after college graduation increases the benefits to recruit students into the program to become program completers. At the same time, intrinsic

career values, difficulty, shape the future of children/ adolescents, prior teaching and learning experiences, and make social contribution were subfactors triangulated to explore different retention strategies in education. Therefore, the need to foster the humanistic commitment of students enrolled in the program assist with the need to give back to younger generations (Ingersoll et al., 2019). School districts could incorporate retention strategies into the course to keep students in the program, such as providing a welcoming or safe space for students, strengthening students as leaders, providing professional development for teaching, competitions through school-based clubs, and opportunity to complete community service hours. By offering a variety of opportunity of students to be engaged in the program, the higher changes of opportunity for students to become program completers and high school graduates (DeFeo, 2015). Ultimately, the outlined strategies could help a TA program recruit or retain more secondary students to build a greater pipeline of future homegrown teachers.

**APPENDIX A: UNIVERSITY OF CENTRAL FLORIDA INSTITUTIONAL REVIEW
BOARD APPROVAL**

APPROVAL

March 29, 2021

Dear Daniel Santos:

On 3/29/2021, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title:	AN EXAMINATION OF PRE-COLLEGIATE EDUCATION PROGRAMS IN THE K-12 CONTEXT: THE ROLE OF STUDENTS MOTIVATION AND PERCEPTION AND RECRUITMENT AND RETENTION STRATEGIES FOR SUCCESSFUL OUTCOMES
Investigator:	Daniel Santos
IRB ID:	STUDY00002681
Funding:	None
Grant ID:	None
IND, IDE, or HDE:	None
Documents Reviewed:	<ul style="list-style-type: none">• Faculty Advisor Scientific-Scholarly Review Form (Daniel Santos; January 2021).pdf, Category: Faculty Research Approval;• HRP-502 - CONSENT DOCUMENT Adult _ DS _ 32921 (1)_IRB edits_TRACK CHANGES_v2.pdf, Category: Consent Form;• HRP-502b - Parent for Child _ DS _ 32921.pdf, Category: Consent Form;• HRP-503-Protocol_DS _ 32921_IRB edits_TRACK CHANGES_v3.docx, Category: IRB Protocol;• Questionnaire and Survey.docx, Category: Survey / Questionnaire;

The IRB approved the protocol on 3/29/2021.

In conducting this protocol, you are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. Guidance on submitting Modifications and a Continuing Review or Administrative Check-in are detailed in the manual. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

**APPENDIX B: TEACHER ACADEMY STUDENT FIT-CHOICE
MOTIVATION CONSTRUCT SURVEY**

Rate yourself on a scale of 1 (*not at all important in your decision*) to 7 (*extremely important in your decision*).

Subfactor	Item Number	Original Item
Ability	B05	I have the qualities of a good teacher.
	B19	I have good teaching skills.
	B43	Teaching is a career suited to my abilities.
Intrinsic career values	B01	I am interested in teaching.
	B07	I have always wanted to be a teacher.
	B12	I like teaching.
Fallback career	B11	I was unsure of what career I wanted.
	B35	I was not accepted into my first career choice.
	B48	I chose to teach as a last-resort career.
Job security	B14	Teaching will offer a steady career path.
	B27	Teaching will provide a reliable income.
	B38	Teaching will be a secure job.
Time for family	B02	Part-time teaching could allow more family time.
	B16	Teaching hours will fit with the responsibilities of having a family.
	B29	School holidays will fit in with family commitments.
	B04	As a teacher, I will have a lengthy holiday.
Job transferability	B18	As a teacher, I will have a short workday.
	B8	Teaching will be a useful job for me to have when traveling.
	B22	A teaching qualification is recognized everywhere.

Subfactor	Item Number	Original Item
	B45	A teaching job will allow me to choose where I wish to live.
Shape the future of children/ adolescents	B09	Teaching will allow me to shape child and adolescent values.
	B23	Teaching will allow me to influence the next generation.
	B53	Teaching will allow me to have an impact on children/adolescents.
Enhance social equity	B38	Teaching will allow me to raise the ambition of underprivileged youth.
	B49	Teaching will allow me to benefit the socially disadvantaged.
	B54	Teaching will allow me to work against social disadvantage.
Make social contribution	B06	Teaching will allow me to provide a service to society.
	B20	Teachers make a worthwhile social contribution.
	B31	Teaching enables me to give back to society.
Work with children/ adolescents	B13	I want a job that involves working with children and adolescents.
	B26	I want to work in a child and adolescent-centered environment.
	B37	I like working with children and adolescents.
Prior teaching and learning experiences	B17	I have had inspirational teachers.
	B30	I have had good teachers as role models.
	B39	I have had positive learning experiences.
Social influences	B03	My friends think I should become a teacher.

Subfactor	Item Number	Original Item
	B24	My family thinks I should become a teacher.
	B40	People I have worked with think I should become a teacher.

**APPENDIX C: TEACHER ACADEMY STUDENT FIT-CHOICE
PERCEPTION CONSTRUCT SURVEY**

Rate yourself on a scale of 1 (*not at all*) to 7 (*extremely*).

Subfactor	Item Number	Original Item
Expertise	C10	Do you think teaching requires high levels of expert knowledge?
	C14	Do you think teachers need high levels of technical knowledge?
	C15	Do you think teachers need highly specialized knowledge?
Difficulty	C02	Do you think teachers have a heavy workload?
	C07	Do you think teaching is emotionally demanding?
	C11	Do you think teaching is hard work?
Social status	C04	Do you believe teachers are perceived as professionals?
	C08	Do you believe teaching is perceived as a high-status occupation?
	C12	Do you believe teaching is a well-respected career?
	C05	Do you think teachers have high morale?
	C09	Do you think teachers feel valued by society?
	C13	Do you think teachers feel their occupation has high social status?
Salary	C01	Do you think teaching is well paid?
	C03	Do you think teachers earn a good salary?
Social dissuasion	D2	Were you encouraged to pursue a career other than teaching?
	D4	Did others tell you teaching was not a good career choice?
	D6	Did others influence you to consider a career other than teaching?

Subfactor	Item Number	Original Item
Satisfaction with choice	D1	How carefully have you thought about becoming a teacher?
	D3	How satisfied are you with your choice of becoming a teacher?
	D5	How happy are you with your decision to become a teacher?

**APPENDIX D: TEACHER ACADEMY STUDENT RECRUITMENT
AND RETENTION QUESTIONNAIRE**

Answer the following question to the best of your abilities.

Subfactor	Original Item
Background	Male Female White Student of Color
Short-answer questions	What has kept you in the Teaching Academy? What motivated you to join the teaching profession and the teaching academy program? What strategies could be used to recruit more students into the Teaching Academy? What strategies could be used to retain students into the Teaching Academy? What is your perception of the teaching profession?

APPENDIX E: G*POWER CALCULATION

Input Parameters

Determine =>	Effect size $f^2(V)$.25
	α err prob	0.05
	Power ($1 - \beta$ err prob)	0.95
	Number of groups	3
	Response variables	22

Output Parameters

Noncentrality parameter λ	49.5000000
Critical F	1.4565231
Numerator df	44.0000000
Denominator df	152
Total sample size	99
Actual power	0.9521997
Pillai V	0.4000000

APPENDIX F: PERMISSION OF FIT-CHOICE SURVEY MODIFICATION

From: Helen Watt <helen.watt@sydney.edu.au>
Sent: Thursday, August 19, 2021 3:53 AM
To: danny.santos <danny.santos@knights.ucf.edu>
Cc: fitchoice@monash.edu <fitchoice@monash.edu>; 'Paul Richardson' <paul.richardson@monash.edu>; Helen Watt <helen.watt@sydney.edu.au>
Subject: RE: Dissertation - FIT Choice Survey

Dear Danny,

Thank you for your email and interest in our work.

Our FIT-Choice scale was in fact developed and validated for preservice teachers,

- The stem is “I chose to become a teacher because...” (preservice teachers).

With best wishes, Helen (& Paul)

HELEN M G WATT | Professor of Educational Psychology
ARC Future Fellow
School of Education and Social Work

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W http://sydney.edu.au/education_social_work/about/staff/profiles/helen.watt.php
FIT-Choice project: www.fitchoice.org
STEPS study: www.stepsstudy.org

From: danny.santos
Sent: Wednesday, August 18, 2021 8:17 PM
To: helen.watt@monash.edu <helen.watt@monash.edu>; paul.richardson@monash.edu <paul.richardson@monash.edu>
Subject: Dissertation - FIT Choice Survey

Good Evening,

My name is Daniel Santos, and I am a doctoral candidate at the University of Central Florida. I am excited to say I will be using the FIT-Choice survey in my dissertation. My research involves looking at secondary student's motivation and perception of the teaching profession to create a guideline of effective recruitment and retention strategies for secondary Teaching Academy programs.

My purpose for my email is to receive permission to modify your survey in the future tense to align with the need of the secondary students in the Teaching Academy program.

Thank you very much in advance for your consideration.

Daniel C. Santos, Ed.S.
Doctoral Candidate, Educational Doctor of Educational Leadership
University of Central Florida

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