

CREATING A FRAMEWORK FOR THE RECRUITMENT AND RETENTION OF
RACIALLY DIVERSE TEACHER CANDIDATES IN TEACHER PREPARATION

By

EDMUND WYATT GORDON

A dissertation submitted to the

Graduate School of Education

Rutgers, The State University of New Jersey

in partial fulfillment of the requirements

for the degree of

Doctor of Education

Graduate Program in Design of Learning Environments

written under the direction of

Dr. Angela O'Donnell

Dr. Dan Battey

Dr. Paul A. Ramsey

New Brunswick, New Jersey

October 2019

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

© 2019

Edmund Wyatt Gordon

ALL RIGHTS RESERVED

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

Abstract

Elementary and secondary teaching is the largest occupation in the United States (Ingersoll & Merrill, 2017). Teacher preparation programs serve as the entryway for teachers into the profession and have experienced more than a 30 percent decline in enrollments since 2008 (Office of Postsecondary Education, 2015). Declining enrollment and funding at teacher preparation programs create a difficult landscape for the recruitment and retention of racially diverse teacher candidates (ACT, 2015). Frameworks that promote effective recruitment and retention strategies need to be created to allow for resources to be used effectively and efficiently (American Association of Colleges for Teacher Education, 2013). There are examples of program designs (or elements of program designs) at teacher preparation programs that are effective at recruiting and retaining racially diverse teacher candidates. As such, it is important to identify and analyze these designs in order to understand how the embodiment of core principles leads to effective outcomes. Using qualitative methods (semi-structured interviews and content analysis), this dissertation contextualizes and problematizes the issue of racial diversity in the teaching workforce, identifies teacher preparation programs that are effective at recruiting and retaining racially diverse teachers, and highlights aspects of program design that lead to successful recruitment and retention. The analysis is grounded in the theoretical framework of critical race theory for education developed by Ladson-Billings and Tate (1995). It also is grounded in the framework of learner-centered design articulated by Quintana (2006), and the concepts of conjecture mapping and argumentative grammar developed by Sandoval (2014).

Keywords: teacher preparation, diversity, recruitment, retention

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

Dedication

This work is dedicated to my namesakes Dr. Edmund W. Gordon and Dr. Edmund T. Gordon who paved the way for me, provided me with invaluable guidance, and -most importantly- set the standard. Your unwavering dedication to social justice has shaped, and will continue to shape, the world for generations.

"We are like dwarfs sitting on the shoulders of giants. We see more, and things that are more distant, than they did, not because our sight is superior or because we are taller than they, but because they raise us up, and by their great stature add to ours."

-John of Salisbury

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

Table of Contents

ABSTRACT	iii
DEDICATION	iv
LIST OF TABLES	x
LIST OF FIGURES	xi
CHAPTER 1: INTRODUCTION.....	1
Problem Background	3
Understanding Racially Diverse Teachers and the Teacher Workforce.....	5
The Demographic Divide	8
Research Question	11
Purpose	12
CHAPTER 2: LITERATURE REVIEW	13
Conceptions of Race	14
Understanding “Racially Diverse”	16
Critical Race Theory and Education.....	17
From CLS to CRT	18
CRT in Education	19
Race as a Significant Factor in Determining Inequality	19
United States society based on property rights.....	20
The intersection of race and property.	21
Application of CRT in education.	21
Racially Diverse Teachers and Student Achievement.....	23
Serving as Role Models.....	23
Experience and Knowledge Match.....	24
Expectation Setting.....	25
Classroom Dynamics.....	26
Mission Driven Retention.....	26

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

The Effect of Racially Diverse Teachers on Student Achievement	27
Recruitment and Retention of Racially Diverse Teachers.....	29
Factors that Influence the Occupational Choices of Racially Diverse People	29
Factors that Influence Racially Diverse People to Become Teachers	30
Factors that Dissuade Racially Diverse People from Becoming Teachers	31
Frameworks of Successful Recruitment Efforts	34
Frameworks of Successful Retention Efforts	36
Structural Issues in Teacher Preparation Programs	37
Theoretical Framework	38
Critical Race Theory in Education	38
Learner-Centered Design.....	39
Conjecture Mapping and Argumentative Grammar	40
CHAPTER 3: METHODOLOGY	42
Research Objective	42
Research Design	42
Literature Informing Methods	44
Research Design Structure	47
Learning Environment.....	48
Conjecture Mapping	48
Participants	50
Selection of Teacher Preparation Programs	51
Faculty and Staff Selection.....	54
Teacher Candidate Selection	55
Procedure and Data Collection	55
Content Analysis	56
Interviews	56
Consolidation.....	58
Materials	58
Faculty and Staff Interview Protocol.....	59
Teacher Candidate Interview Protocol	60

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

Informed Consent	61
Data Analysis.....	61
Coding	62
CHAPTER 4: FINDINGS	63
Conjecture Mapping from Content Analysis.....	63
TPP 4	64
Instruction, practice, and 21 st -century teaching and learning.....	65
Creating nurturing classrooms and learning environments with support services and a connection to the community.....	66
TPP 5	68
Prestigious academic institution with world-class facilities and outstanding faculty dedicated to groundbreaking research.....	69
Diversity, inclusion and social justice for students by creating change agents and leaders.....	70
Innovative partnerships and programs.....	71
Offering financial aid and support to help students enroll and finish.	74
TPP 6	75
High standards, program prestige and excellence, quality faculty and quality research.....	76
Hands-on training and professional development with diverse situations and experiences.	77
Successful career development and financial security.	77
Diversity and community engagement.....	78
Interviews with Faculty, Staff and Teacher Candidates	79
Overall Results	80
Partnerships and Connections with the Community	82
Partnerships with schools.....	83
Community focus.....	86
Focus on urban education.....	89
Innovative admissions programs.....	91
Recruiting in schools and communities.....	93
Supportive Staff and Intimate School Setting	95
Supportive staff.....	95

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

Small program with intimate cohorts.	98
Do whatever it takes.	100
Innovative Curriculum and School Structure	101
Improving practice with innovative pedagogy.	102
Expanded student teaching experience.	105
Flexible fast-track program.	107
Centers of teaching excellence.	110
Commitment to Equity	111
Commitment to equity.	112
Professional Preparation for a Financially Viable Career	114
Professionalization.	114
Job offers and the teacher shortage.	117
Financial Assistance	119
Affordability.	120
Scholarships.	122
Program Prestige and World-Class Faculty	123
Program prestige.	124
Professors with practical experience.	125
Consolidated Conjecture Map	126
CHAPTER 5: DISCUSSION	132
Summary of Study	133
Framework Interpretation	135
Discoveries	137
Partnerships as a Pipeline	138
Faculty as Program	139
Foregrounding of Career Success	140
Equity as “table-stakes”	141
Overblown Importance of Financial Assistance	141
Prestige as a Means to an End	142
Limitations and Potential Bias	143

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

Implications	144
Purposeful Approach	145
Consumers of Teacher Preparation	146
Ask Racially Diverse Teacher Candidates	146
Future Research	147
REFERENCES	149
APPENDIX A - EXAMPLE CONJECTURE MAP	161
APPENDIX B - INTERVIEW PROTOCOL FACULTY AND STAFF	162
APPENDIX C - INTERVIEW PROTOCOL TEACHER CANDIDATE	165

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

List of Tables

Table 1. <i>Teacher Turnover of Racially Diverse and White Teachers 1988 - 2013</i>	5
Table 2. <i>Percent Enrollment by Racial Category for Teacher Preparation Program Types</i>	8
Table 3. <i>Comparison of Student and Teacher Racial Diversity 1987 - 2012</i>	9
Table 4. <i>Most Diverse Traditional Teacher Preparation Programs in Selected States</i>	52
Table 5. <i>Background of Traditional Teacher Preparation Programs in this Study</i>	53
Table 6. <i>Background of Participating Faculty and Staff</i>	54
Table 7. <i>Background of Participating Teacher Candidates</i>	55
Table 8. <i>Conjectures and Categories from Interview Phase</i>	80
Table 9. <i>Categories Contributing to Each Theme</i>	81
Table 10. <i>Synergies between Embodiments</i>	136
Table 11. <i>Discoveries</i>	138
Table 12. <i>Implications</i>	145

RECRUITMENT & RETENTION FRAMEWORK FOR TEACHER PREPARATION

List of Figures

<i>Figure 1.</i> Conjecture Map Example	43
<i>Figure 2.</i> Conjecture Map of the Study	49
<i>Figure 3.</i> TPP 4 Conjecture Map	65
<i>Figure 4.</i> TPP 5 Conjecture Map	69
<i>Figure 5.</i> TPP 6 Conjecture Map	76
<i>Figure 6.</i> Consolidated Conjecture Map	128

Chapter 1: Introduction

In July of 2016 the U.S. Department of Education released a report titled “The State of Racial Diversity in the Educator Workforce” (Office of Planning, Evaluation and Policy Development, 2016). The report begins with John King, the Secretary of Education during the Obama administration, problematizing the issue of the lack of racial diversity in the teaching workforce:

Without question, when the majority of students in public schools are students of color and only 18 percent of our teachers are teachers of color, we have an urgent need to act...

The question for the nation is how do we address this quickly and thoughtfully. (Office of Planning, Evaluation and Policy Development, 2016, p.1)

John King and the Department of Education were attempting to call attention to an important issue that states, school districts, schools, and teacher preparation programs are facing (Office of Planning, Evaluation and Policy Development, 2016, p.1). Prior to John King, Richard Riley (1998) the Secretary of Education for the Clinton Administration produced an article calling for excellence and diversity in the teacher workforce. Riley (1998) wrote that:

Children need role models, they need to see themselves in the faces of their teachers. We need teachers who can relate to the lives of diverse students, and who can connect those students to larger worlds and greater possibilities. We need teachers from different backgrounds to share different experiences and points of view with colleagues. This sharing enriches and empowers the entire profession and students from all backgrounds. (p. 19)

Riley (1998) called for a national campaign to “recruit, prepare, and support high-quality teachers, with a particular focus on teachers of color” (p. 20). It has been over two years since

the release of the John King's report (2016) and over ten years since the release of Richard Riley's (1998). Unfortunately, little has been done to rectify recruitment and retention issues at teacher preparation programs for racially diverse teachers (TeachStrong, 2016).

Elementary and secondary teaching is the largest occupation in the United States (Ingersoll & Merrill, 2017). There are many educational institutions that support the occupation and many require changes in order to address the lack of racial diversity in the teaching workforce, including teacher preparation programs, states, accreditation boards, school districts and schools (TeachStrong, 2016). However, teacher preparation programs serve as the entryway for teachers into the profession and have been hit particularly hard, experiencing more than a 30 percent decline in enrollments since 2008 (Office of Postsecondary Education, 2015). Declining enrollments at teacher preparation programs are particularly concerning because they prepare the overwhelming majority of teacher candidates that enter the teaching workforce (American Association of Colleges for Teacher Education, 2013). Furthering concern is the fact that 88 percent of all teacher preparation program completers graduated from traditional higher education-based programs during the 2009-2010 academic year (American Association of Colleges for Teacher Education, 2013). The high percentage of teacher candidates who are prepared by traditional higher education-based programs, that are typically housed in public schools of education, causes resource issues in a climate where states are being asked to reduce spending on public education (Office of Postsecondary Education, 2015). These calls for educational austerity seriously impact the ability of teacher preparation programs to fix their systemic issues (Guarino, Santibanez & Daley, 2006).

Declining enrollment and funding at teacher preparation programs creates a difficult landscape for the recruitment and retention of racially diverse teacher candidates (ACT, 2015).

The American Association of Colleges for Teacher Education (2013) has called for federal, state and philanthropic investment in traditional higher education-based teacher preparation programs as a way to combat declining enrollment and to rectify racial diversity issues in the teacher pipeline (American Association of Colleges for Teacher Education, 2013). In addition to funds, frameworks that promote new investment and recruitment/retention strategies need to be created to allow resources to be used effectively and efficiently (American Association of Colleges for Teacher Education, 2013).

To that end, there may be examples of program designs (or elements of program designs) in teacher preparation programs that are effective at recruiting and retaining racially diverse teacher candidates. As such, it is important to identify and analyze these designs in order to understand how the embodiment of their core principles leads to effective outcomes. Design principles identified during investigation can be replicated and implemented in other institutions as a way of solving an issue that has persisted over time. This dissertation seeks to contextualize and problematize the issue of racial diversity in the teaching workforce, identify teacher preparation programs that are effective at recruiting and retaining racially diverse teachers, and understand the aspects of program design that lead to successful recruitment and retention of racially diverse teachers at teacher preparation programs.

Problem Background

Teacher preparation programs have experienced a 30 percent decline in enrollments since 2008 while the overall enrollment in postsecondary education has only decreased 3 percent over the same period (Office of Postsecondary Education, 2015). In 2015, only 4.6 percent (88,000) of ACT test takers indicated that they had an interest in education majors or professions (ACT, 2015). As a result of declining interest in education careers, states across the country are

experiencing shortages of teachers in key subject areas (particularly STEM) and across grade levels (ACT, 2015; American Association of Colleges for Teacher Education, 2013, TeachStrong, 2016). Indeed, only 3,700 of the already low 88,000 ACT test takers interested in education indicated that they were preparing for education careers in mathematics and science (ACT, 2015).

Decreases in the number of incoming teachers to the workforce is compounded by serious and systemic issues of teacher turnover in the profession (Alliance for Excellent Education, 2014). According to the US Department of Education “about 13 percent of the teaching workforce either moves [away from high-needs schools] or leaves the teaching profession each year” (Alliance for Excellent Education, 2014, p.2). In addition, within five years of the start of their careers 17 percent of new teachers exit the teaching workforce (National Center for Education Statistics, 2005). Practically, this means that about 500,000 teachers leave the workforce each year (Alliance for Excellent Education, 2014). The exodus of teachers from the profession costs the United States an estimated \$2.2 billion per year (Alliance for Excellent Education, 2014). The majority of turnover (and financial impact) occurs in high-poverty schools (Johnson, Kauffman, Donaldson, Kardos, & Liu, 2004) requiring teachers without certification to teach in those schools at double the rate of those teaching in low-poverty schools (Eppley, 2009). This reality means that racially diverse teachers, who are more likely to teach in urban and high poverty schools, are disproportionately impacted by turnover issues (Casey et al., 2015, Ford et al., 1997; Ingersoll & Merrill, 2017; Little & Bartlett, 2010). Table 1 shows the annual teacher turnover for racially diverse and White teachers.

Table 1.

Teacher Turnover of Racially Diverse and White Teachers 1988 - 2013

<u>School Year</u>	<u>% Turnover Diverse</u>	<u>% Turnover White</u>	<u>% Difference</u>
1988 – 89	13.0	13.5	.5
1991 – 92	12.4	12.4	0
1994 – 95	16.3	13.3	3
2000 – 01	15.4	15.1	.3
2004 – 05	18.8	16.1	2.7
2008 – 09	18.1	15.0	3.1
2012 – 13	18.9	15.0	3.9

Note. Adapted from Casey et al. (2015)

Understanding Racially Diverse Teachers and the Teacher Workforce

The teaching profession has historically been a safe-haven for low-income and racially diverse professionals looking for a means of upward mobility (Irvine, 1988). In 1950 about one-half of all African-American professionals in the United States were teachers (Irvine, 1988). Prior to desegregation, African-American schools were largely run by African-American administrators who were allowed to autonomously manage their schools as long as there were no major problems (Irvine, 1988). The Brown decision effectively ended de jure segregation (although not de facto segregation) and handed over management of personnel decisions at African-American schools to largely White school boards, superintendents, and administrators (Irvine, 1988). The result of outsourcing personnel decisions to school boards that differed substantially both culturally and economically from the teacher workforce was the firing of 40,000 (documented) African-American teachers, the transfer of African-American teachers away from their current schools, and disinterest in hiring new African-American teachers to teach in desegregated schools (Irvine, 1988).

Latinx, Asian, and Indigenous teachers don't have a history that is as visible and debated

as African-American teachers, but they share a similar overall experience (King, 1993). Latinx teachers have historically had very little representation in the teaching profession. There is a serious gap between the large number of Latinx students and the diminutive number of Latinx teachers (King, 1993). Asians also have had very little representation in the teaching profession due to very scant interest in educational professions (King, 1993). Indigenous teachers in the teaching profession are almost invisible, as they have become in most aspects of American life, without any major efforts to increase their recruitment and retention (King, 1993). In a profession with such a high demand for new supply (King, 1993) and a serious need for retention (TeachStrong, 2016) little has been done to include huge swaths of teachers that match the demographic makeup of the student population (King, 1993).

Between 1945 and 1958 there were about 1 million elementary and secondary teachers in the United States and the profession would quadruple in size, to 4 million teachers, by 2012 (Ingersoll & Merrill, 2017). However, between the 1940s and the mid-1980s, there was a 56 percent decrease in the number of African-American female college graduates who decided to enter the teacher workforce (Hrabowski & Sanders, 2015). The decrease of African-American female teachers was accompanied by a corresponding 50% decrease in the number of bachelor's degrees in education awarded to racially diverse students between 1975 and 1982 (Hrabowski & Sanders, 2015). As a result, degree attainment in education fields declined twice as much between racially diverse students and their White counterparts over the period (Hrabowski & Sanders, 2015).

Between 1987 and 2012, the number of racially diverse teachers entering the workforce would increase 104 percent (compared to only 38 percent for White teachers) (Ingersoll & Merrill, 2017). These increases were not consistent across racial groups and the increase has still

not created a racially representative teaching force (in relationship to students) (Ingersoll & Merrill, 2017). Asian and Latinx teachers have increased at a higher rate than African-American teachers whose representation in the teacher workforce has continued to decline since desegregation (Hawley, 1989; Ingersoll & Merrill, 2017; Madkins, 2011). Indigenous American teachers in particular have experienced sharp declines over the period (Ingersoll & Merrill, 2017). White male teachers, who are sometimes referred to as “very rare” in the teaching profession, experienced a 110 percent growth over the period while racially diverse females only increased by 102 percent as a group (Ingersoll & Merrill, 2017). The rates of participation also differ by subject (Ingersoll & Merrill, 2017). The majority of participation gains for racially diverse teachers occurred in ESL, ELA, mathematics, science, social studies; and special education (Ingersoll & Merrill, 2017). General elementary, vocational subjects, art and music all experienced below average growth for racially diverse teacher populations (Ingersoll & Merrill, 2017).

Traditional higher education-based teacher preparation programs prepare more White teachers than their alternate route counterparts (Office of Postsecondary Education, 2015). Compounding this reality is that certain racial groups are concentrated in relatively few traditional higher education-based programs (Office of Postsecondary Education, 2015). For example, 16 percent of all African-American teacher candidates attend Historically Black Colleges and Universities (HBCUs); however, HBCUs only prepare 2 percent of all teachers (Office of Postsecondary Education, 2015). Alternate route programs, based in higher education institutions or as separate entities, prepare a higher proportion of racially diverse candidates (Office of Postsecondary Education, 2015). These programs have over-contributed (when compared to their size) to the racial diversification of the teaching workforce (Office of

Postsecondary Education, 2015). While all teacher preparation programs need to increase the racial diversity of their teacher candidates, the problem is particularly acute in traditional higher education-based programs (Office of Postsecondary Education, 2015). Table 2 shows the proportion of teacher candidates enrolled in different program types by racial category.

Table 2.

Percent Enrollment by Racial Category for Teacher Preparation Program Types

<u>Program Type</u>	<u>White</u>	<u>African-American</u>	<u>Latinx</u>	<u>Asian</u>	<u>Indigenous</u>	<u>Two+ Races</u>
Traditional IHE based	74	9	11	3	1	2
Alternative IHE based	65	16	11	4	1	3
Alternative (non-IHE)	59	18	18	3	1	2

Note. Adapted from the Office of Postsecondary Education (2015)

The Demographic Divide

The number of racially diverse teachers entering the teacher workforce creates an imbalance between White teachers and racially diverse teachers (Hrabowski & Sanders, 2015). The White female teaching population is exceedingly overrepresented in the current teacher workforce (Yuan, 2018). Currently, about 84 percent of the teaching force is comprised of White female teachers (Yuan, 2018). In addition, 70 percent of ACT-tested graduates who are entering education careers are White (ACT, 2015). United States Census Bureau numbers show that the United States' White population is about 61 percent of the total population, including both male and female White citizens (United States Census Bureau, 2017). Statistics captured in order to determine the makeup of teacher candidates entering teacher preparation programs show that the racial makeup of entering prospective teacher candidates is similar to the racial makeup of the current teacher workforce (Yuan, 2018). Projecting the current imbalance of the teacher

workforce onto teacher preparation programs creates a clear need for teacher preparation programs to proactively attempt to recruit and train an increasing number of racially diverse teachers (Hrabowski & Sanders, 2015). It is becoming a concern at teacher preparation institutions that the teaching workforce, both nationally and locally, does not have sufficient diversity to match an increasingly diverse student population (Hrabowski & Sanders, 2015).

While changes in the teacher workforce continue, for teachers overall and specifically for racially diverse teachers, the student population also continues to change (Hrabowski & Sanders, 2015). In 2008, about 17 percent of public school teachers were racially diverse, and an astounding 42 percent of public school students were racially diverse (Madkins, 2011). The increasing gap between the number of racially diverse teachers and racial diverse students is creating a “demographic divide” (Hrabowski & Sanders, 2015). In 2012, the percentage of racially diverse teachers remained at a stagnant 17 percent, while 44.1 percent of all public school students were racially diverse (Casey et al., 2015; Ingersoll & Merrill, 2017). Alarming reports estimate that the primary and secondary student population in the United States will be more than 50 percent racially diverse by 2025 (Boser, 2011) while the diversity of the teaching population remains largely unchanged (Casey et al., 2015). In fact, the National Center for Education statistics reported in 2014 that the racially diverse student population had already exceeded 50 percent (50.5 percent) (National Center for Education Statistics, 2017). Table 3 shows the percentage of racially diverse students and teachers between 1987 and 2012.

Table 3.

Comparison of Student and Teacher Racial Diversity 1987 - 2012

<u>School Year</u>	<u>% Diverse U.S. Pop</u>	<u>% Diverse Students</u>	<u>% Diverse Teachers</u>	<u>% Difference</u>
1987 – 88	23.1	27.3	12.4	-14.9
1990 – 91	24.3	30.3	12.8	-17.5

1993 – 94	25.6	31.5	12.8	-18.7
1999 – 00	28.1	35.4	12.8	-22.6
2003 – 04	32.1	38.1	15.0	-23.1
2007 – 08	34.4	40.6	16.3	-24.3
2011 – 12	37.0	44.1	16.5	-27.6

Note. Adapted from Casey et al. (2015).

Beginning teachers are likely to begin their careers in schools where:

at least 25 percent of students live in poverty and many of them lack basic food, shelter, and health care; 10 percent to 20 percent have identified learning differences; 15 percent speak a language other than English as their primary language (many in urban settings); and about 40 percent are members of minority groups, many of them recent immigrants from countries with different educational system and cultural traditions. (Darling-Hammond, 2012, p. 300)

Historically, these students are the most underserved groups in American schools (Yuan, 2018).

As a result, preservice teachers currently in training to join the teacher workforce will face increasingly racially diverse student populations, schools and districts throughout their careers as educators (Yuan, 2018) at the same time as the teacher workforce becomes less diverse (Madkins, 2011). Increasingly teachers and students will have different cultural frames of reference (Gay, 1993).

The demographic divide creates a situation where both racially diverse students and racially diverse teachers are negotiating their comfortability with their own identities, as their identities interact with educational spaces (Yuan, 2018). Although teacher preparation programs posit that they can train teachers of all kinds to be effective with racially diverse students, shared frames of reference are an important starting point between students and teachers (Evans & Leonard, 2013). Beginning teachers, who are often asked to teach in urban environments (Darling-Hammond, 2012), will be asked to help students bridge cultural gaps and understand

school culture (Gay, 1993) even though they are the least prepared teachers to do so. In addition, the demographic divide means that urban students are not likely to have access to curriculum materials and instruction that are presented to them in ways that align with their own experiences and knowledge (Cochran-Smith, 2004). This is particularly pressing for urban students who already face challenging educational environments throughout their educational journey (Cochran-Smith, 2004). Like school integration, the complete integration of the teaching workforce allows for the development of important dispositions and competencies that help students to achieve (Hawley, 1989). Unfortunately, current trends of the American student population and the diversity of the American teacher workforce promise to expand the demographic divide into the foreseeable future (Yuan, 2018).

Research Question

The demographic trends of the student population and the teacher workforce in American classrooms are creating a demographic divide in schools across the country (Hrabowski & Sanders, 2015). As the entry to becoming a practicing teacher, traditional teacher preparation programs must find ways to recruit and retain racially diverse teachers if a serious resolution of the divide is to occur. Teacher preparation programs, like other higher education departments, have the ability to attract students from all fields as they graduate high school, community college or even college. However, they have yet to find a resolution to the persistent problem of the demographic divide. Nevertheless, some teacher preparation programs may have strategies and designs that can prove useful for recruitment and retention if those strategies are made available to the larger community of programs. Any design that enables traditional teacher preparation programs to continue to diversify in light of changing demographic tides deserves serious recognition and scrutiny. The following research question is at the heart of this study and

informs the development of the literature review: *How are traditional teacher preparation programs designing programs that are effective at recruiting and retaining diverse teachers?*

Purpose

The purpose of this study is to offer insight into a problem of practice encountered by states, school districts and teacher preparation programs. Teacher education is an essential part of the education system and increasing the representation of racially diverse teachers in the field should be an important focus of teacher preparation programs everywhere. Diversity in the student body and in the teacher workforce is necessary for our educational system. The design of gateway institutions can hurt or help to reduce the demographic divide. As such, inquiry into the mechanisms that embody the conjectures of teacher preparation programs about how to attract and retain racially diverse teachers is important.

In my role as the director of a national teacher assessment, I have worked directly with teacher preparation programs to monitor, compare, and improve assessment scores across groups of students and schools. I am often asked by administrators of teaching preparation programs if in my work I have seen how other teacher preparation programs are going about finding solutions to the demographic divide problem. I have found no analysis that attempts to address the question from a design-based prospective, such that other programs can replicate the key embodiments of successful program designs. This dissertation seeks to provide a blueprint by evaluating how teacher preparation programs are actually recruiting and retaining racially diverse teachers, and evaluating the designs of the programs that allow them to do so. To begin to think about the aspects of programs that can effectively and strategically reduce the demographic divide, we need to review the literature in order to frame key concepts and to discover what may be effective.

Chapter 2: Literature Review

The concept of race in literature and in society is relatively modern (Omi & Winant, 2014). Historically, European nations (who colonized most of the planet) encountered new types of people who looked different from them and needed to create a framework for understanding interactions with others (Massey, 2009; Omi & Winant, 2014). The creation of race in Europe took a religious tone, causing Europeans to question if God had only made one type of man or many types of men (Omi & Winant, 2014). Non-Europeans were stigmatized as not descendants of God (Omi & Winant, 2014). Religious overtones caused Europeans to question what to do with “others” if those “others” were considered non-human or not descendants of God (Omi & Winant, 2014). To those engaged in this religiously driven conversation, race was thought of as a biological concept (Omi & Winant, 2014). As a result, scientific fields like physical anthropology and biology explored the biological basis of race (Omi & Winant, 2014). Ultimately, the biology and anthropology of race was interpreted as a fact that affected non-Europeans with social structures and realities that have real impacts on their lives (Bulmer & Solomos, 1999).

In practice, race determines the allocation of resources based on the assignment of people into racial categories (Omi & Winant, 2008). The result is that systems, programs, and policies “signify” race through their actions even when the intent to identify people racially is denied or members are not aware of the effects of their practices (Omi & Winant, 2008). The perceived differences of people based on racial characteristics is one of the main factors that has shaped the world and ideas about how people interact in the world (Bulmer & Solomos, 1999). Today the realities of race continue through a persistent link between racial identity and social structures (Omi & Winant, 2008). In the United States this linkage is particularly important because of the

structural and economic realities of racial minorities, but also because of post-World War II movements that politicized (and problematized) social relationships between groups, institutions and the state (Omi & Winant, 2008). The politicization of the social interactions between racial groups links macro-level racial structures with the micro-level realities lived by people (Omi & Winant, 2008, p. 1565). For Americans, this linkage changed the orientation of American politics so as to revolve around discussions of race (and also gender and sexuality) (Omi & Winant, 2008). However, the linkage also illuminated the ways that conceptions of race and racial organizations affect every aspect of modern American lives (Omi & Winant, 2008).

Conceptions of Race

The biological basis for race has been disproven; social science has framed race as a social concept (Omi & Winant, 2008, 2014; Saperstein et al., 2013). Omi and Winant (2014) describe race as “a concept which signifies and symbolizes social conflicts and interests referring to different types of human bodies” (p. 55). The description of race as a socio-historical concept allows for the recognition of the reality of the impact of race (2008, 2014). Essentially, Omi and Winant (2008, 2014) argue that the meaning of race is subject to the specific social structures and historical contexts of its creation. Additionally, ideas of race are inextricable from the social structures, power relations, and experiences of difference present in everyday life (Omi & Winant, 2008, 2014). Despite problematizing race as a social construct, elements of a biological argument still exist in subjects like educational psychology where “hereditary factors” are sometimes thought to shape intelligence, and debates continue about “nature versus nurture” in determining personal characteristics (Omi & Winant, 2014). Although race is now generally agreed to be a social phenomenon, some argue that recognizing race and discussing race only serves to lend credibility to those that continue to hint at a biological basis for race (Miles &

Brown, 2003). Others argue that regardless of the warrant used to attempt to prove the existence of race, the effects of race and racism are very real and have damaging effects on people who experience it (Bulmer & Solomos, 1999; Omi & Winant, 2008, 2014). In sum, history informs ideas of race and how race is interpreted is a matter of how it was socially constructed in the past in the specific context in which it existed (Omi & Winant, 2008, 2014; Saperstein et al., 2013).

In the United States, race has been defined in a very specific way (Omi & Winant, 2014). Encoded into the fabric of American culture are notions of race that Harris (1964) calls “hypo-descent”. Harris (1964) explains that:

In the United States, the mechanism employed is the rule of hypo-descent. This descent rule requires Americans to believe that anyone who is known to have had a Negro ancestor is a Negro. We admit nothing in between... ‘Hypo-descent’ means affiliation with the subordinate rather than the superordinate group in order to avoid the ambiguity of intermediate identity... The rule of hypo-descent is, therefore, an invention, which we in the United States have made in order to keep biological facts from intruding into our collective racist fantasies. (p. 56)

The “color line” created by hypo-descent led to the creation of strict racial categories, categories which then became encoded into law (Bulmer & Solomos, 1999). The racialization of American citizens created identities for African slaves, but it also created an identity for Europeans (as White) (Omi & Winant, 2014).

It is important to note that the history of the United States includes multiple attempts by immigrants to situate themselves as “White” in opposition to “non-White” social groups (Massey, 2009). Interestingly, the particular mechanisms and outcomes associated with the creation of race in the United States are materially different than the hierarchies created in other

countries, like Brazil (Omi & Winant, 2014). That material difference is based largely on the unique, strict classification of people into racial categories (i.e., the “one-drop” rule or hypo-descent) in the United States (Omi & Winant, 2014). In comparison, Latin American countries, like Brazil, name miscegenation as the key difference in the creation and interpolation of race in their contexts (Telles, 2014). Unlike, hypo-descent in the United States, miscegenation explicitly recognizes racial mixing as a key feature of Latin American culture, however many of the same structural issues of the United States exist in Latin American countries (Telles, 2014). In sum, entrenched ideas of race in the United States have created social structures that shaped the realities of different groups (Massey 2009; Omi & Winant, 2008, 2014). In education, the realities of race led to the segregation of schooling following centuries of slavery and oppression (Massey, 1993).

Understanding “Racially Diverse”

The conception of racial diversity used in this study draws on elements of the historical origins of race (Omi & Winant, 2008, 2014). Scholars argue that the creation of the concept of race is an act of “othering” non-Europeans (Massey, 2009; Omi & Winant, 2008, 2014). This process is inextricably linked to the organization of institutions and social structures (Omi & Winant, 2008, 2014). Post-World War II movements seeking to identify and remedy racial inequity reorganized politics around issues of race (along with gender and sexuality) in the social and political lives of Americans (Omi & Winant, 2008, 2014). This formation of race (and its precursors) led to the creation of hypo-descent as a filter through which race would be conceptualized in the United States (Harris, 1964). The created color-line allowed for the development of the White identity as an identity built in contrast to “others” (Massey, 2009; Omi & Winant, 2014). The construction of this identity has had very real consequences for non-White

people (Bulmer & Solomos, 1999; Omi & Winant, 2008, 2014). In education, it has led to the segregation of schools and ultimately differing educational outcomes for White and non-White students (Massey, 1993). The conception of race at the heart of the process of racialization in the United States centers on the idea of Whiteness defined in opposition to all others (Massey, 2009; Omi & Winant, 2014). As such, racial diversity in this study means that all teachers not considered White will be considered to be racially diverse.

Critical Race Theory and Education

Critical Race Theory (CRT) was conceptualized when scholars began to explore the reason legally enshrined principles of equality did not seem to improve the experiences of racially diverse American citizens (Crenshaw, 1988; Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). Prior to the conceptualization of CRT, Critical Legal Studies (CLS) was being developed as a critique of United States Law (Crenshaw, 1988). Much of the foundation of CLS is based on the writings of Antonio Gramsci and his idea of hegemony, which describes how oppressive structures persist and are replicated (Ladson-Billings, 1998).

CLS challenged the existing conception of law and power structures in the United States and drew a direct linkage between how laws are used and how power is maintained (Unger, 1983). The critique included claims that the law is used to codify discrimination against marginalized groups (Unger, 1983). For example, racial categories in the United States census have shifted frequently throughout the history of the census, however two racial categories (Black and White) have been included on every iteration (Ladson-Billings, 1998). As Crenshaw (1988) points out, “the recognition on the part of civil rights advocates that deeper institutional changes are required has come just as the formal changes have begun to convince people that enough has been done” (p. 1348). Until the development and articulation of CLS, the legal field

pushed a unified narrative of colorblind law that worked “equally” to protect all citizens (Crenshaw, 1988).

From CLS to CRT

The ideas developed by the CLS movement would later inform the development of CRT at Harvard Law School, when students who felt disenfranchised by the school’s curriculum developed their own courses that would create the idea of CRT (Crenshaw, 1995). Members of the CRT movement argued that law, and particularly civil rights law, should look at the most disadvantaged members of society for leadership and insight (Matsuda, 1987). Disadvantaged members of society, according to CRT, had a special perspective that allowed them to see past the assumed objectivity or “perspectivelessness” of law (Matsuda, 1987). In fact, CRT scholars argued that the appearance of objectivity in law served to perpetuate White privilege (Matsuda, 1987) by maintaining power for some and not others (Crenshaw, 1988). For example, in education law Derrick Bell (2008) critiqued the *Brown v. Board of Education* decision as a decision that had little impact on American education (despite being advertised as a law equalizing opportunity for students) because of the continuing segregation of American schools following the decision. Legal scholars argue that education is equal for all students because the decision enshrines equal education rights, however in practice the decision does not operate as described (Bell, 2008). Said more plainly, in the field of law the inability to look past the supposed objectivity of law has, in fact, created inequality (Matsuda, 1987).

Importantly, CRT recognizes that issues of inequality due to race change form but not effect (Siegel, 1997). As a result, the effect of law (and of research and policy) should be looked at in addition to the form of law (Siegel, 1997). Today, CRT has expanded outside the legal field into fields like sociology, economics, and education (Carbado & Gulati, 2002; Ladson-Billings

& Tate, 1995; Ladson-Billings, 1998; Yosso & Solorzano, 2005). As a result, sociologists, economists, and educators have created literature that ground the use of CRT in those contexts (Carbado & Gulati, 2002; Yosso & Solorzano, 2005).

CRT in Education

In education, Ladson-Billings and Tate (1995) have conceptualized CRT as it relates to the specifics of the field. Ladson-Billings and Tate's (1995) conception of CRT in education has three central tenets: (1) race as a significant factor in determining inequality in the United States, (2) United States society as a society based on property rights, and (3) the use of the intersection of race and property as an analytic tool that can be used to understand educational inequity (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). Some scholars have called for the foregrounding of the core principles of CRT in scholarly education work (Dixson and Rosseau, 2005). They have criticized the over-theorization of scholarly products in education and the tendency for education scholars to neglect linking theory and practice (Dixson and Rosseau, 2005). In response to these critiques, CRT serves as a link between theory and practice (Ledesema & Calderon, 2015). The link between theory and practice is particularly useful in education where issues of policy (including colorblindness and selective admissions) and the racial climate of campuses are difficult to understand without a CRT view (Ledesema & Calderon, 2015; Parker, 2015).

Race as a Significant Factor in Determining Inequality

Ladson-Billings and Tate (1995) argue that (before their seminal work) race was untheorized in education. They argue that race had not been used as a lens to systematically analyze inequality in education (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). The authors recognized that other researchers used race in critiques of educational phenomena, but

there was no underlying systemic theory to support their analyses (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). Ladson-Billings and Tate (1995) built their ideas on the work of W.E.B. DuBois and Carter G. Woodson, who considered race as the central construct for understanding inequality across contexts. Implicit in Ladson-Billings and Tate's (1995) understanding of CRT for education was that class- and gender-based explanations and critiques of phenomena were not powerful enough to explain all of the observed variance in educational outcomes between racial groups. As such, Ladson-Billings and Tate (1995) proposed a foregrounding of race in educational analyses based on an understanding of the field of education as a part of a larger question of racial inequality.

United States society based on property rights. The second tenet of CRT for education is the idea that society in the United States is organized around the ownership of private property (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). Ladson-Billings and Tate (1995) intended to add this assertion to already understood aspects of CRT from a variety of different fields. These understood aspects of CRT are that (1) racism is not a series of isolated acts but is ingrained in American life, (2) a realization that laws seeking to remedy inequality are often undermined before they can be effective, (3) claims of neutrality or colorblindness hide the self-interest of dominant groups, (4) subjectivity should be used to reformulate laws based on input for marginalized groups, and (5) the use of stories and first person accounts as critical evidence (Ladson-Billings & Tate, 1995). For Ladson-Billings and Tate (1995), the inclusion of property rights into these shared understandings resolves a key issue in CRT literature, the conflation of democracy and capitalism. According to Ladson-Billings and Tate (1995), democracy and capitalism are often conflated because of the coupling of the two ideas in contemporary American society. Property rights, as a key feature of capitalism, has a heavy influence on

education policy and school funding (Ladson-Billings and Tate, 1995). In addition, the idea of property rights interacts with, reinforces, and benefits from aspects of CRT elucidated in other fields (Ladson-Billings and Tate, 1995).

The intersection of race and property. For Ladson-Billings and Tate (1995) the conflation of democracy and capitalism (where democracy is understood as an important backbone of any society without a serious critique of capitalism) ignored how capitalism affects marginalized communities. Property rights, as a mainstay of American capitalism, led to the use of property taxes that unequally funded schools and led to the implementation of inequitable curriculum (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). In essence, Ladson-Billings and Tate (1995) argue that those who control property not only control the quality of education, but also what is taught and enshrined in curriculum. They also argue that intellectually property (i.e., the curriculum) must be secured by real property (e.g., land, science labs, computers) in order for the intellectual property to be valuable and effective (Ladson-Billings & Tate, 1995). The connection between race and property is that poor students and racially diverse students rarely have the level of property ownership that allows them to dictate their curriculum and to increase spending on education outcomes (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). Ladson-Billings and Tate (1995) describe the property gap as directly responsible for differences in the “opportunity to learn.”

Application of CRT in education. For this study, the systematic use of CRT in education can help to create a theoretical foundation that can be used to analyze the recruitment and retention of racially diverse teachers (Ladson-Billings & Tate, 1995). Just as CRT was formed in response to differences between outcomes and the notions of “equality” enshrined in the law (Crenshaw, 1988), CRT can be used to explore how racially diverse teachers have

become notably absent from teacher preparation programs that have equal opportunity policies for enrollment and recruitment. Analyzing the strategies used to recruit and retain racially diverse teachers in light of the “perspectivelessness” (or colorblindness) of admission standards at teacher preparation programs can help us to understand if/how programs are designed in ways that maintain the status quo (Matsuda, 1987).

CRT in education has been conceived of as a social justice project aimed at removing racism, sexism, language bias, sexuality bias, and classism from American education (Parker, 2015). The central lens of race used in CRT in education links theory to practice in a way that is primarily concerned with social justice (Parker, 2015). In addition, CRT in education seeks to link scholarship with teaching, and the academy with the community (Parker, 2015). In essence, the foregrounding of race in CRT in education is used to highlight disparities in outcomes so that practical steps can be taken to improve conditions while working with impacted populations to do so (Ladson-Billings, 1998).

To analyze impacted populations, CRT in education embraces experiential knowledge as one of its key principles (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998; Parker, 2015). Qualitative methods are used in CRT to provide insight into lived experiences in education spaces (Parker, 2015). Storytelling, histories, narratives, and biographies are all used in CRT in education to collect data from the experiences of subjects who offer a unique picture of the world and provide historical context for the phenomena being analyzed (Ladson-Billings, 1998; Parker, 2015). Therefore, the first-hand experience of students as they experience programs can give important insight into the ability of teacher preparation programs to recruit and retain students (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998; Parker, 2015).

Racially Diverse Teachers and Student Achievement

The mismatch between the degree of diversity in the student population and the lack of racial diversity of the teaching workforce continues to be an issue (Goldhaber, Theobald & Tien, 2015; Hrabowski & Sanders, 2015; Torres et al., 2004). Policy makers and researchers have argued that the teaching workforce needs to increase its racial diversity to keep pace with the student population (Cochran-Smith, 2004; Hrabowski & Sanders, 2015). To support this assertion the literature focuses on five key aspects of racial diversity in the teacher workforce that support student achievement, (1) racially diverse teachers as role models to racially diverse students, (2) racially diverse teachers' relevant experiences and knowledge as assets for racially diverse students, (3) racially diverse teachers and expectations of racially diverse students, (4) classroom dynamics between racially diverse teachers and racially diverse students, and (5) racially diverse teachers and their likelihood to seek employment and remain employed in schools that serve racially diverse students.

Serving as Role Models

Racially diverse teachers have historically been presented as a way to positively model opportunities and learning strategies for racially diverse students (Goldhaber, Theobald & Tien, 2015; Hawley, 1989; Irvine, 1989; Loehr, 1988). The logic for this claim is that racially diverse teachers are able to counteract negative racial stereotypes while also showing racially diverse students a possible future for themselves (Hawley, 1989; Irvine, 1989; Loehr, 1988; Preston, 2016). Loehr (1988) explains:

As the proportion of white teachers grows, role modeling that might encourage minority students to pursue careers in education decreases. ... Without sufficient exposure to minority teachers throughout their education, both minority and majority students come

to characterize the teaching profession and the academic enterprise in general as best suited for Whites. (p. 32)

Ultimately, role modeling increases student achievement through non-cognitive modeling of dispositions and possibilities for students who otherwise might not be able to see examples of themselves in those roles (Hawley, 1989; Irvine, 1989; Loehr, 1988; Preston, 2016). As an added bonus, Hawley (1989) says that the role modeling of racially diverse teachers can not only help with dispelling the negative stereotypes of racially diverse students, but also those of White students as well.

Experience and Knowledge Match

Racially diverse teachers are also thought to provide cultural, experiential and knowledge assets that are familiar, comfortable and useful for racially diverse students (Gay, 1993; Irving, 1989). Examples, scenarios, and personal experiences can be used by teachers to convey meaning and understanding to diverse students (Gay, 1993). If the examples and abstractions used by teachers are different than the metaphors or allusions used by students then they cannot properly convey meaning (Gay, 1993). Through a match of experience and knowledge with their students, racially diverse teachers can improve racially diverse students' achievement (Irvine, 1989). Irvine (1989) posits that there are two specific benefits of the experience and knowledge match of racially diverse teachers and students: (1) racially diverse teachers are more likely than White teachers to decrease the alienation of racially diverse students by serving as "cultural translators", and (2) racially diverse teachers use unique teaching styles that appear to be related to the success of some racially diverse students. Importantly, the insider knowledge deployed by racially diverse teachers in their teaching of racially diverse students is a valuable resource (Irvine, 1989; Preston, 2016).

Expectation Setting

Racially diverse teachers can benefit racially diverse students by setting expectations that allow students to see themselves achieving (Beady & Hansell, 1981). Expecting and preparing for student success in the classroom is a key for achievement in the classroom (Beady & Hansell, 1981). Indeed, studies have shown that race (and social class) have an important impact on teacher expectations (Dusek & Joseph, 1985) and evaluations (Ouazad, 2008). Teachers' speech often favors White students and reserves positive feedback/speech for those students at the expense of their Black and Hispanic counterparts (Tenenbaum & Ruck, 2007). Additionally, matching the race of students and teachers has a strong positive correlation with college expectations (Beady & Hansell, 1981). African-American teachers have been shown to have greater expectations that African-American students will enter and complete college (Beady & Hansell, 1981).

Teacher perceptions, expectations, and behaviors toward racially diverse students exacerbate the Black-White test score gap (Ferguson, 2003). Matching races of teachers and students improves student scores on classroom tests and assessments due to the "improved" perceptions and expectations of teachers that share their students' racial backgrounds (Ouazad, 2008). A study of longitudinal data found that racial matching of teachers and students has significant effects in the perception of students' ability (Ehrenberg, Goldhaber & Brewer, 1995). The study found that Black male teachers provided Black male (science and reading) and Black female (mathematics and science) students with higher subjective evaluations of their work than White male teachers (Ehrenberg, Goldhaber & Brewer, 1995). In addition, Hispanic teachers provided higher mathematics evaluations for Hispanic students than did White male teachers (Ehrenberg, Goldhaber & Brewer, 1995). Moreover, a study of tenth graders found that White

teachers believed that Black students were less scholastically able than their White peers (McGrady & Reynolds, 2013).

Classroom Dynamics

Classroom dynamics are another important concern found in the literature (Casteel, 1988; Dee, 2005; Ehrenberg, Goldhaber & Brewer, 1995; McGrady & Reynolds, 2013). African-American students were engaged in more negative interactions than White students when being taught by White teachers (Casteel, 1988). White students are more likely to be praised, receive positive feedback, and be given clues for correct answers from White teachers than their African-American peers (Casteel, 1988). In addition, Black and Hispanic students are less likely to be rated as attentive by White English (both groups) and mathematics (only Black students) teachers (McGrady & Reynolds, 2013). In a study of Tennessee student data, students were 36 percent more likely to be considered disruptive, 33 percent more likely to be seen as inattentive, and 22 percent more likely to not complete homework if the racial characteristics between students and teachers did not match (Dee, 2005). For low socioeconomic status students, the situation is worse as they are 35 to 57 percent more likely to be seen in a negative light by teachers who do not share their racial background (there is not a significant result for high socioeconomic status students) (Dee, 2005). This finding is particularly problematic as the majority of low socioeconomic status students in American public schools are racially diverse (Dee, 2005).

Mission Driven Retention

Racially diverse teachers are also able to help racially diverse students because of their motivation to teach those particular students (Ladson-Billings, 1995; Quirocho & Rios, 2000). The nature of this argument is that an activist or humanistic spirit developed through concern about students with common historical and racial roots will lead racially diverse teachers to seek

out racially diverse students to teach, help and mentor (Ladson-Billings, 1995; Quirocho & Rios, 2000). Practically, this means that for urban and low-income schools, which serve mostly racially diverse students (Darling-Hammond, 2012), racially diverse teachers are more likely to seek out those schools and stay employed at those locations (Ladson-Billings, 1995; Quirocho & Rios, 2000).

The Effect of Racially Diverse Teachers on Student Achievement

Researchers have investigated empirically the claims that racially diverse teachers positively impact the achievement of racially diverse students (Banerjee, 2017; Dee, 2004; Eaglite, Kisida & Winters, 2015; Ehrenberg, Goldhaber & Brewer, 1995; Evans, 1992; Gershenson et al., 2017; Goldhaber, Theobald & Tien, 2015; Hess & Leal, 1997; Jones, 2015; Hanushek, 1992; Yarnel & Bohrnstedt, 2017). Dee (2004) used a randomized experiment to explore how student test scores were affected by racially diverse teachers. The study randomly matched students and teachers in participating Tennessee schools (Dee, 2004). The experiment found that matching the race of students and teachers significantly increased the mathematics and reading scores of students (Dee, 2004). Interestingly, the result was the same for both Black and White students (Dee, 2004). Banerjee (2017) attempted to reproduce Dee's experiment and did not find that all racially diverse teachers affected mathematics and reading achievement for all racially diverse students. However, Banerjee (2017) did find that the achievement scores of Hispanic students were increased when they were paired with Hispanic teachers.

Researchers analyzed the reading and mathematics scores on the Florida Comprehensive Assessment Test to determine if matching the race of students and teachers affected achievement scores (Eaglite, Kisida & Winters, 2015). The study found that racial matching of students and teachers had a positive impact on reading achievement for Black and White students (Eaglite,

Kisida & Winters, 2015). In addition, the racial matching of students and teachers had a positive impact on mathematics achievement for Black, White and Asian students (Eaglite, Kisida & Winters, 2015).

Researchers have found that Black male teachers increase the academic achievement of Black male students in history (Ehrenberg, Goldhaber & Brewer, 1995). Racial matching of racially diverse teachers to racially diverse students has also been found to improve student learning in English and language arts (Jones, 2015). Matching Black students and Black teachers has been shown to improve reading scores on the National Assessment of for Educational Progress (Yarnell & Bohrnstedt, 2017).

Researchers have also found that exposure to Black teachers has positive effects on all students (Gershenson et al., 2017). Exposure to a Black male teacher in elementary school (third, fourth or fifth grade) reduces the probability of dropping out for all students but especially for Black male students (Gershenson et al., 2017). Exposure to a Black male teacher also increases the likelihood that students from the lowest socioeconomic groups will expect to attend college (Gershenson et al., 2017). In addition, instruction from minority (non-White) teachers has been found to increase the likelihood that all minority students enroll in college (Hess & Leal, 1997).

A study of role model effects was conducted in order to determine if the hypothesis that role modeling positively affects the achievement of racially diverse students (Evans, 1992). The study found that racially matched role models did have a significant effect on achievement (Evans, 1992). The regression analysis used in the study showed that matching the race of teachers and students increased achievement by almost 19 percent (if the mothers of the students had not completed their college education) (Evans, 1992).

Recruitment and Retention of Racially Diverse Teachers

Middleton, Mason, Stilwell and Parker (1988) developed an end-to-end framework for the implementation of plans at teacher preparation programs that increases the recruitment and retention of racially diverse teacher candidates. Their framework begins with (1) the analysis of the teacher preparation program, including documentation and description of the current state of the program's diversity (Middleton et al., 1988). Step two and three of the framework are: (2) specify recruitment and retention goals, and (3) to involve community groups in planning (Middleton et al., 1988). Consultation with community groups and attention to the recruitment goals leads to (4) developing the plans for a recruitment and retention strategy (Middleton et al., 1988). The fifth step includes (5) planning for the implementation of the plan by ensuring funding and training staff (Middleton et al., 1988). The next steps are to (6) implement and (7) evaluate the plan (Middleton et al., 1988). Finally, programs should (8) maintain their recruitment and retention efforts by collecting data and conducting ongoing analyses (Middleton et al., 1988). This framework can be used with other specific strategies to build an effective plan of action for teacher preparation programs looking to impact their ability to recruit and retain racially diverse teacher candidates.

Factors that Influence the Occupational Choices of Racially Diverse People

Torres et al. (2004) identified a number of factors that influence the occupational choices of racially diverse people. The factors include: (1) socioeconomic status, (2) degree of acculturation, (3) racial or ethnic identity, (4) appearance based on phenotype, (5) educational attainment of parents and the individual, (6) self-efficacy, and (7) amount of experienced discrimination (Torres et al., 2004). Degree of acculturation describes the process that immigrants experience as they integrate into society (Torres et al., 2004). Appearance based on

phenotype is used to describe aspects of “colorism,” or the idea that a person’s physical skin color can determine the way that they are interacted with (Torres et al., 2004). Finally, self-efficacy describes the belief that a person can successfully accomplish goals (Torres et al., 2004). These factors are important when analyzing successfully recruitment designs for racially diverse teachers.

Factors that Influence Racially Diverse People to Become Teachers

In the literature, two main factors influence racially diverse candidates to become teachers: (1) attraction of service, and (2) attraction of social justice (King, 1993; Shipp, 1999; Torres et al., 2004). One of the reasons that African American, Caribbean American, and African teachers are attracted to the profession is because it allows them to interact with students (King, 1993). A defining factor for African American teachers is a dedication to service as opposed to a dedication to salary (which is a determinant for non-education African American students) (Shipp, 1999). In addition, social justice is a key factor influencing racially diverse teacher candidates to pursue a teaching career (Shipp, 1999).

A study of middle and high school students in Connecticut was conducted in order to understand the aspects of teacher preparation programs (and their recruitment strategies) that are attractive for future racially diverse teacher candidates (Easley, Moorhead, Gordon, Wickramasinghe, 2017). Although all of the respondents were middle and high school students, the study provides important insight into potential aspects of teacher preparation program design that can influence potential teacher candidates. Teacher preparation programs that promote diversity and inclusion were cited as important by 98 percent of respondents (Easley et al., 2017). Diversity of faculty was cited as an important attribute by 54 percent of respondents (Easley et al., 2017). Future educator “clubs” for students still in high school was also cited as an

important factor by 86 percent of respondents (Easley et al., 2017). Over 84 percent of respondents disagreed with the statement that financial aid is not an important recruitment tool for teacher preparation programs, suggesting that respondents valued financial aid packages (Easley et al., 2017). In addition, participants indicated that opportunities to work in schools (91 percent), to have academic counseling (97 percent), to have job placement assistance (95 percent), and to work with diverse student populations (69 percent) were also important considerations for racially diverse students (Easley et al., 2017).

Other studies have found a variety of variables that influence racially diverse teacher candidates' desire to enroll and finish teacher preparation programs (Brown & Butty, 1999). A quantitative study of African-American male teachers' beliefs found that only an innate desire to impart knowledge and enrollment in education courses (before entering a teacher preparation program) were predictive of entrance to the teaching profession (Brown & Butty, 1999). The employment of racially diverse teacher educators with identities grounded in race, class, gender, and immigration issues could serve as a push to develop meaningful relationships with students and to pursue a career in teaching (Quiocho & Rios, 2000). In addition, motivational speakers that encourage students to pursue careers in teaching could be used to increase the number of racially diverse teacher candidates at teacher preparation programs (Quiocho & Rios, 2000).

Factors that Dissuade Racially Diverse People from Becoming Teachers

Lack of prestige has been overwhelmingly cited as the biggest factor dissuading racially diverse people from entering the teaching profession (Clewell & Villegas, 1998; Ford et al., 1997; Gordon, 1997; Madkins, 2011; Torres et al., 2004; Villegas & Lucas, 2004). Prestige, or the relative prestige compared to other professions, is shaped by the mainstream perceptions of teaching as a job and profession (King, 1993). Unfortunately, in society overall and particularly

in racially diverse communities teaching is not seen as a high prestige career like medicine or law (Ford et al., 1997; Madkins, 2011). The more acculturated a racial group has become to American culture, the less likely it is that they will see teaching as a prestigious career (Ford et al., 1997; Gordon, 1997).

Conditions that can be described as “depressing” in the teacher profession also contribute to making teaching a less appealing career (Clewell & Villegas, 1998). In addition, higher salaries in other fields along with increased opportunities in those fields make teaching a less attractive career (Clewell & Villegas, 1998; Villegas & Lucas, 2004). Moreover, tuition and the cost of licensure tests are barriers to potential teachers from low-income families who realize that the teaching profession is a low paying profession (Clewell & Villegas, 1998; Villegas & Lucas, 2004).

Compounding these issues is the reality that poor academic advising leads to many racially diverse teacher candidates failing to complete teacher preparation programs (Chung & Harrison, 2015; Quiocho & Rios, 2000). Additionally, poor elementary and secondary education causes many racially diverse teacher candidates to have trouble with retention in teacher preparation programs due to a lack of academic skill (Vegas, et al., 1998). Moreover, low high school and college graduation rates are contributing to a major drain on the pipeline of available racially diverse teachers (Vegas et al., 1998).

Lack of prestige, low salary, difficult working conditions, and inadequate educational preparation are the major factors influencing racially diverse people to not enter the profession (King, 1993). One of the students interviewed in King’s (1993) study explained that:

In this society, teaching is not a respected field. The government does not value teachers, which makes the students not value them too. Therefore, minorities who are on the lower

economic scale tend to seek or choose careers that are more respected, glamorous and richer [in salary]. (p. 485)

In addition, teachers have explained that in some communities it is expected that racially diverse teacher be “more than just” a teacher (Quiocho & Rios, 2000, p. 498). Clearly, for teacher preparation programs looking to recruit racially diverse teachers, overcoming the perceived lack of prestige is very important (Gordon, 1997; King, 1993; Madkins, 2011; Torres et al., 2004; Quiocho & Rios, 2000). This is especially important as college participation rates for racially diverse students continues to be lower than for White students, creating a smaller pool to recruit from (Ford et al., 1997).

Culture shock and alienation are critical reasons that many racially diverse teachers decide not to enroll in teacher preparation programs (Bennett, 2002; Chung & Harrison, 2015; Villegas & Lucas, 2004). Culture shock is caused by differences between the communities, homes and values of racially diverse teachers and the environment of teacher preparation programs (Bennett, 2002; Villegas & Lucas, 2004). Many racially diverse teacher candidates find that the day-to-day realities of interacting with predominantly White teacher candidates can be stressful and alienating (Chung & Harrison, 2015; Villegas & Lucas, 2004). Culture shock can be worsened for some students who find themselves a “minority” in homogeneous classrooms for the first time (Bennett, 2002) and are asked to represent/present ideas on behalf of all racially diverse people (Chung & Harrison, 2015). In particular, racially diverse teacher candidates in diversity courses sometimes feel alienated by curriculum focused on teaching White teacher candidates how to interact with racially diverse students (Chung & Harrison, 2015; Villegas & Lucas, 2004). Diversity classes of this kind make racially diverse teacher candidates feel as if “teacher education was for White students and not for them” (Chung &

Harrison, 2015, p. 8). Feelings of alienation can eventually lead racially diverse teacher candidates to leave teaching majors and transfer to other majors or careers (Ford et al., 1997).

Lack of emphasis on multicultural education can also impact racially diverse teacher candidates' desire to enter and stay in teacher preparation programs (Ford et al., 1997; Quirocho & Rios, 2000). Racially diverse teacher candidates who don't receive the type of multicultural education that they think they need often feel unprepared to enter the classroom at the conclusion of their teacher preparation program (Ford et al., 1997). The lack of emphasis extends to K-12 education where racially diverse teachers begin their experiences with education (Ford et al., 1997). In many cases, a lack of multicultural education in K-12 schooling dissuades prospective racially diverse teacher candidates from entering teacher preparation because of their past negative experiences in the education system (Ford et al., 1997). Students that find themselves underrepresented in education textbooks, curricula, and course content and can self-select out of seemingly unwelcoming classrooms (Ford et al., 1997; Quirocho & Rios, 2000; Villegas & Lucas, 2004).

Frameworks of Successful Recruitment Efforts

Multiple studies have sought to elucidate strategies that can effectively recruit racially diverse teacher candidates (Beardsley & Teitel, 2004; Bennett, 2002; Clewell & Villegas, 1998). Tufts University's Urban Teacher Training Partnership (UTTP) was built on five key pillars that were upheld as standards by the National Council for Accreditation of Teacher Education (Beardsley & Teitel, 2004). The five pillars include: (1) the creation of learning communities, (2) accountability and quality assurance of program outcomes, (3) collaboration, (4) culturally aware teaching, and (5) structural organization (Beardsley & Teitel, 2004). Project TEAM at the University of Indiana at Bloomington structures their programs around four pillars designed to

recruit racially diverse teachers (Bennett, 2002). The four pillars are: 1) curriculum reform to include diverse historical perspectives, 2) equity pedagogy that focuses on positive school and classroom climates, 3) multicultural competence, and 4) societal equity (Bennett, 2002). Teacher candidates that have participated in Project TEAM name community, ethnic identity awareness, social justice, and pedagogy as significant contributors to their recruitment and retention (Bennett, 2002). The Sherman STEM Teacher Scholars Program built their program on four foundational ideas: 1) developing community, 2) a summer bridge program to prepare teacher candidates for the program, 3) advising, mentoring and coaching academic, professional, and personal issues, and 4) classroom fellowships under the guidance of teacher mentors (Hrabowski & Sanders, 2005). Almost 40 percent of the Sherman Program's teacher candidates are racially diverse (Hrabowski & Sanders, 2005). The advising, mentoring and coaching support offered by the Sherman Program extends into the first few years of teaching, allowing for continued support of teacher candidates as they begin their careers in the classroom (Hrabowski & Sanders, 2005).

Seeking both traditional and non-traditional sources for teacher candidates, including non-declared undergraduates and non-education baccalaureate degree holders, is key to improving recruitment concerns (Clewell & Villegas, 1998; Talbert-Johnson, 2001; Villegas & Davis, 2007; Villegas & Lucas, 2004). The targeting of non-declared undergraduates is a strategy best employed by large universities that already have considerable diversity (Villegas & Davis, 2007). Racially diverse non-education baccalaureate degree holders are much more likely to get a provisional certification or to enroll in an alternate route programs than traditional teacher preparation programs; however traditional teacher preparation programs can create pathways for these teacher candidates as well (Villegas & Davis, 2007; Villegas & Lucas, 2004). For teacher preparation programs (without a diverse pool of non-declared undergraduates), one strategy is to

target non-traditional sources for teacher candidates (Talbert-Johnson, 2001; Villegas & Davis, 2007; Villegas & Lucas, 2004). Another strategy is to partner with elementary, middle, and high schools to identify and mentor future teachers in environments where racially diverse students learn and grow (Talbert-Johnson, 2001; TeachStrong, 2016; Villegas & Davis, 2007; Villegas & Lucas, 2004). Community colleges also represent a potential pool for racially diverse teacher candidates (Villegas & Davis, 2007; Villegas & Lucas, 2004). Of course, shifting the focus of recruitment and expanding recruitment efforts requires monetary commitment from teacher preparation programs (TeachStrong, 2016). Monetary support for increased recruitment of racially diverse teacher candidates should include money for website overhauls, salary for personalized recruitment meetings, and the development of forums with partners (TeachStrong, 2016).

Frameworks of Successful Retention Efforts

Multiple studies have also defined a number of strategies that can effectively retain racially diverse teacher candidates (Clewell & Villegas, 1998; Cochran-Smith, 2004; Talbert-Johnson, 2001; Villegas & Lucas, 2004; Yuan, 2018). Teacher preparation programs must incorporate the views and perspectives of racially diverse teacher candidates into their curriculums (Cochran-Smith, 2004; Villegas & Lucas, 2004). In addition, the cultural and linguistic characteristics and experiences of racially diverse teacher candidates must be utilized as a foundation of knowledge to meet the needs of racially diverse students (Cochran-Smith, 2004; Villegas & Lucas, 2004).

Support strategies for racially diverse teacher candidates, including scholarship support and program completion support, is vital for increasing retention in teacher preparation programs (Clewell & Villegas, 1998). Financial aid, loan forgiveness and mentorships can all help to keep

racially diverse teacher in the teacher pipeline (Talbert-Johnson, 2001). Having a human dimension, using school-based experiences, bridging support between high school and teacher preparation programs, monitoring progress, and lowering bureaucratic hurdles are keys to developing teaching preparation programs that can retain racially diverse teachers (Quiocho and Rios, 2000, Gonzalez, 1997). Situating teacher preparation programs in the community and working with the community can also help retain racially diverse teachers (Yuan, 2018). In addition, creating links with community groups and providing opportunities for development through field experiences in the communities that teachers will teach in is also an important consideration (Yuan, 2018).

Structural Issues in Teacher Preparation Programs

Some scholars assert that teacher preparation programs are institutionally and ideologically structured to hinder the success of racially diverse teacher candidates (Chung & Harrison, 2015). Open admissions, safe spaces for racially diverse teacher candidates, and racial sensitivity training for teacher educators in teacher preparation programs are proposed as ways to fix structural issues (Chung & Harrison, 2015). Examining admission criteria, analyzing programs to ensure fairness, and recruiting/retaining racially diverse teacher educators can also help (Evans & Leonard, 2013). Support for candidates as they transition from teacher preparation programs into the classroom can help with professional retention as well as program completion (Evans & Leonard, 2013). Specifically, the literature calls for teacher preparation programs to adopt a nurturing posture as they look to attract and keep racially diverse teacher candidates (Quiocho & Rios, 2000). A multicultural curriculum that attempts to inject anti-racist and pro-justice approaches (to the development of the structure of the teacher preparation program) as

well as the program's curriculum can help to make racially diverse teacher candidates feel more comfortable in their programs (Quiocho & Rios, 2000).

Theoretical Framework

This study is grounded in the theoretical framework of critical race theory for education developed by Ladson-Billings and Tate (1995). It also is grounded in the framework of learner-centered design articulated by Quintana (2006), and the concepts of conjecture mapping and argumentative grammar developed by Sandoval (2014). These frameworks informed the conceptualization of the study, guided the logic of the literature review, and informs the mode of analysis that is employed. Overall these concepts work together to create a vision for the design for teacher preparation programs that meets the needs of racially diverse teacher candidates.

Critical Race Theory in Education

CRT in education is a critical focus for this study. Using CRT as a theoretical framework allows for a view of education that acknowledges that race is a major factor in determining the way that the education system is structured and operates (Ladson-Billings & Tate, 1995). CRT allows for the foregrounding of race as a key issue for analysis (Ladson-Billings & Tate, 1995). Fundamental to CRT is looking past the "perspectivelessness" of systemic issues (Matsuda, 1987). In fact, scholars employing a CRT lens understand that the appearance of objectivity only serves to protect hegemonic forces and groups (Matsuda, 1987). CRT recognizes that issues of inequality due to race change form, but not effect (Siegel, 1997).

CRT in education is built on three central tenets: (1) race as a significant factor in determining inequality in the United States, (2) United States society as a society based on property rights, and (3) the intersection of race and property as an analytic tool that can be used to understand educational inequity (Ladson-Billings & Tate, 1995; Ladson-Billings, 1998). This

study uses the first and third tenants to understand recruitment and retention issues in teacher preparation programs. To this end, CRT in education allows for a critical view of the design of teacher preparation programs that focuses on the outcomes of programs as they relate to their ability to recruit racially diverse teachers, instead of judging the sentiment or intent of the designers of each program (Ladson-Billings & Tate, 1995). Moreover, CRT allows for a critical view of teaching and social justice that can build programs that appeal to racially diverse teachers (King, 1993; Shipp, 1999; Torres et al., 2004).

Learner-Centered Design

Learner-centered design proposes that all designed environments should be built around the “goals, needs, activities, and educational contexts” of users (Quintana, Shin, Norris, & Soloway, 2006, p. 119). In learner-centered design, users must engage in mindful work by being immersed in authentic practice that is surrounded by social and intellectual supports, users must engage in discourse with members of the community, and users must be exposed to the culture and community of their practice (Quintana et al., 2006). As such, the level of expertise of users, homogeneity of tools (or diversity of users), motivation of users, growth of user skill and user processes must be taken into account to provide a learner with a meaningful experience (Quintana et al., 2006). In addition, designers should bridge the Gulf of Execution (helping users understand how to operate in the environment) and the Gulf of Expertise (helping users to think like experts) (Quintana et al., 2006).

The Gulf of Execution, in the context of teacher preparation programs, refers to the gulf of understanding that prospective teacher candidates need in order to enroll in a teacher preparation program. The Gulf of Expertise, in the context of teacher preparation programs, refers to the gulf of understanding that prospective teacher candidates need in order to stay

enrolled and graduate from teacher preparation programs. Quintana et al. (2006) suggests that bridging these two gulfs can be done using scaffolding. Scaffolding, in this context, refers to the specific program features that help teacher candidates through the Gulf of Execution and the Gulf of Expertise. Learner-centered design is an important framework for this study because it orients thinking about the design of teacher preparation programs and foregrounds a number of principles that can help recruit and retain racially diverse teachers.

Conjecture Mapping and Argumentative Grammar

Sandoval (2014) identifies a critique of traditional design-based research as lacking “the logic that guides the use of a method and that supports reasoning about its data” (p. 19).

Sandoval (2014) offers conjecture maps as a way to articulate an “argumentative grammar” for designs (2014). Argumentative grammar refers to logical arguments about how aspects of a program’s design can be tested (Sandoval, 2014). Argumentative grammar is an alternative to traditional methods of evaluation that take strictly quantitative approaches (although outcomes can still be measured empirically using Sandoval’s approach) (Sandoval, 2014). Instead argumentative grammar measures specific actions in subjects that lead to short- and long- term outcomes (Sandoval, 2014).

In order to illustrate argumentative grammar in an easily digestible way, conjecture maps are used (Sandoval, 2004). Conjecture maps contain (1) high-level conjectures about learning (theories), (2) embodiments of those high-level conjectures (actual design choices), and (3) mediating processes that produce desired outcomes (Sandoval, 2014). Conjecture maps offer a methodology for evaluating teacher preparation programs and evaluating the argumentative grammar of their designs. A conjecture map at its core is a map that “includes logic for making causal attributions about design functions” (Sandoval, 2014, p. 29). In essence, a conjecture map

makes inferences about elements of design that are hypothesized to work in different ways but displays them in a standardized way (Sandoval, 2014). Specifically, conjecture mapping allows for an easily digestible way to illustrate and analyze each teacher preparation program's salient features for recruiting and retaining racially diverse teachers.

Chapter 3: Methodology

This chapter outlines the methodology used in this study and provides background for the methodological choices, strategies and analyses used to investigate the recruitment and retention of racially diverse teacher candidates.

Research Objective

The purpose of this study is to build a framework that teacher preparation programs can use to improve their ability to recruit and retain racially diverse teacher candidates. To this end, the methods employed in this study seek to identify, understand, and provide context to the strategies and tactics used by teacher preparation programs that successfully recruit racially diverse teacher candidates. This chapter discusses the research methods used to conduct this study and draws on previous research to ground methodological decisions.

Research Design

The design of this study was informed by previous works that intended to understand the recruitment and retention of diverse teacher candidates through the use of qualitative content analysis and qualitative case study methods. This study was designed as a multi-phased approach in order to capture important data from multiple stakeholders (i.e., faculty, staff and teacher candidates) using multiple methods (i.e., content analysis and qualitative case studies) that can be consolidated into a single framework for teacher preparation program design.

The first phase used content analysis to analyze the website and marketing materials of programs to determine what each program emphasizes as its key traits, values, and ideas. These traits, values, and ideas are embodied in external facing materials that describe to students the unique experience that each program offers. The second phase analyzed the results of Phase 1 to document and validate the key conjectures, embodiments, and mediating factors that each

program uses to recruit and retain racially diverse teacher candidates. Conjectures are the inferences that programs make about what traits, values, and ideas appeal most to racially diverse teachers. Embodiments are aspects of each program's design that turn the conjectures into tangible program features. Mediating factors are the internalized takeaways, or realizations, that students experience and demonstrate when embodiments are successful. The second phase of the study was designed to produce a conjecture map (a visual mapping of the key conjectures, embodiments, and mediating factors) for each institution. The third phase used qualitative interviews of faculty members and teacher candidates at each institution to validate the conjecture maps and to provide additional insight. The fourth phase consolidated each institution's conjecture map into a single conjecture map that is used to build a framework that teacher preparation programs can employ to improve their efforts to recruit and retain racially diverse teacher candidates. Figure 1 illustrates the structure and components of a conjecture map.

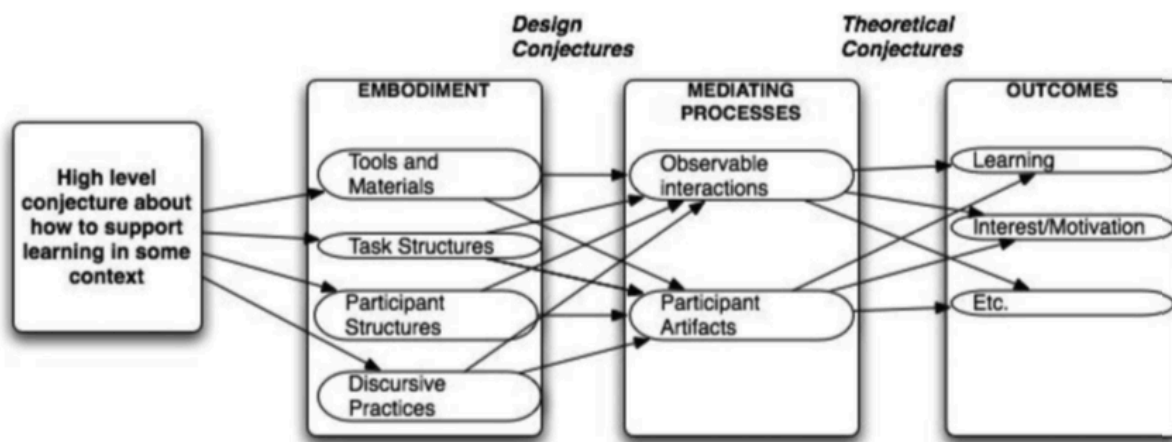


Figure 1. Conjecture Map Example (Sandoval, 2014)

Literature Informing Methods

The overall study method and the methods used in each phase are informed by the work of previous scholars in this domain. Baxter (2015), Sommerhoff et al (2018), Darling-Hammond et al. (2007), and Allen (2017) approached recruitment and retention issues of racially diverse teachers, and other key methodological issues, in similar ways. Baxter's (2015) analysis of important recruitment and retention strategies used by teacher preparation programs to increase the racial diversity of their teacher candidates informed the methods employed in Phases 1 and 2. Allen's (2017) analysis of student experiences in teacher preparation programs informed the development of parts of 3. Darling-Hammond et al. (2007), informed the development of the interview protocols used in Phase 3. Sommerhoff et al. (2018) used content analysis to compare the central concepts and research methods of learning sciences programs across the world. Sommerhoff et al.'s (2018) work is useful because it illustrates how content analysis can be used to identify program features and provides guidance in limiting the breath of materials analyzed during content analysis (a key aspect of Phase 2).

Baxter (2015) used content analysis as a primary method to identify the strategies employed by teacher preparation programs to attract teacher candidates. During the content analysis, historical and narrative data were captured about each institution from its marketing materials (Baxter, 2015). Baxter (2015) built her study on two previous studies by employing three Noel-Levitz rubrics (Noel-Levitz, 2013a, 2013b) in order to rate the effectiveness of recruitment and retention strategies. The identified strategies, narratives and historical information were analyzed using the three Noel-Levitz rubrics for effectiveness (Baxter, 2015). Baxter (2015) then identified three programs (out of thirty) that were using the most effective strategies and conducted case studies of each. The case studies consisted largely of website

content and personal discussions with program directors during semi-structured interviews (Baxter, 2015). Although Baxter uses Noel-Levitz rubrics, a more straightforward measure is simply the number of recruited and retained racially diverse teachers at an institution. This number can be compared to the demographic population of the areas around a teacher preparation program in order to determine if teacher preparation programs are oversampling from the population of available teacher candidates (this metric is be employed in this study).

Allen (2017) used a qualitative case-study methodology administering semi-structured interviews that utilized open-ended questions to elicit in-depth information about the recruitment of African-American teacher candidates at a teacher preparation program in Oregon. Allen (2017) sought to understand the experiences of teacher candidates in the program in order to understand how the recruitment process worked. Allen (2017) included multiple case studies to allow for comparison across teacher candidates. Allen (2017) employed a purposeful sampling method and sent an email to previous graduates of the program that fit the demographic profile, asking them if they would like to participate in the research. After two participants dropped out of the study, Allen (2017) selected and interviewed four teachers, who were previously teacher candidates in the program, with a range of teaching experience from one to eight years. Each participant was interviewed for 90 minutes, detailed notes were taken, and voice recordings were produced (Allen, 2017). The interview protocol aligned multiple questions to each of the four central research questions of the study (Allen, 2017). The design also included a pre-interview survey of background demographics. Allen's (2017) exemplifies the successful implementation of the qualitative case-study methodology. This case-study of one teacher preparation program helps to guide and conceptualize the materials, procedures, and design decisions used to is Phase 2 and 3 of this study.

Darling-Hammond et al. (2007) completed an analysis of the effective approaches to the preparation and development of principles. Case studies were used to determine the characteristics of exemplary educator preparation programs (Darling-Hammond et al., 2007). Then the case studies were broadened to include an analysis of institutional contexts at the state and district level (Darling-Hammond et al., 2007). Darling-Hammond et al. (2007) then attempted to situate each case study in a national context. Darling-Hammond et al. (2007) prioritized the selection of educator preparation programs based on the amount of public outcomes-based evidence available for each institution. Programs that had inadequate outcomes data or less than three years of graduates were not considered (Darling-Hammond et al., 2007). Darling-Hammond et al. (2007) filtered the selection of prospective programs by the type of program (i.e., pre-service or in-service), and the organization of the institution (i.e., district or university) in order to create a final sample with representation across contexts. Eight schools were selected, and semi-structured interviews were conducted with three to five active principals who graduated from each program (Darling-Hammond et al., 2007). Darling-Hammond et al. (2007) also interviewed and surveyed teachers who worked with each principal. The interview protocols used in the study were the basis for the interview protocols in Phase 3 of this study. Additionally, the multilayered approach used by Darling-Hammond et al. (2007) (i.e., using qualitative interviews of others involved with the phenomena being researched) informed the design of the multi-phased approach used in this study.

Sommerhoff et al. (2018) used content analysis to determine the disciplinary backgrounds of graduate learning sciences programs. Sommerhoff et al. (2018) analyzed the websites of 75 different programs and identified concepts that were highlighted by each institution. Only websites that had English language descriptions and a solid amount (i.e., more than just

administrative or admission details) were included in the study (Sommerhoff et al., 2018).

Additionally, only websites that could be retrieved from the program's index or welcome page were included (Sommerhoff et al., 2018). The gathered results were contrasted and compared in order to create an understanding of the most addressed concepts across learning sciences programs (Sommerhoff et al., 2018). The work done by the authors serve as an important illustration of the use of content analysis methods and informed my approach to identifying and selecting the materials that are included in Phase 2.

Research Design Structure

Baxter (2015), Sommerhoff et al (2018), Darling-Hammond et al. (2007), and Allen (2017) offered methods to inform Phases 1, 2 and 3 of the research design. Phase 4 of the design consolidated all the disparate sources of knowledge collected during the first three phases to develop a framework similar to the frameworks central to key pieces of literature in the design of learning environments cannon. In sum, this analysis has four phases:

1. Analysis of website materials and marketing materials aimed at external audiences. This was used primarily to determine the following: characteristics of the institution, aspects of the institution that differentiates it from others, and points of comparison that ground discussions about each teacher preparation program.
2. Compilation of Phase 1 results to determine the conjectures, embodiments and mediating factors of their recruitment and retention strategies. This led to the development of a conjecture map for each institution. The conjecture map will be shared with staff for feedback about its alignment with their view of their program's design.
3. Interviews of racially diverse teacher candidates at each institution about their experiences and reasons for entering their teacher preparation program and of faculty

members to understand aspects of their program's design. This data is used to provide qualitative evidence that the conjecture mapping is valid, to modify the conjecture maps, and to provide some insight into how each of the embodiments work.

4. Consolidation of the created conjecture maps to create a framework of key principles.

This framework can be used by other teacher preparation programs to inform their strategies for recruiting and retaining racially diverse teacher candidates. The consolidated framework can serve as a blueprint for the development of increasingly inclusive teacher preparation programs.

Learning Environment

This study did not attempt to create or analyze a traditional learning environment. A central premise of this study was that each teacher preparation program constitutes a learning environment that can be analyzed for effectiveness and dissected in order to understand its components. In this context, teacher preparation programs were considered broad (in both time and scope) learning environments with purposeful features designed to achieve certain outcomes. Each teacher preparation program has its own embodiments, mediating processes and outcomes. Ultimately, the outcomes that this study is most concerned with are the percentage and total count of recruited and retained teacher candidates who are racially diverse. In addition, embodiments and mediating processes are the key concepts that are researched and discovered using the methodology outlined in this paper.

Conjecture Mapping

The final artifact created based on the analyses conducted in this study is a framework that can help teacher preparation programs recruit and retain racially diverse teacher candidates. In order to create that artifact, multiple conjecture maps (one for each teacher preparation

program) were created and then combined. The conjecture maps were created from multiple narratives about the qualities of each teacher preparation program and supported by multiple data points from different sources (e.g., program materials, staff members, teacher candidates). The created conjecture maps were shown to staff/faculty at participating teacher preparation programs during the semi-structured interviews. The created conjecture maps are specific to each participating teacher preparation program. Figure 2 illustrates the conjecture map guiding this study.

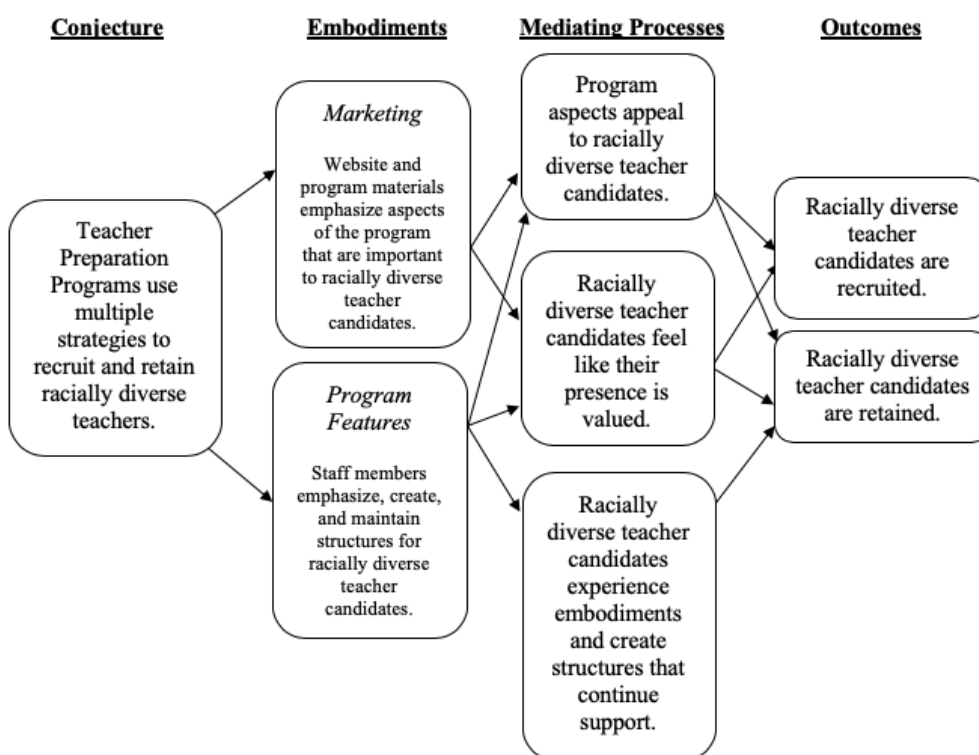


Figure 2. Conjecture Map of the Study

The central conjecture of this study is that teacher preparation programs purposefully use multiple strategies to recruit and retain racially diverse teachers. A collection of these strategies constitutes a program design intended to attract and keep racially diverse teacher candidates. Each program design (or collection of program strategies) is unique to the particular teacher preparation program that employs it. The program design is embodied in two specific ways,

marketing materials and program features. These embodiments are designed to influence teacher candidates to attend and stay enrolled in their prospective programs. In addition, each embodiment represents multiple connected ideas, features, events, structures, strategies, and activities that are designed to position each teacher preparation program as a preferred destination for racially diverse teacher candidates. In some cases, an embodiment is designed to recruit prospective teacher candidates to the profession and, in turn, the program (rather than focusing solely on direct recruitment into the program).

The methods outlined for Phase 1 were designed to measure the “marketing” embodiment (shown in Figure 2), and the “program features” embodiment (also shown in Figure 2). The methods used in Phase 3 were designed to validate the data collected in Phase 1. That phase also provided experiential data on how students interpreted the embodiments.

Mediating processes translate the program’s embodiments into tangible outcomes. Teacher candidates experience embodiments and determine the appeal of the embodiment in their particular context. Teacher candidates experience embodiments and understand that each teacher preparation program is placing a value on the enrollment, and continued participation, of racially diverse teacher candidates. Moreover, teacher candidates internalize the embodiments of the program’s design and develop structures that support the embodiments, leading to additional supports for racially diverse teacher candidates.

Participants

There were three sets of participants in the study: teacher preparation programs, faculty, and teacher candidates. Teacher preparation programs were included as the baseline unit; this unit was analyzed through website content analysis, to elucidate the ways successful programs were designed to recruit and retain racially diverse teacher candidates. Faculty and staff at

participating teacher preparation programs were included to gain insight into how they believed the program recruits and retains diverse teachers. Additionally, faculty offered insight into, and corrections of, the conjecture map that was prepared for their institution. Teacher candidates at each selected teacher preparation program were included to offer comments about the effectiveness of the identified strategies, concepts, and ideas.

Teacher preparation programs were selected for the study using a purposeful sampling method (Merriam, 2009); they were selected based on their effectiveness in recruiting and retaining racially diverse teacher candidates. Purposeful sampling allows participants to be selected based on criteria that support the investigation of a specific research question (Merriam, 2009). This is a nonrandom sampling strategy employed widely in qualitative research (Merriam, 2009). The number of enrolled racially diverse teacher candidates at each teacher preparation program was determined using academic year 2015–2016 data from Title II (a reporting database created and maintained by every teacher preparation program in the country).

Selection of Teacher Preparation Programs

I used data from 6 states, namely Connecticut, New Jersey, New York, Pennsylvania, Delaware, and Maryland. This selection facilitated my efficient travel and time management. Baxter (2015) employed a similar method, limiting the sample of her teacher preparation programs to Midwestern states bordering Minnesota. Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and Asian American and Native American Pacific Islander Serving Institutions (AANAPISIs) were removed from the data file and not considered for selection. Excluding HBCUs, HSIs, and AANAPISIs eliminates the variance associated with the way racially diverse teachers select colleges. Many racially diverse students are attracted to HBCUs, HSIs, and AANAPISIs for reasons that have little to do with an

institution's recruitment or retention strategy; students are influenced by the demographic composition and other factors of the school (Cuellar, 2015; Jackson, 2001; Nunez & Bowers, 2011; Outcalt & Skewes-Cox, 2002; Stewart, 1997). Baxter (2015) also excluded HBCUs from her analysis for similar reasons. Additionally, only traditional teacher preparation programs were included in the data file; alternative-route programs were excluded. Finally, teacher preparation programs with fewer than 100 students were excluded to minimize the likelihood that a single student could have a large effect on the metric used to select programs in this study.

Teacher preparation programs with the highest percentage difference of racially diverse teacher candidates, compared to their metropolitan statistical area (MSA), were selected for outreach (programs were ranked based on the following formula: % of racially diverse teacher candidates minus % of racially diverse people in the MSA). This group of teacher preparation programs was further narrowed by eliminating programs that did not have a positive percent difference between the percentage of racially diverse teacher candidates in their program and the percentage of racially diverse teacher candidates attending the entire college or university (including all departments). The college or university – hereafter referred to as “university” but denoting both types of institution – was used as a point of comparison. Doing so allowed for reduction of bias in the sample caused by university-level recruitment or retention efforts and effects. Table 4 shows the teacher preparation programs that met these criteria.

Table 4.

Most Diverse Traditional Teacher Preparation Programs in Selected States

<u>Program</u>	<u>State</u>	<u>Metropolitan Area</u>	<u>Enroll</u>	<u>Metro Δ</u>	<u>Institution Δ</u>
TPP 1	NY	NY-Newark-Edison	151	32.21%	1.96%
TPP 2	NY	NY-Newark-Edison	153	31.76%	4.99%
TPP 3	NY	NY-Newark-Edison	166	17.98%	5.91%
TPP 4	PA	Phila-Camden-Wilmington	177	17.31%	26.14%

TPP 5	NY	Rochester	143	8.47%	1.96%
TPP 6	PA	Erie	507	7.20%	4.99%

Note. Data for diversity were obtained from Title II and www.diversitydata.org. Data for institution were obtained from nces.ed.gov/ipeds.

For the calculation, teacher candidates from Latinx, African-American, Indigenous American, Native Hawaiian or Pacific Islander, Asian, and two or more (“2+”) racial backgrounds were considered to comprise racial diversity. South Asian and Asian data were combined to create the overall Asian statistic (because of a misalignment between data files, one data set identified South Asian as a separate racial identity, whereas the others did not). Diversity data for teacher preparation programs were gathered from Title II (2015 data). The Heller School of Management at Brandeis University’s diversity database was used for MSA (2012 data). MSAs were defined by the categorization used at www.diversitydata.org. The Integrated Postsecondary Education Data System (IPEDS) was used for the calculation of institutional racial diversity (Fall 2015 data). Enroll refers to the enrollment of each program.

All six identified teacher preparation programs were targeted for recruitment. The program director at each institution was sent an email with details about the study and was asked to participate. For some sites, the certification director or other faculty was contacted. A combination of personal connections and cold-calling was used to communicate with schools that had unresponsive faculty. Of the six schools approached, three agreed to participate. Table 5 lists the three schools and information about their demographic backgrounds.

Table 5.

Background of Traditional Teacher Preparation Programs in this Study

<u>Program</u>	<u>State</u>	<u>Enroll</u>	<u>Latinx</u>	<u>Indigenous</u>	<u>Asian</u>	<u>AA</u>	<u>2+</u>
TPP 4	PA	177	8%	0.56%	2.82%	38.42%	3.39%
TPP 5	NY	143	9%	0.00%	8.39%	6.99%	6.29%
TPP 6	PA	507	0%	0.00%	0.39%	1.58%	19.13%

Note. Data from Title II.

Faculty and Staff Selection

Faculty and staff were selected for the study using a purposeful sampling method (Meriam, 2009). The selection criterion was that participants must be staff or faculty members at the selected teacher preparation programs. Individuals were identified by the program director or the school contact from the teacher preparation program recruitment phase, based on their proximity to the recruitment and retention processes. Three faculty or staff members were interviewed at two of the three participating institutions; two faculty members were interviewed at the third institution.

Faculty and staff were asked by email if they would participate in the study, and a date and time was reserved for a semi-structured interview. The interview was scheduled as an in-person discussion when feasible. When this not feasible due to scheduling conflicts or other issues, phone interviews were conducted.

Participating faculty and staff members came from a variety of backgrounds and roles within their respective institutions. For the eight staff members who were interviewed, the average time they had worked in their program was 11.4 years. Table 6 shows the race, gender, role, years at the program, and prior experience for each faculty or staff participant.

Table 6.

Background of Participating Faculty and Staff (n=8)

<u>ID</u>	<u>Race</u>	<u>Gender</u>	<u>Role</u>	<u>Years</u>	<u>Non-Program Exp.</u>
411	-	F	Student Placement Coordinator	5	Elementary Teacher
412	White	M	Professor of Education	4	Middle School Teacher
511	White	F	Director, Elementary and Early Childhood	10	Elementary Teacher
512	White	F	Director, English Teacher Preparation	8	Middle School Teacher
513	White	M	Director, Teacher Education	10	High School Teacher
611	White	F	Interim Dean for School of Ed.	31	None

612	White	F	Special Ed. Professor	15	Learning Support Spec.
613	White	F	Chair, Middle, Secondary, Ed. Leadership	8	High School Teacher

Teacher Candidate Selection

Teacher candidates were selected for the study using a purposeful sampling method (Meriam, 2009). The faculty or staff interviewed were asked to provide the names of two racially diverse teacher candidates who might be willing to participate in the study. Teacher candidates were emailed an invitation asking them to participate. Again, a semi-structured interview was scheduled as an in-person discussion where feasible. If not feasible because of scheduling conflicts or other issues, phone interviews were conducted. Table 7 shows the race, gender, teaching license, years at program, and age for each participating teacher candidate.

Table 7.

Background of Participating Teacher Candidates (n=6)

<u>ID#</u>	<u>Race</u>	<u>Gender</u>	<u>License Pursued</u>	<u>Years</u>	<u>Age</u>
421	Black	F	Special Education and General Education for K to 4	2	33
422	Black	M	Secondary Ed & Special Ed Dual Cert Program	3	43
521	Asian	F	High School English	1	36
522	Black	F	Secondary Social Studies	2	36
621	Black	M	K to 12 Music Education	2	24
622	Black	F	Early Childhood Special Education (completed)	Alum	26

Procedure and Data Collection

The research procedure began with content analysis of webpages and other materials that were presented externally by the selected teacher preparation programs. Bowen (2009) described content analysis as “a systematic procedure for reviewing or evaluating documents – both printed and electronic (computer-based and Internet-transmitted) material” (p. 27). Content analysis is used to examine documents to understand concepts and ideas (Bowen, 2009). This method is

sometimes used with other qualitative data-capture methods, but always employs coding as its central technique (Bowen, 2009). Content analysis in this study allowed for the distillation of information from a program's website to create a conjecture map. This map outlined aspects of the program's design that facilitated the recruitment and retention of racially diverse teacher candidates.

Content Analysis

The content analysis began with downloading each program's webpages in PDF format. The homepage and each main branch of the homepage (e.g., admissions, about us, why choose us) were downloaded for analysis. All downloadable materials (e.g., information for prospective teacher candidates) were also downloaded for analysis. All materials for each program were printed and grouped by institution, in anticipation of coding. After coding, the main categories and identified themes were used to create each program's conjecture map. This provided a picture of the program's strategy.

All identifiable information was removed from the documents and the conjecture maps and was replaced by a site number (the first digit in the participant ID for each participant connected to the institution). Site numbers protected the identity of programs by de-identifying any specific information about the program. The name of the institution and its assigned institutional number were stored in a password-protected spreadsheet. Only the principal investigator had access to the institution data file, and the file was not stored on any cloud-based storage service such as Dropbox.

Interviews

The interviewing of faculty, staff, and teacher candidates (Phase 3) began after each participant had agreed to participate in the study. A meeting time was established, after which

the participant was assigned a participant ID that was stored in a password-protected spreadsheet. The participant ID was a three-digit alphanumeric code beginning with a one-digit site number. The second digit was a letter designating the position of the participant (i.e., faculty, staff, teacher candidate). The final digit of the code designated the actual participant. Participant IDs were used to protect the identity of participants. Only the principal investigator had access to the participant data file; it was not stored on a cloud-based storage service.

Interview material for faculty and staff was used to modify the conjecture maps created during Phase 2. Teacher candidates' views were used to provide experiential data points to affirm or provide context to the conjecture maps for each program. Semi-structured interviews were used so that I could respond to the participant's answers and follow up where necessary (Merriam, 2009). The interview protocol was adopted from Darling-Hammond et al. (2007), with several modifications (described in the materials section). Thirty minutes was allocated for each interview of faculty and staff members and teacher candidates.

At the beginning of each interview, I read a short statement outlining the purpose of the interview and making the participant aware of specifics of the study. The participant was then asked to consent to the interview and begin to answer the background questions. Each interview was delivered at a slow but deliberate pace, to allow the participant to reflect and add details as necessary.

Each interview was recorded using an iPhone application called Voice Recorder. This is a free application that enables the creation and distribution of voice files. The principal investigator also took notes during the interview. Voice recordings and researcher notes are two of the strategies outlined by Merriam (2009) for successful qualitative data capture. The notes and recordings were used to create written transcriptions of the interviews. Each transcribed

interview was coded into key themes and categories, which were used as inputs in the final consolidated conjecture map.

As the primary researcher, I transcribed the interviews. Merriam (2009) stated that written transcriptions should use left-justified numbering of each line of text, with single spacing between lines. Merriam (2009) also suggested that double spacing be used between lines uttered by different speakers. Additionally, Merriam (2009) suggested that interview questions be shown in bold or italic font. All these guidelines were used in transcription of the interviews in this study. For words that were hard to hear on the audio recording, contextual clues and my interview notes helped to make sense of what had been said.

Consolidation

The final phase of the study (Phase 4) combined all the edited conjecture maps into a single conjecture map, creating a unified framework. It included the seven central conjectures about the aspects of program design that enable successful recruiting and retention of racially diverse teachers. The final map was translated into an expanded framework, which embellished on each central conjecture and offered explanatory examples from faculty, staff, and teacher candidates.

Materials

Each of the four phases of the study involved different materials for collecting information. For Phase 1, content analysis was conducted, which did not require materials to be distributed. Website content and other available materials on each program's website were downloaded and analyzed during this phase. Conjecture maps were created in Phase 2. An example of a completed conjecture map appears in Appendix A. For Phase 3, a semi-structured interview protocol was created and administered to faculty members and racially diverse teacher

candidates. For Phase 3, semi-structured interview protocols were created and administered to racially diverse teacher candidates. Finally, Phase 4 combined the conjecture maps to create a comprehensive framework. The comprehensive framework appears in the findings chapter.

Faculty and Staff Interview Protocol

In Phase 3 semi-structured interview with faculty and/or staff served two purposes: 1) to understand the aspects of program design that the faculty believed contributed to the successful recruitment and retention of racially diverse candidates; and 2) to validate or modify the Phase 2 conjecture map. The structured interview protocol was divided into sections. It began with demographic questions, moves to “warm-up” questions, followed by program-design questions, and ended with conjecture map questions. The protocol borrowed heavily from that of Darling-Hammond et al. (2007) for faculty interviews. Many demographic questions were taken from the Darling-Hammond et al. (2007) protocol, such as questions about the participant’s role at the program and their prior experience. Both warm-up questions were taken directly from Darling-Hammond et al. (2007), they allow the participant to ease into the substantive parts of the interview. Multiple questions about program design were taken from the Darling-Hammond et al. (2007) faculty protocol.

The demographic background questions included name, race or ethnicity, gender identity, role in the program, date when participant began working at the program, and experience prior to joining the program. The warm-up questions were then asked to orient the participant and put them at ease. The third section of the protocol included questions about the program design, which undergirds its foundation and its presentation externally. These questions asked specifically about program efforts and supports designed to increase the recruitment and retention of racially diverse candidates. These questions addressed the central research question

of this study and provided examples of and ideas about how the program's design met recruitment and retention goals. The last section of the protocol asked for feedback on aspects of the conjecture map created for each program. These questions validated and modified the central features of the map. This part of the protocol was an important check for the validity of content analysis. The interview protocol for faculty and staff is shown in Appendix B.

Teacher Candidate Interview Protocol

The Phase 3 semi-structured interview was designed for racially diverse teacher candidate participants. The interviews served a single purpose: to understand and confirm the aspects of program design that teacher candidates believed contributed to successful recruitment and retention. The protocol again borrowed heavily from Darling-Hammond et al.'s (2007) participant interview protocol.

As with the faculty protocol, the structure of the teacher candidate protocol began with demographic questions, followed by warm-up questions and then program design questions, and ended with conjecture map questions (Darling-Hammond et al., 2007). Many demographic questions were taken from Darling-Hammond et al. (2007). Questions were also asked about the participant's certification or intended certification and length of time in the program (Darling-Hammond et al., 2007). The warm-up questions were taken directly from Darling-Hammond et al. (2007), as were most of the program design questions.

The demographic background questions asked for the person's name, race or ethnicity, age, gender identity, high school education, intended teaching license or credential, and length of time in the program. The second section asked a single warm-up question with several follow-up questions. The third section covered aspects of program design that influenced teacher candidates to attend and stay in the program. These questions also asked how they had decided to

attend the program and what influenced them to stay enrolled. The questions directly addressed the central research question of this study, by providing experiential data points that could be tied to the conjectures of the program design.

The last section of the protocol asked for feedback on the multiple design conjectures of the program (e.g., whether social justice was a key aspect of design). These questions sought to validate or modify the central features of the conjecture map. This part of the protocol provided a further check for the content analysis, conjecture map, and earlier faculty interviews. The interview protocol for teacher candidates is shown in Appendix C.

Informed Consent

Each participant was asked to complete a consent form as a condition of their participation. The form outlined expectations for participants during the study. Each consent form was completed either in-person for face-to-face interviews, or via DocuSign for phone interviews. After the consent forms were signed, each participant was given a participant number to protect his/her identity and to track the related results throughout the study.

Data Analysis

Data analysis for this study consisted of organizing data from the content analysis and interviews and separating these data into coded themes. Then the codes were condensed, and the data were mined for exemplars. All the data were used as input for the final consolidated conjecture map.

Content analysis depended on downloaded information from websites and publicly accessible marketing material. These materials were coded using thematic with definitions and examples of each theme. The main themes identified in coding were used to populate the

conjecture maps, which served as input for the semi-structured interviews conducted with faculty members and teacher candidates.

The transcripts provided the basis for coding. Merriam (2009) noted that the goal of qualitative data analysis is to identify key pieces of information that answer the research questions. According to Merriam (2009), data must meet two criteria: 1) they should be heuristic and 2) they should be small enough to be “digestible”, without other information needed for understanding. In this study, the data were aggregated so that categories were discovered through coding activities (Merriam, 2009). All codes were data driven; an open coding technique was used to code and categorize key themes that provided answers to the research questions (Merriam, 2009). Examples given by participants during interviews were selected for their adherence to the thematic categories identified during coding; they were included in this report to provide insight into the function of each category.

Coding

Three raters coded the data from the interviews and the content analysis. The use of multiple raters allowed for triangulation of the results (Merriam, 2009) to increase the reliability of data analysis. Using a third rater also allowed for discrepancies to be adjudicated. Each rater worked only with anonymized data. Two raters were doctoral candidates and the third rater holds a PhD. Each rater had received CITI certification.

Chapter 4: Findings

This chapter is divided into three sections. The first section outlines the conjecture maps created by the content analysis of website and marketing materials, and validated by interviews with faculty, staff, and racially diverse teacher candidates. The second section offers insight into the main findings from the semi-structured interviews of staff and teacher candidates and provides exemplars of the conjectures from the interviews. The third section provides the consolidated conjecture map and a discussion of its main points. Each theme uncovered during data analysis is explored in detail, to provide context for program administrators who seek to understand key design considerations.

Conjecture Mapping from Content Analysis

The content analysis of website and marketing materials proved to be fruitful and effective for succinctly distilling the main design aspects of the teacher preparation programs. Generally, when conjecture maps created during the content analysis process were presented to faculty, staff, and students, they were well received and were rarely edited. However, although the maps captured relevant design decisions for each teacher preparation program, they did not capture elements of design that were particularly important from the perspective of racially diverse teacher candidates. That perspective was captured in the semi-structured interviews and the information was used to develop the final consolidated conjecture map. In this section, I outline the conjecture map created for each teacher preparation program, discuss the central design conjectures and themes for each program, and include any modifications made to the conjecture maps by interviewees.

TPP 4

TPP 4 is a private college on the outskirts of Philadelphia, Pennsylvania. Created as a women's college focused on liberal arts, the university relatively recently (2003) began to allow male students to enroll. The mission of TPP 4 is to provide holistic education as a primarily Catholic college. The school is mid-sized, with about 2,000 students enrolled across all its programs. The teacher preparation program is known as a relatively small teacher preparation program in the region; about 177 teacher candidates were enrolled in 2015.

TPP 4 has a robust website with much information for prospective and current students. The website includes information about each certification and degree program, along with marketing materials designed to give users a view of what life is like in the program. The website includes a video of current students discussing what it is like to attend the program. In general, the main aspects of design of TPP 4's teacher preparation program are front and center on the website and in the marketing materials. Figure 3 shows the TPP 4 conjecture map that was created during the content analysis phase. When the map was presented to TPP 4's participating faculty members, they did not request any edits or modifications.

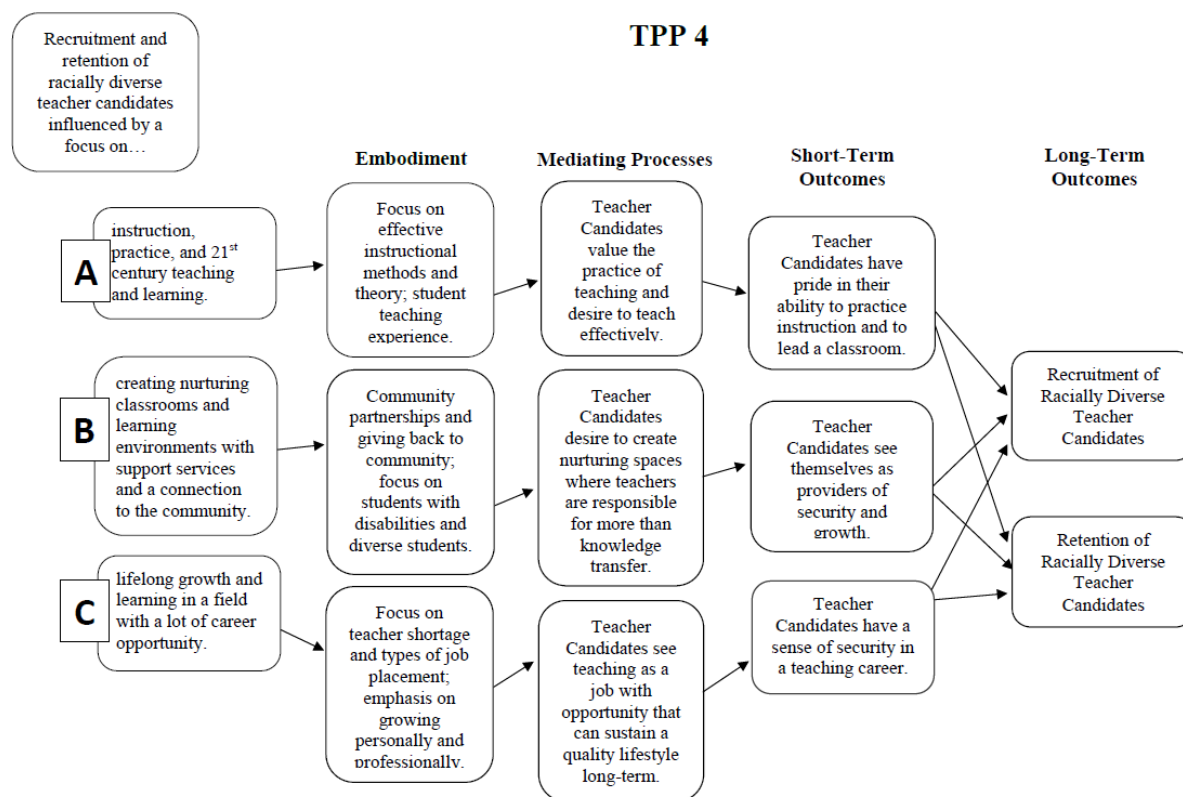


Figure 3. TPP 4 Conjecture Map

Instruction, practice, and 21st-century teaching and learning. The first conjecture (labeled A) on the conjecture map is a focus on instruction, practice, and 21st-century teaching and learning. This conjecture is embodied at the teacher preparation program as instructional method courses and pedagogical theory courses; there is also a strong focus on the student teaching experience. An example of the conjecture is a video on the TPP 4 website of a student's experience at TPP 4: "I've loved being in my writing methods class. I took it with [OMITTED]. She's an amazing teacher that gave me so many different strategies and ideas that I use in real classrooms." The quote exemplifies TPP 4's innovative approach to student teaching.

Student teaching placements in public, private, and parochial schools are offered so that students can align their instruction and practice with the environments where they want to teach. Their student teaching experience is divided into four stages, each designed to build on the

previous stage. Stages 1 and 2 consist of 40 hours of observation and classroom participation embedded within foundation pedagogy courses (i.e., human growth and development, learning theory, and methodology). These stages are used to build theoretical understanding of pedagogy while immediately seeing theory applied in the classroom. Additionally, Stages 1 and 2 allow teacher candidates to experience real classrooms early in their training. This exposure empowers them to reconsider their career choice if necessary and socializes them to the professional context of their future work.

Stage 3 assigns teacher candidates to a cohort that, in combination with a TPP 4 instructional coach, is placed in a classroom for 6 hours per week for a total of 75 hours. Stage 4 serves as the capstone for the student teaching experience and is similar to the traditional full-time student teaching model.

As outlined in the program's conjecture map, racially diverse teacher candidates possibly process these embodiments and examples by understanding that the program can help them to become effective teachers and build their pedagogical skills. In the short term, this approach potentially provides racially diverse teacher candidates with a sense that TPP 4 can possibly provide them with pride and confidence in their ability to lead classrooms. Over the long term, it can potentially lead to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Creating nurturing classrooms and learning environments with support services and a connection to the community. The second conjecture (labeled B) on the conjecture map is a focus on creating nurturing classrooms and learning environments with support services and a connection to the community. This conjecture is embodied at TPP 4 as multiple community-based partnerships, with a focus on students with disabilities and on diverse learners. Examples

of this conjecture are the Classroom in the Community and the Council for Exceptional Children programs. Classroom in the Community exposes teacher candidates to the importance of community experiences, field trips, and learning in nature by hosting classes at Morris Arboretum in Philadelphia. The Council for Exceptional Children is an open membership group at TPP 4 that shares research and knowledge about teaching students with disabilities; it also provides community service to gifted students. As outlined in the program's conjecture map, racially diverse teacher candidates possibly experience these embodiments by understanding that the program can potentially help candidates to become nurturing teachers who are responsible for more than simply knowledge transfer. In the short term, this potentially gives racially diverse teacher candidates a vision of themselves as providers of security and growth. Over the long term, it potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Lifelong growth and learning in a field with many career opportunities. The third conjecture (labeled C) on the conjecture map is a focus on lifelong growth and learning in a field with career opportunities. This conjecture is exemplified in a passage from the TPP 4 website:

Across the nation, teachers who have been teaching for 25 years or more are retiring from the profession. Since 2010 the mass retirement has opened up more than 10,000 new teaching positions per year. New teachers can choose from a variety of classroom settings that match their background, college preparation, and particular activities.

This conjecture is embodied in the teacher preparation program through job opportunities, types of job placements, and professional growth. TPP 4 keeps a list of areas that have a shortage of teachers, which at the time of this study included private schools that offered specialized curricula connected to specific philosophies, parochial schools that offered curricula tied to

specific faith teachings, and charter schools aligned to state and national standards. Explicit identification of these areas potentially allows teacher candidates to align their training to the specific contexts in which they would like to work.

As outlined in the program's conjecture map, racially diverse teacher candidates possibly embrace these embodiments by understanding that the program can potentially help them to gain entrance into the teaching profession and afford them a quality lifestyle, long-term. In the short term, the program potentially provides racially diverse teacher candidates with a sense of security in their chosen profession. Over the long term, it potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

TPP 5

TPP 5 is a private university in New York State. It is a large university of about 11,000 students located in a mid-sized city. TPP 5 is a research university with multiple campuses and a robust offering of degree programs. Although the university is much larger than TPP 4, the teacher preparation program at TPP 5 had an enrollment of only 143 teacher candidates in 2015 (about 30 people fewer than TPP 4). TPP 5's website is well-built and full of content for prospective and current students. Figure 4 shows the TPP 5 conjecture map that was created during the content analysis phase.

After the conjecture map was presented to TPP 5's participating faculty members, an important modification was made. The original map contained a reference to "world-class status and rankings" for the education program in national publications (the embodiment of Conjecture A). Several faculty members took issue with this characterization. They clarified that they do not focus on test scores or increasing the metrics used to rank their program nationally; instead, they

focus on the quality of research and the program to build a world-class institution. This approach is independent of the ranking. One faculty member offered the following insight:

It's less about ranking status and more about high-quality work and frequent work, and the connections of that work to the community and to the schools in which our candidates are going to teach. I think that's really important. I think candidates see that. They experience that in the classes that they take, but I think they probably see that in the materials too.

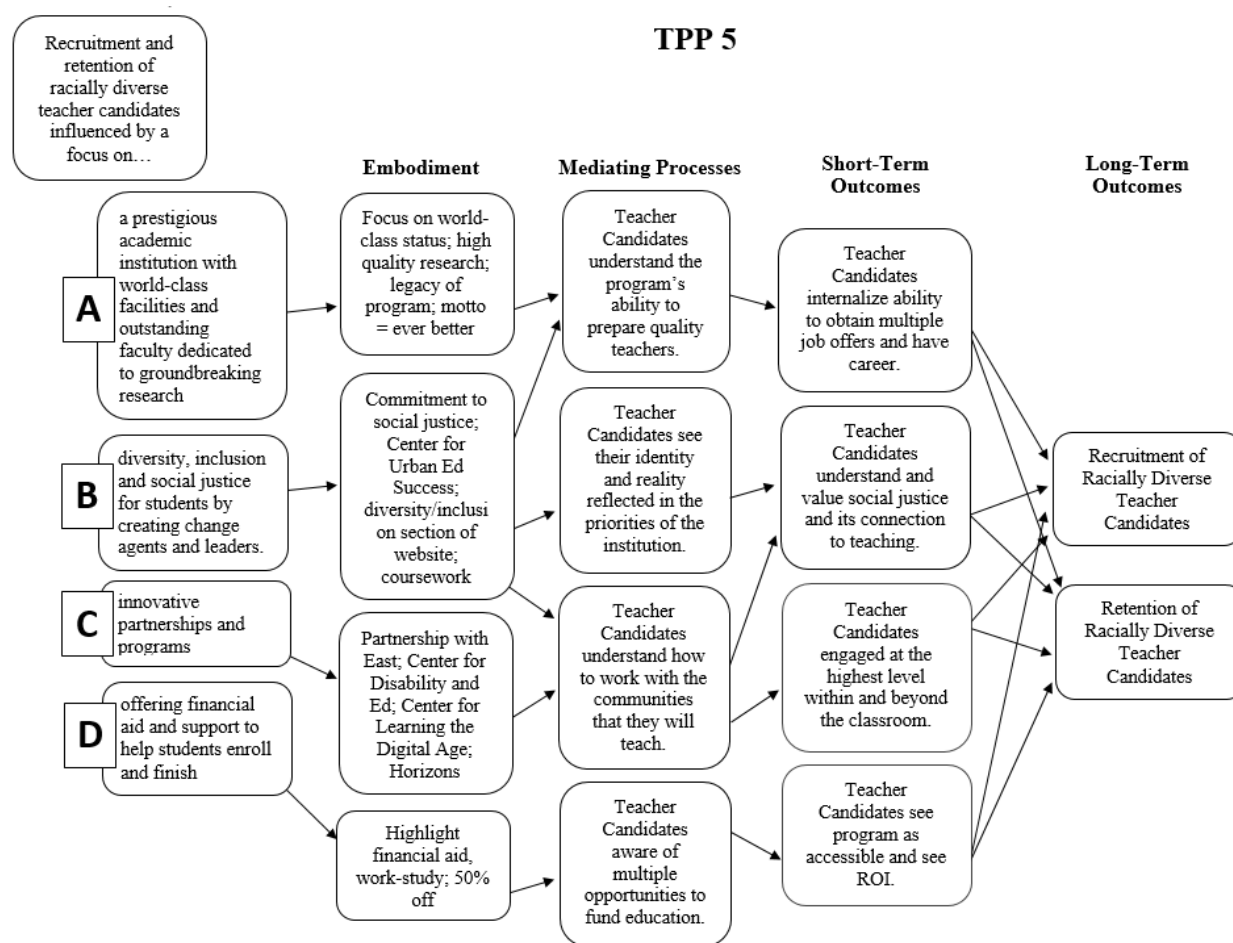


Figure 4. TPP 5 Conjecture Map

Prestigious academic institution with world-class facilities and outstanding faculty

dedicated to groundbreaking research. The first conjecture (labeled A) on the conjecture map

focuses on a prestigious academic institution with world-class facilities and outstanding faculty, dedicated to groundbreaking research. An example of this conjecture is the heading of the “About” page on the TPP 5 website: “A Research School of Education in a World-Class University. In the spirit of *Meliora*, making the world ever better.” This conjecture is embodied in the teacher preparation program as a focus on world-class status, high-quality research, and the legacy of the program. The conjecture is also embodied by the motto of the university, “Ever Better.”

Racially diverse teacher candidates possibly experience those embodiments by understanding that the program can potentially help them to become effective, quality teachers. In the short term this potentially provides racially diverse teacher candidates with the belief that they will obtain several job offers and embark on a career as a teacher. Over the long term, this potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Diversity, inclusion and social justice for students by creating change agents and leaders.

The second conjecture (labeled B) on the conjecture map is a focus on diversity, inclusion and social justice for students by creating change agents and leaders. An example of this conjecture appears on a dedicated “Diversity and Inclusion” section of the TPP 5 website:

[TPP 5] is dedicated to fostering a learning community, cultures, histories, ideas, and ways of living. Consistent with our dedication to education, leadership, counseling, and human development that can transform lives and make the world more just and humane, we recruit, support and learn with and from students, staff, and faculty from the broadest spectrum of human diversity.

In addition, the website provides contact information for TPP 5's full-time faculty diversity officers. This indicates how seriously the university takes its commitment to diversity and inclusion.

This conjecture is embodied at TPP 5 as a commitment to social justice, diversity, and inclusion. Additionally, the Center for Urban Education Success is featured prominently in their marketing materials. The Center "studies best practices in urban education and produces various resources for interested educators and scholars." The Center's cornerstone program is a partnership with [Upper] High School; here, TPP 5 worked with a school on the brink of closure to turn it around. It provided revamped curricula, secured renegotiated labor contracts with teachers, and provided support from TPP 5's student teachers.

As outlined in the program's conjecture map, racially diverse teacher candidates possibly experience these embodiments by understanding that the program can potentially help them become effective, quality teachers. They potentially see their identities reflected in the priorities of the program and prioritize work in communities. In the short term this potentially provides racially diverse teacher candidates with the belief that they will obtain job offers and have a career as a teacher; it also potentially provides an understanding of the value of social justice and its connection to teaching. This also potentially helps racially diverse teacher candidates to become engaged at the highest level within the classroom and beyond. Over the long term, this potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Innovative partnerships and programs. The third conjecture (labeled C) on the conjecture map is a focus on innovative partnerships and programs. Examples appear throughout the TPP 5 website. The website contains separate sections dedicated to the Center on Disability and

Education, the Center for Professional Development and Education Reform, and The Center for Urban Education Success. In addition, the website contains separate sections for the [Growth] Enrichment Program, the [Upper] High Partnership, the [Shallow] Valley Writing Project, and the [Smith] Master Teaching Fellows Program.

The Center on Disability and Education provides expertise and guidance to community members, students, families, school districts, non-profit agencies, and higher education institutions that navigate the world of disability. In essence, the Center serves as an information center to help people access information about disability services and opportunities. The Center for Professional Development and Education Reform partners with organizations and institutions to provide professional development learning opportunities, leadership development, and program evaluation services. The previously mentioned Center for Urban Education Success provides best practices for education; it also seeks to disseminate that information to schools, teachers, and scholars.

The [Growth] Enrichment Program is a full-day six-week summer program on the TPP 5 campus, which provides urban kindergarten students with authentic learning experiences. The following excerpt describes the program:

The program is designed to allow our new entering kindergarten class each summer (as they advance academically) to attend for nine successive summers of high-quality academics blended with arts, sports, cultural enrichment, field trips, and confidence-building activities. Each student selects a hobby group for sustained interactions through activities such as sewing, bookmaking, tennis, piano, robotics, organic gardening, dance, and photography. The close relationships developed between families and [the Growth Enrichment Program] staff, along with engaging instructional approaches, help lead city

students in the program to reach their fullest potential. [The Growth Enrichment Program] is made possible through the generous support of corporations, foundations, and individuals.

[The Growth Enrichment Program] is an important program for TPP 5 because it allows teacher candidates to work side by side with faculty members so as to gain experience teaching real students.

As mentioned previously, the [Upper] High Partnership is a school transformation initiative designed to leverage TPP 5's pedagogical and professional expertise to save [Upper] High from closure. In addition, the partnership served as a research site for faculty and graduate students to gather authentic data. To protect the interests of [Upper] High and its students, TPP 5 created the [Upper] Research Committee ([U]RC) to act as an institutional review board for the school. TPP 5 included teachers, students, parents, and community members from [Upper] High on the ERC. Importantly, [Upper] High also serves as a training location for TPP 5 teacher candidates.

The [Shallow] Valley Writing Project is a "teachers teaching teachers" professional development program for PK-16 teachers. The project includes summer institutes for practicing teachers and writing camps for students in grades 6–12. The [Shallow] Valley Project collaborates with [Upper] High and other schools to offer students writing training and development. The projects focus on both urban and suburban schools.

The [Smith] Master Teaching Fellows Program is a collaboration between two of TPP 5's centers of teaching, which seeks to prepare teachers to guide schools through digital conversion initiatives. Digital conversion initiatives seek to provide every student with a tablet or laptop computer to enhance learning. The [Smith] Master Teaching Fellows program works with K-12

students in six school districts. The program draws existing teachers, offers them admission into TPP 5, and seeks to certify them as master teachers who serve high-need districts. In addition, the program provides ongoing professional development to graduated teachers and salary supplements to incentivize participation in the program.

The innovative partnership and program embodiments potentially allow racially diverse teacher candidates to understanding how to work with the communities they will ultimately teach, and to potentially develop teaching skills. In the short term, this potentially orients candidates to the importance of social justice and its connection to teaching, while allowing them to become engaged at the highest level in and beyond the classroom. Over the long term it potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Offering financial aid and support to help students enroll and finish. The fourth conjecture (labeled D) on the conjecture map entails offering financial aid and support to help students enroll and finish. This conjecture is embodied at TPP 5 in the highlighting of financial aid, work study, and a 50%-off program. Six sections (pages) of the TPP 5 website are dedicated to this conjecture: “Financing Your Education”, “Scholarships”, “Work for Masters Students”, “Work Study”, and “Financing”. Each seeks to demystify how students will fund their education at TPP 5 and to provide resources for students who need support. TPP 5 offers an Urban Fellows Scholarship that covers a third of tuition fees and gives scholarships to students who previously completed undergraduate study at nearby regional colleges. In addition, TPP 5 makes available many different jobs for students, including working as a teacher in the [Growth] summer program. Students can even choose to become employees of TPP 5 through work study for a tuition waiver worth 80%–95%. Students who contact TPP 5 directly requesting financial

information are provided with an application-fee waiver, worth \$70. Moreover, for students who qualify, TPP 5 offers a 50%-off tuition program to help recruit and retain low-income teacher candidates.

As outlined in the program's conjecture map, racially diverse teacher candidates possibly experience these embodiments by understanding that there are multiple opportunities to fund their education. In the short term, this potentially provides them with the belief that the program is accessible to them and allows them to understand the potential return on their investment. Over the long term, it potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

TPP 6

TPP 6 is a public university in Pennsylvania. It is a small school of about 4,000 students, located in a suburban area near a small city. TPP 6 was founded as a teachers' college and eventually became Pennsylvania's second state normal school. TPP 6 added liberal arts and graduate degree programs over time and earned university status in the mid-1980s. Interestingly, TPP 6 was the first school in the world to offer a music education degree; this music program was attended by one of the interviewees in this study. The teacher preparation program for TPP 6 was the largest program that participated in the study and had 507 teacher candidates. For comparison, TPP 6 is roughly four times larger than TPP 4 or TPP 5. Figure 5 shows the TPP 6 conjecture map that was created during the content analysis phase. When the map was presented to TPP 6 participating faculty members, no edits or modifications were made.

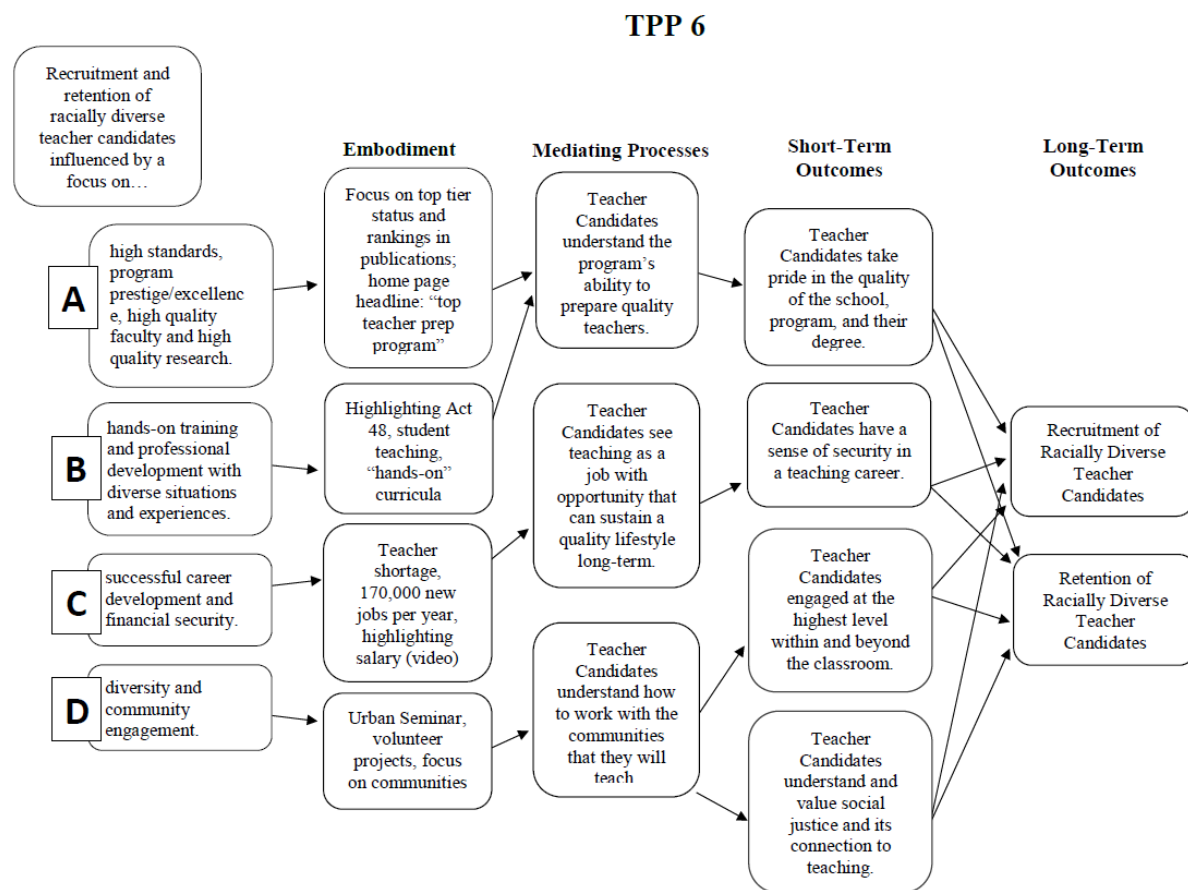


Figure 5. TPP 6 Conjecture Map

High standards, program prestige and excellence, quality faculty and quality research.

The first conjecture (labeled A) on the conjecture map is a focus on high standards, program prestige and excellence, high-quality faculty and high-quality research. This conjecture is similar to TPP 5's first conjecture and is embodied similarly. It is embodied as a focus on top-tier status and rankings in publications. An example of this conjecture appears on the homepage of the TPP 6 website: "[TPP 6] has one of the top teacher preparation programs in the Commonwealth of Pennsylvania... Alumna [NAME] has been named the 2016 Pennsylvania Teacher of the year... Great teachers begin at [TPP6]." In addition, the website has a section dedicated to research, which touts the faculty's contribution to scholarly research. As outlined in the program's conjecture map, racially diverse teacher candidates possibly experience this embodiment by

understanding that the program can help them become effective, quality teachers. In the short term this potentially gives racially diverse teacher candidates pride in the quality of the school, program, and degree. Over the long term this potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Hands-on training and professional development with diverse situations and experiences.

The second conjecture (labeled B) on the conjecture map is hands-on training and professional development with diverse situations and experiences. This conjecture has similarities with TPP 4's first conjecture. The conjecture is embodied by sections on the TPP6 website that are dedicated to student teaching and Act 48. Act 48 is a statewide requirement in Pennsylvania that requires public- school teachers to participate in ongoing professional development. TPP 6's teacher candidates can have their course credits reported to the state as evidence of their meeting the Act 48 requirements. As with the first conjecture and as outlined in the program's conjecture map, racially diverse teacher candidates possibly experience this embodiment by understanding that the program can help them to become effective, quality teachers. In the short term this potentially provides racially diverse teacher candidates pride in the quality of the school, program, and degree. Over the long term this potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Successful career development and financial security. The third conjecture (labeled C) on the conjecture map addresses successful career development and financial security. This conjecture is similar to TPP 4's third conjecture. The conjecture is embodied by highlighting the national teacher shortage, student teaching, and TPP 6's hands-on curricula. Examples of this conjecture appear in a video on the TPP 6 website. The video is titled "Why should you become a teacher?" and provides an overview of the teaching profession for prospective teachers. It contextualizes

the profession by noting that there is a national teacher shortage and that an additional 170,000 new teaching jobs are created every year. It explains that in Pennsylvania there will be 4,600 annual openings for teachers until 2022. In addition, the video explains that Pennsylvanian teachers are in demand in other states, and that recruiters from around the country value teachers certified in Pennsylvania. The video then outlines salary expectations for beginning and experienced teachers, while promoting a nine-month working year.

As outlined in the program's conjecture map, racially diverse teacher candidates possibly experience these embodiments by seeing teaching as a job with opportunities that can sustain a quality lifestyle long-term. In the short term, this potentially provides racially diverse teacher candidates with a sense of security about pursuing a teaching career. Over the long term this potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Diversity and community engagement. The fourth conjecture (labeled D) on the conjecture map is diversity and community engagement. This conjecture is embodied at TPP 6 by their Urban Seminar, volunteer projects, and a focus on community. This conjecture is related to TPP 5's second conjecture. Urban Seminar gives teacher candidates with an opportunity to gain hands-on experience in Philadelphia public schools. The seminar occurs over a summer semester and can be taken as an elective or as a substitute for a core requirement. Urban Seminar also gives teacher candidates an opportunity for community service, where they interact with students, parents, and community leaders. In addition, there are various volunteer projects that teacher candidates can participate in.

As outlined in the program's conjecture map, racially diverse teacher candidates possibly experience these embodiments by understanding how to work with the communities that they

will teach. In the short term, this potentially engages candidates at the highest level in and beyond the classroom and potentially helps them to understand the value of social justice and its connection to teaching. Over the long term, this potentially leads to the recruitment and retention of racially diverse teacher candidates who value this conjecture.

Interviews with Faculty, Staff and Teacher Candidates

The semi-structured interviews with faculty, staff, and teacher candidates provided a plethora of data and insights into the conjectures that are key for recruiting and retaining racially diverse teacher candidates. Faculty members, who were identified by the primary contact at each teacher preparation program, were forthcoming and excited to discuss their efforts to diversify their programs. However, there was an exception. One faculty member felt that researching program design features that appeal to diverse candidates was divisive and unnecessary. That person declined to participate in the study and was replaced by another faculty member. In addition, one faculty participant declined to provide her race, which is the only missing piece of background information in the study. Appendices B and C contain the interview protocols used for this phase of the study. Every participant answered every protocol question. Generally, participants were receptive to the conjecture mapping concept, although for some it was unfamiliar; a couple of participants commented that the maps were useful in helping to think about purposeful design.

This section provides in-depth analysis regarding the main conjectures that were found in the interview phase. Quotes, examples, and new information identified in the interviews are shared in this section. The main findings are combined with those of the content analysis, to provide a comprehensive vision of important design considerations and a consolidated conjecture map for the recruitment and retention of racially diverse teacher candidates.

Overall Results

The semi-structured interviews produced seven conjectures or themes that were frequently cited as main design considerations. Among these, the first three themes were cited twice as often as the next three, and the remaining (least cited conjecture) was cited half as often. The top three cited conjectures were, from most to least cited: 1) partnerships and connections with the community, 2) supportive staff and intimate school setting, and 3) innovative curriculum and school structure. The next three conjectures were 4) commitment to equity, 5) professional preparation for a financially viable career, and 6) financial assistance. The least cited conjecture was program prestige and world-class faculty.

Two other conjectures or themes were cited more than once, but so infrequently that they were omitted from the remainder of the analysis. Each conjecture comprised multiple categories or embodiments, in which different codes were grouped together for coherence.

Table 8 outlines the conjecture or themes found during the interview phase, along with the frequency of each theme. Table 8 also connects the conjectures with their counterparts from the content analysis phase. This connection was to create a mapping the consolidated conjecture map.

Table 8.

Conjectures and Categories from Interview Phase

<u>Conjecture/Theme Name</u>	<u>Frequency</u>	<u>Alignment</u>	<u>Included in Analysis</u>
Partnerships and Connections with the Community	81	TPP 6 TPP 5	Y
Supportive Staff and Intimate School Setting	75	TPP 4	Y

Innovative Curriculum and School Structure	74	TPP 6 TPP 4	Y
Commitment to Equity	43	TPP 6 TPP 5	Y
Professional Preparation for Financially Viable Career	41	TPP 6 TPP 4	Y
Financial Assistance	33	TPP 5	Y
Program Prestige and World-Class Faculty	17	TPP 6 TPP 5	Y
Familiar Program / Close to Home	9		N
Innovative Recruiting Strategies	7		N

Table 9 shows the embodiments or categories that contributed to each theme. Each category consisted of many codes, and each code contained several participant statements. For this report, all participants' statements are included in-text in the categories that they ultimately contribute to. In addition, each category is presented separately within its overarching theme as a way to organize the findings into manageable portions. Finally, results are grouped by teacher preparation program in-text, so that program initiatives are presented together for completeness. Table 9.

Categories Contributing to Each Theme

<u>Conjecture/Theme Name</u>	<u>Embodiment/Category Name</u>
Partnerships and Connections with the Community	Partnerships with Schools Community Focus

	Focus on Urban Education Innovative Admission Programs Recruiting in Schools and Communities
Supportive Staff and Intimate School Setting	Supportive Faculty and Staff Small Program and Intimate Cohorts Doing “Whatever It Takes”
Innovative Curriculum and School Structure	Improving Practice with Innovative Pedagogy Expanded Student Teaching Experience Flexible Fast Track Program Centers of Teaching Excellence
Commitment to Equity	Commitment to Equity
Professional Preparation for Financially Viable Career	Professionalization Job Offers and Teacher Shortage
Financial Assistance	Affordability Scholarships
Program Prestige and World-Class Faculty	Program Prestige Professors with Practical Experience

Partnerships and Connections with the Community

The most frequently cited conjecture among both faculty and racially diverse teacher candidates was partnerships with and connections to the community. This conjecture is closely related to the “diversity and community engagement” conjecture in the TPP 6 conjecture map, the “innovative partnerships and programs” conjecture in the TPP 5 conjecture map, and the “creating nurturing classrooms and learning environments with support services and a connection to the community” conjecture in the TPP 4 conjecture map. Five embodiments or categories were found in this theme, ordered here from most frequent to least cited: 1) partnerships with schools, 2) having a community focus, 3) a focus on urban education, 4) innovative admissions programs, and 5) recruiting in schools and communities. The following

section explores each of these embodiments and categories, the main codes that contributed to their creation, and important quotes that exemplify the theme.

Partnerships with schools. Two of the three teacher preparation programs in this study (TPP 5 and 6) had robust partnerships with local schools and school districts, as represented on their respective website and in marketing materials. They used these partnerships to conduct research and to provide teacher candidates with hands-on training; to serve as recruiting pipelines; and create connections between the program and surrounding communities. Faculty members spoke about the importance of these partnerships in the community and in the programs.

TPP 5's partnership with [Upper] High School was one of many partnerships for the program. A faculty member stated that:

They see our partnership with schools. I mean, [Upper] High School gets a lot of press. We're the EPO of [Upper] High School so there's this formalized partnership between [TPP 5] and [Upper], but we have other partnerships with other schools that take different kinds of forms.

One such partnership was with School 33, he continues:

For example, in our literacy program, the director of that program has a partnership with School [OMITED], which is a local elementary school, around literacy initiatives. There are other similar partnerships where the commitment to urban education and the commitment to the community and the commitment to providing equitable educational opportunities for kids is borne out in these partnerships, so that matters too.

The importance of these programs is highlighted by input that faculty members receive from visiting and committed potential teacher candidates:

We get a lot of folks who... very rarely is it a circumstance in which folks come in and they're like, 'Yeah, I just want to become a teacher. I don't really care where I go to school. Get me out of here with a degree and I'll go find a classroom somewhere and do it.' Most of the time, the students actually match up relatively well with us. They say, 'We looked at your literature. We know somebody who went to your program and they really enjoyed it and raved about it and they're doing well. We know you have a strong emphasis on partnerships with local schools.'

Hence, the partnerships were important both internally and externally for TPP 5 but were not the only initiatives at the program.

The [Growth] Summer Enrichment program is another of its main partnerships. A participating member of TPP 5 faculty described the program as follows:

We bring 165 city kids on to the campus. Kindergarten through eighth grade, for six weeks. Full days. Academic and enrichment programming. For every 15 children, we have one highly, long-time certified teacher, one newly certified teacher, and one teacher assistant. At this point, all the teacher assistants have gone through our ninth-grade teacher in training program. And then they're hired as teacher assistants.

The [Growth] program allows middle-school students to become familiar with the TPP 5 campus and faculty, while also familiarizing them with teaching professionals. One faculty member described this process as follows:

It's almost an expeditionary learning type program along with typical summer camp types of things, like games and swimming and all that kind of stuff. That's one that I didn't mention that does also play into the process of people's interest, people becoming interested in our program. Actually, there's a considerable amount of overlap between

people in our teacher education programs and people who volunteer for or work at the [Growth] program.

TPP 5 uses [the Growth Enrichment Program] to train older students to become teaching assistants and then hires them once they have graduated from the program. Strategically, this provides TPP 5 with an ongoing supply of willing and able teaching assistants, while preparing those students to pursue a teaching degree in the future at TPP 5. Hence, the Horizon Summer Enrichment program is an essential partnership with local schools and is also an effective recruiting pipeline for the university.

TPP 6 also is involved in partnerships with local schools and school districts. A notable partnership is an aspect of the K-12 Principal and Superintendent programs. One faculty member described the program:

We have a Principal K-12 and a Superintendent program and in the Principal K-12 program they have to do internships, you know elementary and secondary. And they have to do school improvement projects, for the school in which they work. So, our students may be here for a principal certificate, but they actually have to do something to improve their school and it is all data based.

In addition, TPP 6 funds and manages a program designed to allow their faculty members to teach in local schools:

We also have our professors go into high schools and they teach classes there. The kids are getting high school credit and also college credit. So, we have an education track in [West] School District right now and, I believe, [South] School District. So, the professors go to them and teach in their building.

As this faculty member pointed out, part of the responsibility of visiting faculty members is to identify and recruit teacher candidates who are interested in enrolling at TPP 6.

One racially diverse teacher candidate at TPP 6 stated: “They still do the urban seminar to this day and there are a lot of volunteer projects available. ... They definitely have a lot of opportunities for volunteering and, in regard to the community.” The teacher candidate described the effect of TPP 6’s partnerships:

I think most recently ... [they] started a summer reading camp and targeted to inner city kids that really wouldn't normally have the opportunity to get hands-on one-on-one tutoring. They had the graduate students that were there for reading and then they had the undergraduate students that were in a reading course [participate].

Like the TPP 6 Urban Seminar (described in the content analysis section), these types of programs help TPP 6 to spread its name among local students and teachers as well as the community.

Community focus. Two of the three teacher preparation programs (TPP 4 and TPP 6) promoted and valued their connection to the community, as a core conjecture of their respective program, on their respective website and in marketing materials. However, TPP 4’s faculty members and racially diverse teacher candidates did not mention any work in the community during their interviews. TPP 6’s partnerships with local schools exemplified its commitment to community, and discussions with faculty members further highlighted the program’s orientation to the community. Likewise, TPP 5’s faculty and racially diverse teacher candidates described a focus on – and efforts to impact – their surrounding community, as an orientation within the faculty and program generally.

TPP 6 primarily serves the community through school partnerships, but an aspect of that work is focused on providing services to the local community. One partnership with a local school is characterized by an exchange of pedagogical knowledge, and by charitable contributions. A faculty member described this as follows:

We do a lot of partnerships with that elementary school. Recently I think they had a book drive and took a bunch of books down there that the faculty collected from their houses and the students. We just bought them yoga mats for exercising in the building. We've done backpacks, like filled up backpacks for snacks and things like that. That's all part of our community work with that particular elementary school.

The same faculty member noted that teacher candidates were expected to volunteer, as a requirement of their program completion plan:

They have to go complete 18 hours in a diverse setting. So, they're all sent to different places, like afterschool programs and Martin Luther King charter school. So, they have one of those opportunities to go in there and spend 18 hours volunteering... . We make them do a certain number of hours to volunteer in community service. We have AmeriCorps VISTA students that go up to McKinley, McKinley is our community school.

Like the work that TPP 6 does partnering with local schools, work in the community builds connections among potential teacher candidates, faculty, and the program itself.

From the perspective of racially diverse teacher candidates, community-based efforts are indeed important. A TPP 6 teacher candidate stated:

They also have lots of volunteer projects. They do a lot with the different communities around the school, so I know they would offer tutoring where [TPP 6] students would go

to different schools and do tutoring after school or Dr Seuss Day, they would have students volunteering and create Dr Seuss activities that they could do with kids or different schools.

This participant went on to describe a summer reading camp that TPP 6 hosted:

Everyone had their own student and all summer they worked on exactly what the student needed, and I thought that was a really good thing for the community, because some of these kids wouldn't have had it otherwise.

As this participant pointed out, building goodwill in a program's surrounding community also builds goodwill with future teacher candidates. It allows the program to position itself as a preferred destination in the eyes of social-justice minded candidates.

A TPP 5 faculty member described their commitment to community in the following statement:

I would say in terms of mission and vision, there are some pretty strong foci that we have, that I think contribute to people's interest in coming to and staying in our program. One of which is the fact that we very strongly emphasize our dedication to helping kids in the city have educational experiences that are more than just equitable educational experiences. ...An important element of our mission is to form partnerships with local schools and to try to disrupt the failing school narrative, and to really focus on a sort of socio-culture perspective on both learning and learning to teach, so that our candidates see themselves as important contributors to the community and important contributors to the public goods that traditionally underserved students really deserve. I would say that's an important element of the program in terms of its principles.

Another faculty member at TPP 5 stated that:

[We] prepare educators to be agents of change in their local community whether that be the school or the district, whatever it may be, and to help them enact a critical theoretically grounded form of instruction for the benefit of their students.

This approach, described by two different TPP 5 faculty members, sees the community both as an important beneficiary of the program's efforts, and as a primary focus of pedagogical inquiry.

Focus on urban education. None of the three participating teacher preparation programs included a focus on urban education as a core conjecture of the program, on their respective website and in marketing materials. However, urban education was a frequently discussed topic during the interviews, especially at TPP 5. Both faculty members and racially diverse teacher candidates mentioned their interest in urban education as a significant part of the program's appeal.

TPP 5 was strongly orientated to urban education in its curriculum and in program initiatives. Not surprisingly, TPP 5 is located in a densely populated urban area in a part of New York State that is nestled between two other urban centers. As a result, there are many urban schools in the area. In addition, economic and social wellbeing in the community are among the lowest in the nation. One faculty member stated:

So we are all pretty focused on urban education. We have the lowest ranked school in the country, and in the state. Our child poverty rate in this city is third in the country. So, we are very focused on our city school district... . We're going to turn out the very best teachers we can, and hopefully they'll go to the city school district.

Another faculty member from TPP 5 shared the same sentiments and described urban education as a core feature of its program: "We very strongly emphasize our dedication to helping kids in

the city have educational experiences that are more than just an equitable educational experience.”

TPP 5’s focus on urban education was most visible in the unique Urban Teaching and Leadership program. One faculty member provided the following overview of the program:

We also have an Urban Teaching and Leadership program. That's what I would call an add-on, but it's a local certificate program that places people who are explicitly interested in urban teaching and leadership across departments. It's not just people in the teacher education programs who are part of urban teaching and leadership; it's also people who are a part of our leadership programs and our school counseling programs. So, the emphasis of that program is really improving both counseling, leadership, and teaching practices in urban schools.

When asked about the program’s attractiveness to racially diverse teacher candidates, the faculty member replied:

I would say that there's probably a higher percentage of our racially and ethnically diverse students in the urban teaching and leadership program than they are in other programs as a whole. In other words, the urban teaching and leadership program probably attracts more racially and ethnically diverse teacher candidates within the context of that program than if you looked at the percentage of racially and ethnically diverse students that we have overall. It's important in that regard.

One of the teacher candidates also commented on how the Urban Teaching and Leadership Program impacted their decision to attend the program. They stated that:

There's only one other school that had this, the Urban Education program. Because my preference is to work in city schools ... the Urban Teaching and Leadership advanced

certification was a deciding factor. The Urban Teaching and Leadership program focuses on not just teaching students in urban districts but the dynamics of an urban community, and how those varying dynamics can affect students' learning participation in the classroom, and student outcomes. The first class was more focused on changes in the area, but it did also talk about the Chicago area. It also talked about other urban centers, and how housing affects students, and gentrification, and stuff like that.

For this teacher candidate, urban teaching was at the heart of their desire to become a teacher. She wanted to help urban communities, and TPP 5, with its Urban Teaching Leadership Program helped the candidate to achieve her goal.

Innovative admissions programs. None of the three participating teacher preparation programs included a focus on innovative admissions programs as a core conjecture of their respective program, on their respective website and in marketing materials. However, as was the case with urban education, innovative admissions programs and processes were often discussed in the interviews. Faculty members at TPP 5 and TPP 6 were the main providers of information about admissions programs. The racially diverse teacher candidates mentioned innovative admissions programs several times. Those quotes are included in the financial aid and fast-track-program sections.

TPP 5's Grade Program combines an innovative admissions strategy and an affordability strategy to help low-income and diverse teacher candidates to access the teacher preparation program. A faculty member from TPP 5 described the program as follows:

We have something called the Grade Program. So, when the students apply, they are offered, and it's not often in big letters – you've got to actually look for it. They're offered the Grade Program, which gives them what they call a fifth year in teaching, which

means that they'll come through the four-year program undergraduate major in whatever they want. ... They get their master's in their fifth year, certification to teach, and it's 50% off.

The faculty member then described how Grade Program students are tracked and retained:

If they commit to [the program] at the beginning. And then we sort of connect with them throughout the four years. ... Admissions offers different things. If they finish their undergraduate degree early, they get all their credits, they can then begin taking some courses in [TPP 5's] program.

Many universities are unable to offer such a significant savings to incoming teacher candidates. However, TPP 5 administers the program to diversify its pool of candidates, based on educational background (i.e., course of study), ethnicity, and socioeconomic background.

TPP 6's innovative admissions strategy is underscored by its Regional Choice Initiative (RCI). This initiative is a pipeline program that seeks to reach into high schools to identify prospective teacher candidates, and to place them on track to enter the teacher preparation program. The RCI was described by a TPP 6 faculty member as follows:

We have made, under my leadership, the special effort of sending our teachers in to [South] High and we offer, I don't know if you'd have this there, but we call it Regional Choice, it is called RCI. That's where they can be in their high school and take up to twelve credits, from our professors, and they can bring it to the University if they matriculate here.

A foundational aspect of the RCI is that TPP 6 faculty members are asked to teach in participating high schools. This allows them to create meaningful relationships with prospective teacher candidates and to identify high-potential students. Interestingly, TPP 6 uses the RCI not

just for its teacher preparation program, but also for other courses of study. As the faculty member continued:

We're teaching at [South] High and then another charter school. Which is a very diverse population, and just this semester we started teaching HPE101, it's called 'you make the call'. The specific strategy, one of them, is to give [students] a really positive experience with our faculty to help save them the cost of their first semester in class and that HPE course, it will work in any major they choose at the University, not just the teacher pipeline. But at [South] High more specifically they're in education classes so they can start here.

TPP 6, like TPP 5, clearly understands and values the importance of providing an innovative admissions program that targets key demographics early on. Teacher preparation programs would be wise to implement innovative admissions policies as TPP 5 and 6 have done.

Recruiting in schools and communities. None of the three participating teacher preparation programs had recruiting in schools and communities as a core conjecture of their program, on their respective website and in marketing materials. Indeed, recruiting in schools and communities was discussed less frequently than the other embodiments or categories in this theme. However, faculty members from two of the three programs (TPP 5 and TPP 6) mentioned it during their interviews. TPP 4's faculty and racially diverse teacher candidates did not mention this category during their interviews. None of the teacher candidates included in the study were recruited from local schools or mentioned this conjecture in their interviews. However, one teacher candidates spoke about how he was recruited from the university's undergraduate program. That quote is included in job offers and teacher shortage section.

Faculty members from TPP 5 and 6 identify and recruit racially diverse teacher

candidates in innovative ways by leveraging social media, student teaching experiences, and community programs to this end. A TPP 6 faculty member described how their student teaching experience provides fertile ground for recruiting:

I'm out in classrooms a lot because I have student teachers placed in classrooms. And like at the beginning of this year, in September, this has happened to me twice now, there were, I've gotten two students this way. There was a substitute teacher in the room, it was a young black man. He was really good with the kids. And I was there observing my student teacher, and I said to him, 'Hey, how come you're not teaching?'

Similarly, community and school partnerships can provide opportunities:

One of our signature annual events which is a Why Teach program, where we target mostly the undergrads on our campus, but also community members, and have them come in to try to find more about our programs and more about why getting into education is a positive career trajectory. Also, we have a program at a high school and they reach out to us and say, 'I have a group of like 20 kids here that want to become teachers.' And we have a discussion and then we bring them on campus, maybe give them a tour. Then they eat lunch in our cafeteria. Then they sit in one of our education classes. And then they decide with their families ... number one, if they want to be a teacher and, number two, is [TPP 6] a place where they want to be to do this.

Additionally, social media can serve as an innovative way to contact potential racially diverse teacher candidates, as a faculty member suggests: "I'd just been on Facebook with [a student] for forever and one got an undergraduate degree in education. I said, 'Hey you've got to come to [TPP 5] and get your master's with me.'" Recruiting strategies are implemented in different ways across the programs; however, staff thinking creatively about how recruiting is managed is an

important consideration for those wishing to increase racial diversity.

Supportive Staff and Intimate School Setting

The second most frequently cited conjecture among faculty and racially diverse teacher candidates was supportive staff and an intimate school setting. This theme is somewhat related to the “creating nurturing classrooms and learning environments with support services and a connection to the community” conjecture in the TPP 4 conjecture map. Although TPP 4’s conjecture does not quite capture the essence of this theme, it is tangentially related and logically follows the theme’s central premise. The “supportive staff and intimate school setting” theme contains three embodiments or categories, ordered here from most to least frequently cited: 1) supportive staff, 2) small program with intimate cohorts, and 3) doing whatever it takes. The following sections explore each of these embodiments, the main codes that contributed to their creation, and important quotes that exemplify for the theme.

Supportive staff. None of the participating teacher preparation programs included supportive staff as a core conjecture of their respective program on their respective website and in marketing materials. However, faculty members and racially diverse teacher candidates at all three programs named “supportive staff” as a key design consideration for programs. This category overlaps slightly with some of the other embodiments in the “supportive staff and intimate school setting” theme but was clearly the most important thematic consideration.

TPP 6’s faculty and racially diverse teacher candidates valued the orientation of their staff as supportive and nurturing forces in the program. One teacher candidate at TPP 6 stated:

I know that I would not be here today without the support of every single one of my professors, and I do keep in contact with them all. ... Dr. [OMITED]. She was my go-to in everything. I actually ended up [joining] a work study for her in the department

because she was just very influential and inspiring in education. I mean, just her experiences that she would share and her experience in a first-grade classroom before becoming a professor. She didn't sugarcoat things. She did it make it sound like it was all rainbows and unicorns.

Another teacher candidate stated:

Dr. [OMITTED] really allowed us to step out of a box and put [ourselves] at a kid's level. It just reminds you that sometimes we expect so much, and we have to remember that they're just kids. She would challenge us a lot to incorporate music and art into the curriculum and let the kids have fun while learning. So, I really enjoyed her, as well.

When a faculty member was asked how teacher candidates felt about faculty and staff members, she replied, "I think our faculty are dedicated to their programs and to their students. They really care about them. I see a lot of relationships established in a positive way. They're always there to help and guide their students." Relationship building, nurturing, and guiding teacher candidates form a foundational aspect of TPP 6's strategy and helps the program to retain racially diverse teacher candidates.

TPP 4's faculty responded similarly when asked what differentiates their program from others. One member said:

I would say, a personal touch. In other words, I've worked with some state preparations that are very large. And, in talking to people who have been involved with that, and around that program, the general consensus is, what they'll say bluntly, is that they don't really care about your students. So, we work with students, and kind of really have a personal touch. If we find they're not taking the tests, or going to do well, kind of counsel them, reach out to them. We're really closely involved with the students. So, there's a

personal touch.

Racially diverse teacher candidates at TPP 4 generally identified the supportive nature of faculty and staff as a strength of the program. One stated that:

So, knowing and building a relationship with other professors who are able to, maybe get you an interview or show you how classes are run in other parts of the city definitely helped me make the decision to attend that program. The interaction with the staff and interaction with the [faculty] that teaches the class, the knowledge that the staff has, that's actually good to me.

Another TPP 4 teacher candidate stated that “I knew that the staff, they were going to stay by all the students' sides. There was a huge thing with the staff. I felt like we were a family, in a way.”

TPP 4 has a relatively small teacher preparation program, in which it may be easier to create a “family” environment; however, there may be steps that larger programs can emulate to create similar conditions.

At TPP 5, racially diverse teacher candidates were vocal about their connection with faculty and staff: “I've come to really trust the professors that I'm dealing with in my program. So, I feel very guided by them.” One teacher candidate stated:

One of the main reasons why I continue to stay, is because they actually work with you. As an older adult student, versus a student that is straight from undergrad to grad, in a career change, there are certain things that are different for me personally. There's a few other of us that are adult minors with adult issues, so they're very understanding with that. That's kind of why I've stuck it out.

A faculty member added:

There's a personal connection that they develop with their faculty adviser and their

university supervisors in the field observing them. I think there's a personalization. And I think that is probably the biggest reason why people would choose us. ... Supportive, open, nurturing, I think I'm someone who holds them to high standards in terms of the work that they produce, but offers coaching, counseling, and supports to make sure that they can meet those standards no matter where they're starting from.

Overall, TPP 5 faculty members shared similar sentiments with their counterparts at TTP 4 and TPP 6. However, they delved deeper into how support was provided. For example, one TPP 5 faculty member stated that:

If the issue is primarily an issue of academic performance, then we will provide connections to those kinds of resources like direct connections, 'Student, meet the writing support services director. Director meet this student. Put together a time, work on this or that'. Help them find the right resources, if it's a mental health resource that they need or if it's additional financial consulting or whatever. We have those kinds of resources that we'll connect people with to try help identify what specifically is the retention problem that they face and then how can we meet that problem in a way that's specific to their needs.

Many TPP 5 staff members served as de facto advisors, in addition to the program providing actual advisors. This scenario allowed teacher candidates to develop multiple contacts who could provide support, which – according to teacher-candidate feedback – is important for their retention.

Small program with intimate cohorts. None of the participating teacher preparation programs included having a small program as a core conjecture of their respective program, on their respective website and in marketing materials. However, faculty members and racially diverse

teacher candidates at all three teacher preparation programs named the size of their program as a key design consideration. To some extent, having a small program creates the conditions necessary for having a supportive staff and intimate cohorts. It was mentioned specifically by several participants.

Racially diverse teacher candidates at TPP 5 were the most vocal about the importance of the small size of their program. One TPP 5 teacher candidate said:

If you go to a bigger school, you know, you have a lot of students. Because [TPP 5] is just so focused and small, I know that if I ever have any issues or questions, I can go to [faculty] at any time and get that assistance, which is very important in a teaching environment, because I don't know what I'm doing necessarily.

Another TPP 5 teacher candidate emphasized “the personalized, the small scale of our programs and the personalized connections that form with faculty and with staff too. So, there's a sense of intimacy and very strong relationships.” Additionally, a TPP 4 faculty member stated as follows:

Well again, we have really small class sizes and discussions can't happen unless people feel comfortable and safe. So, a lot of trust. We build trust with our students in many ways and we're very open and accessible to our teacher candidates, so they really get to know us and trust us.

A teacher candidate at TPP 6, the largest teacher preparation program, stated: “There was just so much opportunity to grow in [TPP 6] as a whole because it is a smaller college.” Interestingly, TPP 6 is a large program of about 500 teacher candidates. TPP 6 somehow managed to provide an intimate setting even though they have one of the larger programs in their state. In summary, regardless of the actual size of the program, having a small program was continually cited as an important design consideration.

Do whatever it takes. None of the participating teacher preparation programs included having a “do whatever it takes” attitude, a focus on stress reduction, or providing opportunities to grow as core conjectures of their respective program, on their respective website and in marketing materials. Nonetheless, faculty members at TPP 4 and TPP 5 described a pervasive attitude “to do what was necessary” to recruit and retain racially diverse teacher candidates during their interviews. Doing “whatever it takes” to attract and retain racially diverse teacher candidates is easier at small schools and in small programs; however, extensive support by faculty is a main strategic factor.

A TPP 5’s faculty member described some of their efforts: “We provide one-on-one support. We have a writing center that provides workshops, and it provides one-on-one support. We do whatever it takes. We want our students to be successful.” She went on to describe a single teacher candidate whom faculty members had “spent at least 15 hours one-on-one with” to help the candidate with his writing. A TPP 5 teach candidate commented on the ability of TPP 5’s faculty to respond to student needs:

One of the main reasons why I continue to stay, because they actually work with you. As an older adult student, versus a student that is straight from undergrad to grad in a career change, there are certain things that are different for me personally. There's a few other of us that are adults with adult issues, so they're very understanding with that. That's kind of why I've stuck it out.

Another TPP 5 faculty member described how she had augmented their program quickly in the past:

I said to him, without telling him, you know, we're not going to clear this with anybody, you need to take this class again. That's all. He goes, ‘Well I can't afford that’. I said, ‘But

I'm not charging you. Come in and sit through the class and take the class again.' And he's doing really well so far.

A faculty member at TPP 4 described a similar unofficial strategy:

Well, we just support them, and you know we're flexible we give them to absences if it's needed. We have night time and weekend and hybrid courses, and you know we support them, we work with them to help them, and most of our candidates do complete our program.

Given the overlap between the size of the program, how supportive the staff can be given size, the size of a teacher candidate's cohort, and the willingness to do "whatever it takes", these embodiments/categories were combined to create the overarching theme; taken together, they provide a nice starting point when considering how to design programs.

Innovative Curriculum and School Structure

The third most frequently cited conjecture, among both faculty members and racially diverse teacher candidates, was an innovative curriculum and school structure. This conjecture is somewhat related to the "instruction, practice, and 21st-century teaching and learning" conjecture in the TPP 4 conjecture map. It also resembles the "hands-on training and professional development with diverse situations and experiences" conjecture from TPP 6's conjecture map.

The "innovative curriculum and school structure" theme contains four embodiments or categories, ordered here from most to least frequently cited: 1) improving practice with innovative pedagogy, 2) expanded student teaching experience, 3) flexible fast track program, and 4) centers of teaching excellence. The following paragraphs explore each of these embodiments, the main codes that contributed to their creation, and important quotes that provide exemplify the theme.

Improving practice with innovative pedagogy. Only one teacher preparation program included teaching practice as a central conjecture on the institution's website and in marketing materials. However, all three programs highlighted pedagogical techniques and practices as important considerations. Both faculty members and racially diverse teacher candidates shared this view, with some teacher candidates even stating that it was a defining factor in their decision making.

Racially diverse teacher candidates at TPP 6 were vocal about the impact that the program's orientation toward practice and pedagogy had on their willingness to attend and complete their degree. One teacher candidate stated:

Well, I know that they focus a lot on the different theorists and the different beliefs and I think they don't really put you in a corner with what kind of educator you're going to be. They give you all the different backgrounds and beliefs of different ways that you could [teach]. Like I know they even cover Montessori, so if you want more of an inquiry-based learning environment, you could be a teacher in that type of environment; or if you want to go public school then they go through that ... They just go through the different learning styles and I think that was very helpful.

Another teacher candidate commented as follows:

So [TPP 6] has the different guided reading curriculums and all the different curriculums. ... It was the thing that kind of set it apart for me, because other places didn't offer that. One of the things that I'm really interested in is children's literature, to have that component, I think, really stood out.

TPP 6's general orientation to improving pedagogical technique was helpful to racially diverse teacher candidates who sought to excel as professionals in their new field.

TPP 5's teacher candidates shared the sentiments provided by TPP 6 respondents. One teacher candidate focused on the impact that the program had on him by helping him to understand that "teaching and learning is a result of practices, not skills." When asked to compare TPP 5 to another teacher preparation program that he had considered attending, he replied:

The difference here, is if you go there you have to be able to get out in four years and be able to teach, and they teach you how to teach. But they don't teach you why you're teaching what you teach. You make a thousand decisions in one day of teaching, you'll have no understanding as to why you're making those decisions. They teach you one way to teach.... And I really liked how [TPP 5] were approaching education, and it was very much aligned with what I wanted to do in education, which is kind of change things away from the traditional way of teaching.

Another TPP 5 teacher candidate stated that:

For me, [TPP 5] seems much more focused on, how can you approach things differently? How can you try and be a bigger change? How can you influence your classroom in ways that are much more aligned with diverse ways of learning, right?

TPP 5's racially diverse teacher candidates thus seemed to differentiate their program from other programs – which are sometimes thought of as “diploma mill” – by focusing on the depth and importance of pedagogy in their studies.

A TPP 5 faculty member affirmed this view of the program in the following statement: “Where we're going to give you a toolbox, and you're going to have any number of approaches to use with the multitude of approaches you're going to need.” This multifaceted view of pedagogy

and teaching improvement, shared by faculty members and teacher candidates, is an important consideration. Another faculty member stated:

Our students engage with critique theory, figure out how it informs practice. So, they're reading and thinking very deeply about all of that. And then the other thing that I think is pedagogically unique to our program is that as a graduate school of education, we get people who have already fulfilled their content requirements in their undergrad. And they come to us for a more compressed initial certification plus master's program. And we pair graduate school coursework with field experience within the same semester in the academic year. They're in the schools during the day. And then they're in our classrooms in the afternoon or evening.

A third faculty member described the program as creating “educational change agents. Not just being able to teach, but to change the way teaching and learning looks like and feels. Not only for students, but also for teachers.”

At TPP 4, translating theory into practice and introducing new pedagogical techniques was at the core of comments made by racially diverse teacher candidates. One TPP 4 teacher candidate stated:

There's a lot of things, for instance, like the pedagogy and different differentiation strategies that I was able to learn just by attending the program, and I was able to incorporate them into my classroom to help me and it has also helped me broaden the aspect of learning from my scholars.

Another teacher candidate described the different types of pedagogical techniques available at TPP 4: “Infusing more technology and you know assessment, using assessment to inform instruction. I mean there's just so many different... you know being sensitive to child and human

development.” The topic of pedagogy and its importance clearly connected all of the teacher preparation programs included in this study.

Expanded student teaching experience. TPP 4 and TPP 6 included the student teaching experience, as a central conjecture on their respective website and in marketing materials. TPP 6 cited early student teaching experiences as a key aspect of its program. TPP 4 emphasized the hands-on nature of its program, which was embodied primarily through student teaching experiences and observations of practicing teachers. As with the previous category, pedagogy, student teaching was a deliberate strategy to prepare teacher candidates for the practical work of their future careers.

TPP 6’s student teacher experience is defined by early and frequent experiences in the field. One teacher candidate explained:

I think that they get the kids out early, so we got to do field experiences and observations early, in our major. Where I know some friends, who were education majors at other schools, they didn't really get to get the experience as quickly.

Another student described why an expanded student teaching is important:

I always saw people student teaching [that] were given fifteen weeks of student teaching, but that's just not enough time to truly figure out how things work in a school...Because I think it's very eye-opening once you're actually in the classroom. You may think you want to be a teacher and think that you have these lessons and all this stuff together. But then once you actually do it and get to experience it, it's a whole different thing. And for some people it's not what they want.

When a staff member was asked about the student teaching experience, she replied without hesitation that TPP 6 “gets them out in the field very early.” The approach is an effective way to

retain racially diverse teacher candidates. As one candidate explained:

I think the part that kind of influenced me the most was going out to see other music teachers doing what I wanted to do. ... Student teaching, it was a good experience. The hands-on curriculum, I would say it is very hands-on compared to some places. I think sometimes there are professors that are a little bit more rigorous, in regard to worksheets and reports and papers instead of hands-on, but for the most part it was very hands-on.

The early student teaching experiences in TPP 6 provide a sound frame of reference for beginning teacher candidates, which helps them envision themselves in the role of teacher.

The teacher candidates at TPP 4 recognized that the program focused on providing hands-on experiences; however, they explained that providing even more such experiences would help the program to differentiate itself. One teacher candidate noted that, "I think that in order for teachers to be better prepared educators, the hands-on experience is a must." Another teacher candidate stated, "I think that the student-teaching experience should definitely be incorporated, prior to leaving the program on more than one instance." While the teacher candidates were united in their desire for additional student teaching time, a faculty member described their student teaching experiences as more than adequate. This person said, "We have a lot of field experience, so prior to their student teaching, they have 190 hours of field experience observing teaching in classrooms and different things. Then they go another 150 hours of student teaching." Regardless of whether the experiences were considered the correct length at TPP 4, the responses indicated that racially diverse teacher candidates desired additional time in student teaching placements. The institution was responding to that need.

The teacher candidates at TPP 4 were not alone in wanting additional student teaching time. A TPP 6 teacher candidate stated:

Overall, I feel as though [TPP 6's] education program as a whole, they just need more experience being out there in the field. The non-music education majors, they did, I think it was two weeks at a school and sometimes they would either teach or they would observe. But I think they need more time than that, because usually that's the semester before the student teaching. Because [more time observing] can help the student to have a firmer groundwork when they go into their student teaching placements. So just more experience overall.

The stated need for additional hands-on experience during student teaching, among both TPP 4 and TPP 6 teacher candidates, does not negate this embodiment or category as an important aspect of the programs. In this case, although both teacher preparation programs were advertising their student teaching experience to recruit and retain teacher candidates, they might not deliver enough, and should continue to develop this aspect of design in the future.

Flexible fast-track program. None of the participating teacher preparation programs included a flexible or fast-track program as a central conjecture on their respective website and in marketing materials. However, faculty members and racially diverse teacher candidates at TPP 4 and TPP 5 named having a flexible fast-track program as important, during the interview process. For some racially diverse teacher candidates, this embodiment was the highest priority and informed their decision to attend a specific program.

Racially diverse teacher candidates at TPP 5 strongly valued having a flexible fast-track program. The program offered several degree plan options, including “a short program, meaning 15 months as opposed to a two- or three-year degree” offered “summer-to-summer.” TPP 5 was able to provide this short degree option by allowing teacher candidates to take “classes along with student teaching” at the same time. One teacher candidate expanded on the importance of

the program by discussing:

The amount of time that it would take to complete the program and the comfort that I felt that [TPP 5] would prepare me. I didn't want just a short program. I wanted the short program that was intensive enough to get me prepared to go into a classroom when I haven't been inside an actual physical classroom or focused on education or teaching before.

Faculty members agreed with this teacher candidate's opinion. One faculty member stated that:

I think they also choose our program because of the relative length of time that it requires compared to what they get out of it. ... sometimes as people go through the program... they're halfway through the program and they're thinking, 'Oh, my God, this is way more intense than I thought it was going to be.' If you're going to do a program in 15 to 18 months and you're going to do all of the things that our program requires and actually, not just requires, but all the things that our program does to try to help people become as effective a teacher as you can be in that period of time, it's pretty intense. I think a lot of people see that and that's the kind of thing that they're embracing, because they really want to be the best teacher that they can be and have the fullest experience that they can have, but at the same time, it's like, 'Okay, I want my own classroom by next year, or I'd like to be teaching by next year'. I would say that, that's a factor too.

TPP 5's willingness to innovate regarding the length and modularity of the program had further ramifications. Another faculty member stated that:

If a candidate needs to work and earn money alongside their coursework, if taking 15 months off to divert to education is financially unreasonable, we can adjust their timeline to make more space for them to do that and also arrange for job-embedded placements

for people who are maybe working in a charter school. Or we have one candidate that I'm thinking of in our elementary program, who's a second-career racially diverse teacher candidate, and he's also the primary breadwinner of his family. So, we arranged for his student teaching placement. Instead of being 40 consecutive days in the spring – during which time he would have no opportunity to earn money enough to pay the bills, we made it such that he's in that same school as a substitute teacher, earning money part of the week and then also doing his student teaching and kind of spreading that out. So, I think our flexibility is what allows us to try to retain candidates.

The strategies employed by TPP 5 have merit for both the recruitment and retention of racially diverse teacher candidates.

Additionally, TPP 5 allows teacher candidates to pursue dual certification across disparate programs, such as “a secondary field and special education; or a secondary English and teachers of English to speakers of other languages; or elementary and teachers of English to speakers of other languages.” This modularity appeals to teaching candidates who desire to create their own path to the classroom during their time in the program. An additional example of TPP 5’s flexibility was provided by a faculty member:

Right now, one of my current students in the social studies program ... She started in the summer of '17. She did summer of '17, fall of '17 and then in spring of '18, she didn't have the financial resources to continue the way that she wanted to continue in the program. We restructured her program to push her student teaching back, because when you are student teaching, unfortunately, student teaching remains one of those circumstances where people have to give up their jobs to go teach somewhere for free – which is not the most ideal circumstance for somebody who doesn't have a lot of money.

... We restructured her program a bit and then we went through the process of actually trying to create a student teaching placement that would allow her to serve as a long-term sub for half the day in the school and get paid for that, and then the other half of the day she would be in a student teaching placement.

TPP 5's ability to be flexible with teacher candidates allows racially diverse teacher candidates to complete their programs while balancing the realities of life and work.

TPP 4 employs a similar strategy to meet the needs of their teacher candidates. One candidate identified the length of the program as a "deciding factor"; he went on to explain that "It wasn't going to take long for me to complete my degree." A TPP 4 faculty member identified the program's ability to "cater to the working adult" as key to its success in recruitment. Another faculty member described the flexibility of other undergraduate programs within the university as key to his program's success:

I think that also we have a school of continuing and professional studies where adults can get undergraduate degrees at night, and that's a very diverse population. And a lot of those undergraduate students, if they're interested in education, continue and a lot of them get Masters in Education after completing that program.

For racially diverse teacher candidates, providing flexibility and offering a program that can adapt to teacher candidates' real-life circumstances is important.

Centers of teaching excellence. Only TPP 5 included the presence of various centers of teaching excellence as a central conjecture on its website and in marketing materials. "Centers for teaching excellence" was a category that described pedagogical centers that were dedicated to furthering research or practice for certain learners or communities, or in certain subject areas. These centers allow teacher candidates to gain in-depth knowledge and experience working with

researchers and practitioners who are leaders in their respective areas.

A TPP 6 teacher candidate described how one of the programs centers influenced her view of the school:

I was really impressed with the Literacy Center. That's one thing that, even still today, working with field students and things that come to my elementary school, other schools don't have that. They don't have access to a library just for education majors and it's equipped with everything that you would see in the community schools that you'll be working in.

A TPP 5 faculty member named other centers available to teacher candidates:

We also have a couple of different programs or centers or things that I think make us unique in terms of our Center for Urban Education Success, our Center for Learning in the Digital Age, our [Growth Enrichment] Program.

Although this embodiment or category was cited less frequently than others, it was clear that certain teacher candidates found centers of teaching excellence to be important and necessary for their professional development.

Commitment to Equity

The fourth most frequently cited conjecture, among both faculty and racially diverse teacher candidates, was the commitment to equity. This theme is somewhat related to the theme of “diversity, inclusion, and social justice for students by creating change agents and leaders” in the TPP 5 conjecture map, and the “diversity and community engagement” conjecture in the TPP 6 conjecture map. The “commitment to equity” theme contains one embodiment or category, namely “displaying a commitment to equity.” There were other codes that were discovered in the category, such as a focus on equity research and staff members being

politically active. However, these codes occurred so infrequently that the decision was made to collapse them into a single category about equity. The lack of distinct categories for this theme should not diminish its importance for the design of teacher preparation programs. Commitment to equity was the fourth highest cited conjecture.

Commitment to equity. TPP 5's faculty members were enthusiastic about their program's commitment to equity and social justice. Faculty members described their program as having "a very strong commitment to equity ... and social practice" and as "completely committed to a sociological viewpoint of certifying." They described the program's goal of teaching teachers to "position their own privilege and understand how they fit in, and the micro-aggressions that can happen." In addition, they described TPP 5's commitment to "community-based research in a community that is racially segregated and has a reputation in our city school district of under-educating students of color." A faculty member went on to explain, "We work through our teacher preparation and through our research and our community outreach to try to make the educational system around here a little bit more equitable." To this end, faculty members look for prospective teacher candidates who are:

Committed to social justice and a fit with our mission as a primary goal. We want them to be teachers and educators who will be agents of change in their institutions ... [and] agents of change in their local community, whether that be the school or the district, whatever it may be, and to help them enact a critical theoretically grounded form of instruction for the benefit of their students.

Another faculty member explained the TPP 5 view of teacher candidates and their program as follows:

I think they choose our program because as I mentioned before, the sort of explicitness of

the kinds of teachers that we want to come out of our programs are the kinds of teachers that we aim to prepare. Who are focused on equity and justice and care in the lives of kids, but also care in the school and the community which they are a part of, and who are change-agent types. ... We're super explicit about our mission and our vision and our role as a teacher education institution that does a lot of work with the city. Those are the kinds of conversations that we have with candidates. All of the faculty have those conversations with every single candidate that applies.

For TPP 5's faculty, equity is a central conjecture and an important design consideration for its program.

TPP 5's racially diverse teacher candidates found the program's approach to teaching a central part of its appeal. One teacher candidate explained that:

Well, I think I hadn't really known that schools were out there that focused on [equity issues], that would be trying to push for people to be more socially active and to push for inclusion. Once I knew that that was out there, that became a really big, important thing for me, because that goes along with my personal politics and interests. I had no understanding about what the teaching world was like, so I was like I would just focus on getting a degree. And once I learned about [TPP 5], that really kind of swayed me towards really considering it.

Another teacher candidate named "the attention to justice and equity" as the defining reason that she decided to enter the program. The same respondent went on to say, "The social justice part. That's just part of who I am, and so being a change agent, it makes sense to go to a school that embodies that." A commitment to equity was a priority for TPP 5 that was clearly communicated to prospective teacher candidates and was embodied in the activities that the program pursued.

The interview responses from people at TPP 4 were similar to those of TPP 5. However, both faculty members and racially diverse teacher candidates at TPP 4 were slightly less enthusiastic about the importance of equity to the program. A TPP 4 faculty member pointed out quite succinctly that, “Certainly, critical race theory underlies all of our programs.” The same person added that the program was preparing teacher candidates for:

Being culturally relevant, and preparing them to teach in the current system, and be successful, but also to fight for what's really right for children, because we believe that lots of reforms and changes are necessary in the current PreK-12 educational system.

Another TPP 4 faculty member stated that equity “really meshes well with the mission statement of our college ... The mission is a focus on serving diverse populations and treating everyone as our neighbor.” For TPP 4, equity was a baseline consideration for their program, but was not a source of strong differentiation according to faculty members.

Professional Preparation for a Financially Viable Career

The fifth most frequently cited conjecture or theme among both faculty and racially diverse teacher candidates was “professional preparation in a financially viable career.” This theme relates to the “lifelong growth and learning in a field with a lot of career opportunity” conjecture in the TPP 4 conjecture map, and the “successful career development and financial security” conjecture in the TPP 6 map. The “professional preparation for a financially viable career” theme contained two categories, ordered here from most to least frequently cited: 1) professionalization, and 2) job offers and the shortage of teachers. The following paragraphs explore each of these embodiments, the main codes that contributed to their creation, and important quotes that provide context for the theme.

Professionalization. Only TPP 6 included professionalization as a central conjecture on their

website and in marketing materials. However, faculty members and racially diverse teacher candidates from all the programs mentioned professionalization as an important factor of their preparation experiences. Interestingly, as with equity considerations, some teacher candidates wanted an even stronger focus on professionalization during their program.

The racially diverse teacher candidates of TPP 4 and TPP 5 were thankful for their programs' "ability to give a little bit of foresight into the field." One teacher candidate stated, "So it gave me a good preparation as far as understanding, like what classroom management would be, but they gave me a little glimpse into a window of certain special education laws that apply to my position." For other candidates, their program's ability to prepare them professionally for the classroom was key. One respondent stated:

So, the program is preparing us to be educators better than I believe any other program is. ... That's a big part of our job. I wish that I had more classes that taught me how to structure my own classroom, or what to do with your summers, when you get your first job.

Faculty members at both TPP4 and TPP 5 agreed with their teacher candidates' assessments. A faculty member at TPP 5 said:

I think one of the things that the mission does is it emphasizes the idea that education is a complex place. I mean, if you're going to enter this place, you got to be a cut above the rest to lead in it, and you have to be really thoughtful about what it takes to work within a complex political institution of the schools. We emphasize that.

Hence, for interviewees at TPP 4 and TPP 5, the pedagogical component of teaching was important, but so was the professionalization of teacher candidates.

One of TPP 6's teacher candidates wished that he had more preparation for his

professional life. He said:

I felt as though I wished that I had more classes about music education. I didn't feel too prepared to teach in a music classroom, like a full-time teaching job. I still had so many questions. I learned a lot about how to run a marching band, and how to run an ensemble, but I never really had classes that taught me the difference between rules and procedures and the difference between being – I guess understanding – your teacher identity.

The teacher candidate went on to say that:

I also think they could work on... talking about interviewing and resumes. It doesn't really happen until student teaching, but it's something that you need the whole time. Because when I got to the end, I didn't have a portfolio of all the things that I've done throughout my educational career there, which would have been extremely beneficial. ... No one said to you, 'Like when you apply for a job, you're going to want to showcase some of these lessons that you did in this block or showcase some of the assignments that we did here.' Like the IEP and the SBA. Then just kind of compile all that and all these volunteer activities. ... Or start asking for letters of recommendation. Or letters that you could put into a portfolio from teachers that – you worked in their classrooms, or professors that stood out to you and you did well in their classes.

However, another teacher candidate felt the school had prepared her for professional life. She stated:

I don't think I really, truly understood the weight of what I was doing until I was at the end of my sophomore year. And that's when I started taking more of my education classes. ... So, the more time I spent with other teachers, the more I kind of got to see the things that my teacher was telling me about being put into practice.

Professionalization and preparation for the classroom was clearly an important conjecture for many of the racially diverse teacher candidates in this study.

Job offers and the teacher shortage. TPP 4 and TPP 6 included job offers and the shortage of teachers as a central conjecture on their respective website and in marketing materials. However, during the interviews, TPP 5 and TPP 6 were the only programs for which people explicitly mentioned these topics. TPP 5 faculty members were emphatic that their program was highly regarded and excelled at placing teachers in classrooms. TPP 6 shared the same sentiment; these faculty members thought their program probably had the best measurable outcomes for teacher candidates.

TPP 5's faculty members explained that their program was a leader in terms of teacher candidates being hired directly after graduation. A faculty member explained that:

We're highly regarded, I think number one. All of our students get multiple job offers.

That's probably the first reason why they come. ... Everybody gets a job and many of them have multiple offers. They get to choose where they're going to work.

Another faculty member specifically asked that a conjecture should be added to TPP 5's conjecture map, regarding hiring. This person said, "You can add that teacher candidates get jobs immediately. ... There's nobody that doesn't have a job. Support, enroll, and finish. No one doesn't get a job. Everyone gets hired."

Faculty members, acutely aware of the program's ability to provide employment for its teacher candidates, use job offers as a recruiting tactic. As another faculty member recalled, when speaking to a potential teacher candidate, she had said:

'The city school district is looking for black male teachers in particular. Why haven't they given you a contract?' And he said, 'Oh, I'm not certified to teach'. I said, 'What do you

mean? You're fantastic'. ... I gave him my card and said, 'You should give me a call.

Because a year from now you could be teaching, and you could have a job here at the city school district'.

Hence, TPP 5's faculty seemed to cultivate and continue to improve their ability to immediately move their candidates into full-time roles. This aspect of their program is an important design consideration.

TPP 6's teacher candidates cited their program's ability to successfully place them in jobs as an important consideration for their recruitment and retention. One teacher candidate described how TPP 6 compared to other schools that he had considered, and explained that in the end, the TPP 6 "success rate was very appealing." The candidate added, "[It] was appealing, that if I couldn't find something that I knew, I would get something somewhere else because people were contacting the university and the advertisements were up in the hallways when we had class." Another teacher candidate stated:

They were really telling me that there's a need for teachers [before I entered the program], and it took me until last year for one of the educational faculty members, her name is Dr. [OMITTED]. It took until her telling me that there was a high demand for African-American male teachers, because what I was always informed that there aren't any teaching jobs out there. ... It actually affected my opinion to stay at [TPP 6] and pursue a master's there.

A faculty member at TPP 6 provided an example of teacher candidates' comments:

I know the school districts in this region and from out-of-state always want our grads. ... Our students get jobs quickly. We've had people come from Alaska. ... They came to our building just last fall saying, 'Please remember us, please send teachers'.

Another faculty member explained:

We don't just say we educate the best teachers, we can prove that we do. You know, by their GPA, their placement rates. ... We're surveying our completers, we survey alumni, we survey employers. So, all those three – and the instrument we use is reliable and valid, it's not internally developed. We can compare our results with other schools like us. ... Real data to show that, you know, the students are ready, the alumni are happy, and employers are satisfied.

Regarding the information presented on the website about the teacher shortage, a faculty member stated as follows:

Yeah, we specifically put that page up about the shortage because sometimes people don't believe it. ... We've had districts come in, HR directors, and talk to our student teachers about which areas are going to be in more demand than others and told them how to apply so they can get hired the day after student teaching. So, we work with our area districts on those things, they're all very well aware of that.

Like TPP 5, TPP 6's continued diligence in creating and building pathways to the workplace for its teacher candidates was an appealing and compelling reason for candidates to attend and finish that program.

Financial Assistance

The sixth most frequently cited conjecture or theme among both faculty members and racially diverse teacher candidates was financial assistance. This conjecture is related to the conjecture of “offering financial aid and support to help students enroll and finish” conjecture in the TPP 5 conjecture map. The financial assistance theme contains two embodiments or categories, ordered here from most to least frequently cited: 1) affordability and 2) scholarships.

The following paragraphs explore each of these categories, the main codes that contributed to their creation, and important quotes that provide context for the theme.

Affordability. None of the teacher preparation programs included affordability as a specific conjecture on their respective website or in marketing materials. However, participants from TPP 5 and TPP 6 discussed affordability in their interviews. TPP 5's faculty members highlighted its 50%-off initiative, whereas TPP 6 staff spoke generally about efforts to make their program more affordable. These discussions of affordability included perspectives that highlighted the excellent value of both programs, given the quality of their preparation of teacher candidates.

TPP 5's focus on affordability begins with its 50%-off program for fifth-year teacher candidates. As one faculty member illustrated, the TPP 5 strategy is an important differentiator for the program:

In the last couple of years, nobody's wanted to go into teaching. I mean everybody in the area, all the area colleges are having a really difficult time ... all of their enrollments have gone down by half. We've managed to retain our enrollment by giving, I keep calling it the 50%-off sale, and basically, we're giving everyone 50% off at this point ... They get their master's on their fifth year, certification to teach, and it's 50%.

Another faculty member stated that, "We're the same price as a state school at this point. ... Why would you not want to go to the best school in the county at the same price as a state school? Right?" She then described the 50% program in detail:

You have an automatic 50% discount or scholarship when you come in the door. That's for people who commit to completing the master's program plus the teaching certification. The expectation there is that because you're going through the program ... you're probably going to end up teaching in a high-need district in and around the

Rochester area. That's one of the things that we communicated. By the time you're done with this program, you'll have gotten a scholarship, you'll have a master's degree, and certification. The giving back will be to teach in a way that contributes to the community in high-need districts. Most of the time, that comes to fruition the way that it's communicated.

The focus on the 50%-off program by TPP 5 faculty was unanimous and unambiguous. In addition, teacher candidates appreciated the affordability aspect.

A TPP 5 teacher candidate pointed out that “the tuition was a big thing, because financially, it's really hard to go to school and work.” As one teacher candidate explained:

I was forwarded the program, or I was forwarded information on the [TPP 5] program, because their tuition was half-off. ... I didn't want to create an intense amount of debt. And so that, finding out that the tuition would be something that I could cover with the small amount of money I had, and also not work – and so I could be fully focused on the program, because it's so intensive.

The candidate went on to explain that “someone had donated a bunch of money and they were putting that towards discounted tuition for people who want to be teachers but may not necessarily afford a private school education.” The same respondent discussed affordability as a critical issue within the broader context of other design conjectures:

Having to bear the load of a private school education at this point in my life would essentially enslave me into working for the rest of my life to pay off that debt. ... [When] I heard about why the tuition is discounted, that actually made me kind of feel more proud to be a part of the program. That someone is helping to fund this new generation of teachers in a focus that's more aligned with newer ways of thinking of how students are

and who they are and how teachers should be to their students. So, I was very happy to hear why the tuition was discounted. Because if it had been, ‘Hey, we just ... we need more students in our program’ that would have maybe impacted me a little bit differently.

But if I know that it's because someone wanted more teachers out there, that was a push. For TPP 5, there was alignment between faculty members and racially diverse teacher candidates regarding the importance and effect of affordability.

TPP 6’s faculty members understand the affordability of their program in relation to other programs in the area. A faculty member stated that, “[TPP 6] is a state-run institution, and it's affordable for the families of inner city kids.” One teacher candidate said TPP 6’s affordability was a key aspect of the program, “I decided to pick [TPP 6] because I could afford it.” In addition, TPP 6’s affordability intersects with its prestige as a teacher preparation program to create value for teacher candidates. Another teacher candidate said that “I think [programs I considered] were all well-spoken of, I just know that I ultimately chose [TPP 6] because, the financial cost of it was better and they had their accreditations.” As with TPP 5, TPP 6’s affordability was an important consideration for racially diverse teacher candidates, despite their program lacking a discount initiative.

Scholarships. None of the teacher preparation programs included scholarships as a specific conjecture on their respective website and in marketing materials. However, participants from TPP 5 and TPP 6 discussed scholarships and other types of program-specific financial support in their interviews. Interestingly, although scholarships were explicitly mentioned by participants from both programs, neither school had a robust scholarship program for its teacher candidates, but other types of financial aid were offered such as TPP 5’s 50%-off program.

A teacher candidate from TPP 5 said of the scholarship that she received from the

program. She said, “Also if you went there for undergrad, and you decide to go there for grad school, and then also do the Urban Teaching and Leadership you can actually go for free, so they do try to find money for you in various aspects.” A teacher candidate from TPP 6 also mentioned a scholarship program for candidates from their school district: “When you're a student in the [OMITED] public school district, you get scholarships, and it's called the [OMITED] Promise. So that paid for a huge chunk of my college tuition.” Another teacher candidate at TPP 6 stated:

When I was talking to the graduate guidance counselors at TPP 6, and the admissions office, they informed me that there were more financial resources out there for teachers, for students that want to get their master's and their teaching cert at the same time. So that kind of tied into my decision to wanting to get a master's.

TPP 6 faculty members also described how they help with other types of financial support. One faculty member explained that:

We can help them with professional attire, with their tests because all those tests are expensive and also clearances. It's about \$150 to get those clearances to go into schools. ... I've had students of color who couldn't afford their tests and I've used some of my discretionary funds to help them, just because of that. Because I want to see them succeed, I don't want a \$150 test to keep them out of the profession, and sometimes I think that might happen if I don't know about it.

Although scholarships were mentioned less often than other conjectures in this study, the data from the interview phase showed that much attention and effort had been given to them.

Program Prestige and World-Class Faculty

The seventh most frequently cited conjecture or theme among both faculty and racially diverse teacher candidates was “program prestige and a world-class faculty”. This conjecture is

related to the “prestigious academic institution with world-class facilities and outstanding faculty dedicated to groundbreaking research” conjecture in the TPP 5 conjecture map, and to the “high standards, program prestige and excellence, high-quality faculty and high-quality research” conjecture in the TPP 6 conjecture map.

The “program prestige and world-class faculty” theme contains two embodiments or categories, ordered here from most frequently cited to least: 1) program prestige, and 2) professors with practical experience. The following sections explore each of these categories, the main codes that contributed to their creation, and important quotes that provide context for the theme.

Program prestige. TPP 5 and TPP 6 cited program prestige as a central conjecture on their respective website and in marketing materials. The semi-structured interviews supported this trend, as participants from TPP 5 and TPP 6 discussed how the program’s prestige was impactful. In both cases, program prestige was an important consideration for prospective racially diverse teacher candidates and was emphasized by faculty members.

A teacher candidate from TPP 6 described her decision to attend TPP 6 as follows:

I, honestly, chose [TPP 6] because I just liked the environment. It just looks like a really nice school and I heard that they had a good reputation in regard to their education program, so that's part of the reason I went and looked in the first place. I liked the environment. After hearing, especially, that they had a good program, I was just kind of hooked.

Another teacher candidate offered,

Well, I definitely think the high standards and the prestige definitely affected my decision just because so many people go into education, and where we live, it's kind of hard to go

to school up here and find a job. So, knowing that they are well known, and people really want to go here, and people want educators that leave there – that definitely did help my decision.

A participating faculty member stated, “We have a really good reputation in the community ... We prepare our teachers well.” A TPP 5 faculty member commented as follows about TPP 5’s program prestige:

Then the other thing that we emphasize is that you're coming to a place where it's a research institution. I think candidates sometimes will consider the difference between a research institution and non-research institution as an asset. I want to go to the place where people who are researching, learning, and teaching, and writing about those things are actually the faculty that I'm going to work with.

Another faculty member stated that “I think they choose our program because [TPP 5] is a pretty reputable institution.” The comments from participants at TPP 5 and TPP 6 illustrate that program prestige is an important embodiment for the recruitment and retention of diverse candidates.

Professors with practical experience. None of the teacher preparation programs included professors with practical experience as a specific conjecture on their respective website and in marketing materials. However, participants from TPP 4 discussed the topic and its importance. For TPP 4, having professors with a link to the classroom was a point of pride for the program, and faculty members believed this differentiated their program from others.

TPP 4’s faculty members spoke at length about the practical experience of their professors and staff members. A teacher candidate explained that:

There's a lot of professors who either are educators or were educators. The program that

I'm in specifically gears a lot towards special education because I am getting my special education certification. So, there's a lot of professors who have a lot of information or have been working in the field of special education for a very long time, and so they have a lot of information to give.

A faculty member commented:

And we judiciously use adjuncts that are currently in the field and I think that's really good too, and obviously, all of our faculty have been teachers, or administrators. I mean all of us have been teachers and some have been administrators and superintendents in addition to being teachers. ... about 75% of our faculty have the terminal degree and high standards and a commitment to the profession.

For TPP 4, the practical experience of its faculty was a benefit for teacher candidates, to provide them with expert guidance for their future careers.

Consolidated Conjecture Map

The last step in the data analysis process was to combine all of the collected data from the content analysis and interview phases into a consolidated conjecture map. In total, 11 conjectures were captured during the content analysis phase, and seven more during the interview phase. There was significant overlap between the conjectures and themes captured in each phase, as shown in Table 8. To create the consolidated conjecture map, only conjectures represented in the data of both phases were included.

The categories discovered while coding the interview transcripts were included as embodiments of the main conjectures on the map. The mediating processes, short-term outcomes and long-term outcomes for each conjecture were taken from the content analysis conjecture maps and edited to fit with the newly discovered conjectures and embodiments. The consolidated

conjecture map represents a framework that teacher preparation programs can follow to increase recruitment and retention of racially diverse teacher candidates at their institutions. Practically, the consolidated conjecture map serves as a “best practices” roadmap for interested programs.

Figure 6 shows the final consolidated conjecture map.

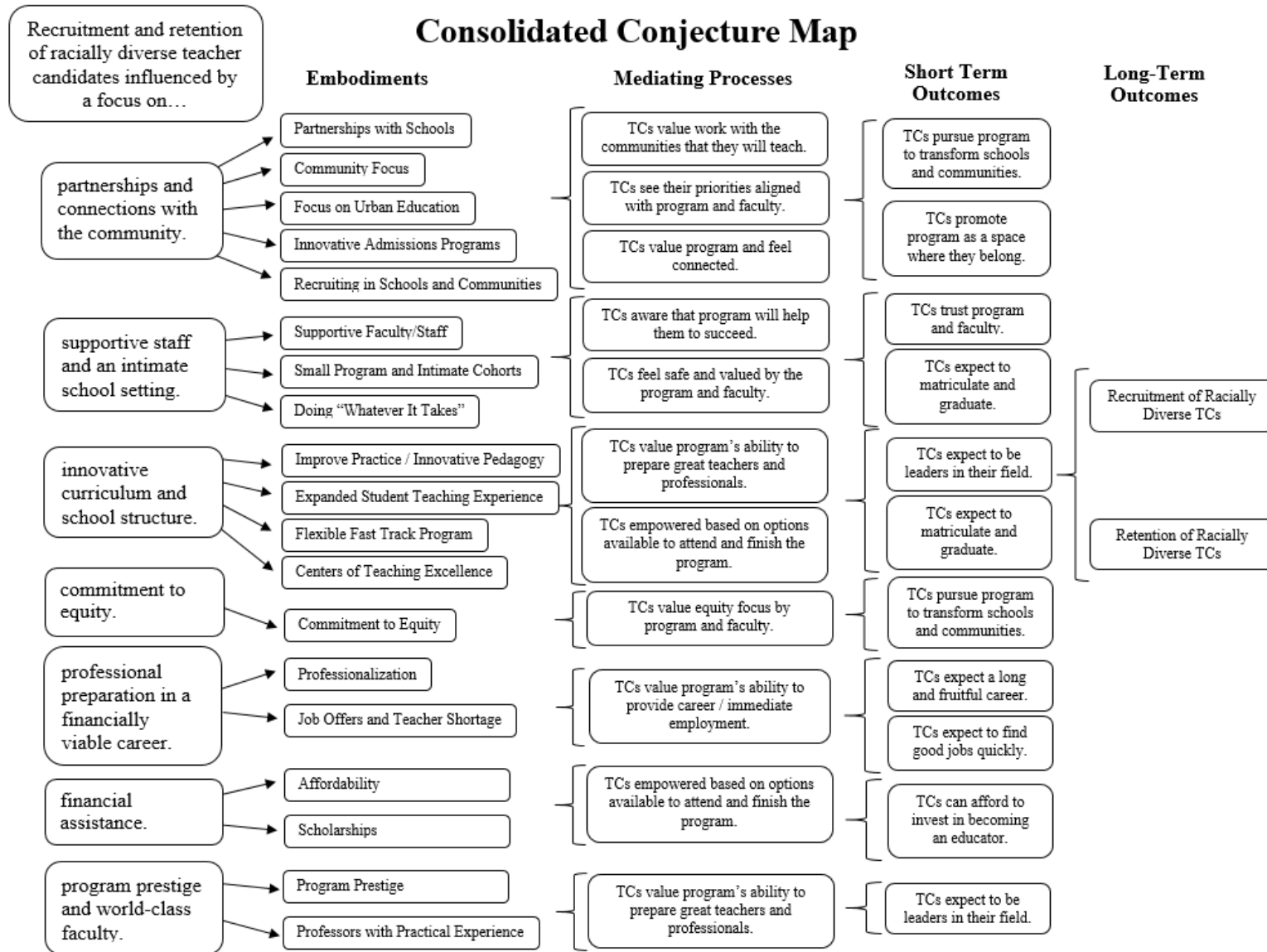


Figure 6. Consolidated Conjecture Map

The consolidated conjecture map features seven conjectures or themes: 1) partnerships and connections to the community; 2) supportive staff and an intimate school setting; 3) innovative curriculum and school structure; 4) commitment to equity; 5) professional preparation for a financially viable career; 6) financial assistance; and 7) program prestige and world-class faculty. The “partnerships and connections to the community” conjecture are embodied by teacher preparation programs as: 1) partnerships with schools, 2) having a community focus, 3) focusing on urban education, 4) having innovative admissions programs, and 5) recruiting in schools and communities. Racially diverse teacher candidates internalize these embodiments by valuing work with the communities that they will teach, seeing their priorities aligned with faculty, and valuing the program by feeling connected. In the short term this leads teacher candidates to pursue the program so that they can transform schools and communities, and to promote the program as a space where people like them belong. In the long term, the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

The “supportive staff and an intimate school setting” conjecture is embodied by teacher preparation programs as: 1) supportive faculty and staff, 2) having a small program with intimate cohorts, and 3) doing “whatever it takes.” Racially diverse teacher candidates internalize these embodiments by being aware that the program can help them to succeed, and through feeling safe and valued by the program and faculty. In the short term this leads teacher candidates to trust the faculty and program and expect to graduate. In the long term, the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

The “innovative curriculum and school structure” conjecture is embodied by teacher preparation programs as: 1) a focus on improving practice and pedagogy, 2) an expanded student teaching experience, 3) developing a flexible fast-track program, and 4) building centers of

teaching excellence. Racially diverse teacher candidates internalize these embodiments by valuing the program's ability to prepare quality teachers and becoming empowering to attend and finish the program. In the short term, this leads teacher candidates to expect to become leaders in their field and to graduate. In the long term, the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

The "commitment to equity" conjecture is embodied by teacher preparation programs as dedication to equity. Racially diverse teacher candidates internalize this embodiment by valuing the focus on equity by the program and faculty. In the short term this leads teacher candidates to complete the program as a way to transform schools and communities. In the long term, the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

The "professional preparation for a financially viable career" conjecture is embodied by teacher preparation programs as: 1) a focus on professionalization and 2) a focus on job placement and the teacher shortage. Racially diverse teacher candidates internalize these embodiments by valuing the program's ability to ensure a career and immediate job placement. In the short term, this leads teacher candidates to expect long, fruitful careers and the ability to secure good jobs quickly. In the long term, the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

The "financial assistance" conjecture is embodied by teacher preparation programs as: 1) affordability and 2) scholarships and financial aid. Racially diverse teacher candidates internalize these embodiments by having options that allow them to attend and finish the program. In the short term, this leads teacher candidates to believe that they can afford to invest in becoming an educator. In the long term, the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

The “program prestige and world-class faculty” conjecture is embodied by teacher preparation programs as: 1) a focus on program prestige and 2) having professors with practical experience. Racially diverse teacher candidates internalize these embodiments by valuing the program’s ability to prepare quality teachers and professionals. In the short term this leads teacher candidates to believe they can become leaders in their field. In the long term the conjecture leads to the recruitment and retention of racially diverse teacher candidates.

Chapter 5: Discussion

My research required me to engage with education stakeholders from teacher preparation programs, school districts, and state departments of education. My engagement with these people alerted me to the reality that American schools have few options when trying to supply classrooms with teachers from racially diverse backgrounds. Although almost all of the stakeholders with whom I came into contact were aware of the issue, few had tangible solutions. In many cases, stakeholders had to deal with various other more pressing issues, like school funding, school safety, faculty and staff skill remediation, or failing infrastructure. Against a backdrop of competing priorities, it has been hard for those stakeholders to focus clearly on fixing their workforce's diversity issues.

In addition, there is growing recognition that efforts to improve teacher diversity cannot be contingent on an individual contributor's effort, such as that of a recruiter or program administrator. Neither can such efforts focus purely on individual students. Hence a central premise of this study was that structural changes are necessary at teacher preparation programs, to create spaces that are attractive and conducive to racially diverse teacher candidates. Design-based research perspectives were used, in part, to address this premise.

Design-based research strategies were also used to segregate aspects of design into easily digestible "embodiments" that could be implemented by teacher preparation programs. Design-based research provided a theoretical framework to highlight structural features; it also allowed for a view of teacher preparation programs from the perspective of racially diverse teacher candidates. In my experience of interacting with stakeholders of education systems, institutions like teacher preparation programs rarely organize and prioritize their work according to the

perceptions of their teacher candidates. Instead, accrediting bodies, personal research priorities, university norms, and industry trends tend to dominate.

For recruitment and retention efforts, where the main focus should be the needs and desires of prospective teacher candidates, a design perspective is critical. A program's design signals the program's priorities and perspectives on education. Even seemingly unimportant aspects of a program's design could signal a potentially unattractive priority to a teacher candidate. However, when the preferences of teacher candidates align with the design of the program, connections can be made that can lead to recruitment – and eventually to retention. What follows is a summary of the research, outlines key discoveries and limitations of the study, and offers implications for research and practice.

Summary of Study

This study was conducted at three teacher preparation programs in the states of Pennsylvania and New York, US. The purpose was to investigate these aspects of teacher preparation program design that enable programs to successfully recruit and retain racially diverse teacher candidates. These design aspects could be used to inform teacher preparation programs that are struggling to identify effective recruitment and retention practices.

Implicit in the study was the belief that racially diverse teacher candidates choose whether they want to pursue a career in teaching, and if so, where. The “where” question is based largely on the appeal of different teacher preparation programs. To isolate aspects of program design that are controllable, this study excluded teacher preparation programs designed to serve special populations.

The teacher preparation programs were selected using an empirical method, in which the racially diverse population attending the teacher preparation program was compared against the

racially diverse population of both the surrounding metropolitan area and the overall university. This method was used to empirically classify programs based on actual outcomes rather than on intent or word of mouth. Historically, teacher pipeline research and investigation of best practices has identified teacher preparation programs that are successful at recruiting racially diverse teacher candidates by relying on general consensus, or by tracking investigative news articles. In response to those avenues, this study offered a different way of identifying teacher preparation programs that succeed in recruiting and retaining racially diverse teacher candidates.

Three of the six programs that were identified using this method of classification decided to participate in the study. The three programs that did not participate were either non-responsive, generally uninterested, or had institutional review boards that opposed the research protocol. Although it would have been ideal to have all six programs participate, the programs that were included provided helpful data that informed the answers to the research questions. Generally, faculty at participating institutions were forthcoming, happy to participate, and interested in the outcomes of the research. At the request of the participating programs, the consolidated conjecture maps and program-specific maps will be shared with participants.

Each participating program's marketing and website materials were collected and analyzed in order to develop conjecture maps. The core conjectures can also be called "aspects of design". These were included in the conjecture maps, along with embodiments, mediating processes, short-term outcomes and long-term outcomes (i.e., recruitment and retention). The conjecture maps provided a way to track aspects of program design and their effects on racially diverse teacher candidates. In addition, conjecture maps provided a structure that could tease out the effects of seemingly innocuous choices that ended up having real effects for teacher candidates. Program staff can use the prepared conjecture maps to discuss and evaluate the

aspects of design that they may be unwittingly promoting, to evaluate whether each aspect is having its intended impact. For this study, the conjecture maps served as a basis for the semi-structured interviews and provided data for a final consolidated conjecture map that enshrined all of the principles discovered.

Each program had two or three faculty members participate in interviews. In addition, two teacher candidates from each institution were interviewed. A purposeful sampling method was used, and participants were selected on a “first come, first served” basis, provided they met the study’s criteria. Semi-structured interviews were completed by phone and took approximately 30 minutes each. Audio recordings were used to create transcriptions and the transcriptions were coded to identify themes and conjectures.

In the data analysis phases of this study, I sought to create a consolidated conjecture map. My intention was for the map to be used by forward-looking teacher preparation programs to improve their ability to recruit and retain racially diverse teacher candidates. The content analysis of each program’s website and marketing materials served as a basis for discussion with faculty members and racially diverse teacher candidates. As previously discussed, the interviews offered insight into the conjecture maps and overarching themes. In the end, data analysis proved rich data providing a clear view of how each program was designed, and how those designs were interpreted.

Framework Interpretation

This study provides a framework for the recruitment and retention of racially diverse teacher candidates at traditional teacher preparation programs. The consolidated conjecture map serves as that framework and presents a theory-of-action for each of the study’s central design conjectures. Each conjecture, in and of itself, cannot wholly change a program’s ability to recruit

and retain racially diverse teacher candidates. Instead, the conjectures should be taken together as a comprehensive framework that can enable recruitment and retention capabilities for a program. An effort to implement several of the presented conjectures is necessary for the framework to be effective. Additionally, programs may find that certain conjectures have natural synergies and should be implemented simultaneously.

Partnerships with schools, having a community focus, and recruiting in schools and communities are embodiments that will likely benefit from shared development and implementation. A focus on urban education, and commitment to equity also will likely benefit from shared development and implementation. The innovative admission programs, flexible fast track programs, affordability, and scholarships embodiments can each benefit from shared development and implementation. Supportive faculty, doing “whatever it takes”, and creating small programs with intimate cohorts have natural synergies. Innovative pedagogy, expanding the student teaching experience, and centers of teaching excellence can also benefit from shared development and implementation. The professionalization, job offers and the teacher shortage, program prestige, and professors with practical experience embodiments have synergies that enable shared development and implementation. Table 10 shows the embodiments that can be developed and implemented together to leverage synergies and to increase the efficiency of framework implementation.

Table 10.

Synergies between Embodiments

<u>Group #</u>	<u>Embodiment/Category Name</u>
Group 1	Partnerships with Schools Community Focus Recruiting in Schools and Communities

Group 2	Focus on Urban Education Commitment to Equity
Group 3	Innovative Admission Programs Flexible Fast Track Program Affordability Scholarships
Group 4	Supportive Faculty and Staff Doing “Whatever It Takes” Small Program and Intimate Cohorts
Group 5	Improving Practice with Innovative Pedagogy Expanded Student Teaching Experience Centers of Teaching Excellence
Group 6	Professionalization Job Offers and Teacher Shortage Program Prestige Professors with Practical Experience

Discoveries

The data provided by the study’s methodology enabled the creation of a consolidated conjecture map, which enshrined the overarching themes of each teacher preparation program. In addition, the data analysis provided nuanced insight into several of the central conjectures that could help to orient teacher preparation programs if they analyze their own designs. In particular, six discoveries help to make sense of the conjecture map. These six insights are: 1) partnerships with local schools and communities serve as a pipeline, engage current teacher candidates, and incentivize prospective candidates to attend; 2) the most meaningful connection that most teacher candidates develop is with faculty; 3) teacher candidates value programs that position them for career success; 4) equity is a “table-stakes” consideration; 5) financial assistance is important, but not everything; and 6) teacher preparation faculty care more about prestige than teacher candidates. The following sections discuss each of these discoveries and thoughts about how

participating teacher preparation programs navigated these realities. Table 11 outlines the discoveries found in this study.

Table 11.

Discoveries

<u>#</u>	<u>Discovery</u>
1	Partnerships with local schools and communities serve as a recruitment pipeline.
2	Racially diverse teacher candidates develop the most meaningful connections with faculty.
3	Racially diverse teacher candidates value programs that position them for career success.
4	Equity is a “table-stakes” consideration.
5	Financial assistance is important, but not everything.
6	Teacher preparation faculty care more about prestige than racially diverse teacher candidates.

Partnerships as a Pipeline

Participating teacher preparation programs demonstrated an overall commitment to building and managing robust partnerships with local schools and communities. In most programs, these partnerships extended their equity-focused work and embodied their commitment to social justice in teaching. However, teacher preparation programs should be aware that school and community partnerships can serve many other purposes; they are also a key building block for sustaining diverse recruitment and retention efforts.

First, partnerships serve as a pipeline creation tool for teacher preparation programs. As programs interact with elementary, middle, and high school students, the students become familiar with the program, familiar with what it means to be a teacher, and aware of new teaching career paths. They can see themselves as educators in the future. As a result, pipelines

of interested prospective teacher candidates are created that can be leveraged in the future using personal connections and other recruitment activities.

Second, partnerships engage enrolled teacher candidates, allowing them to see value in their new career. Such partnerships position teacher preparation programs as a force for positive change. This engagement creates a deep connection between teacher candidates and their preparation program. As a result, candidates value completing their degree through their chosen program, and see their priorities reflected in the program's priorities.

Finally, partnerships that are highlighted in marketing materials and on websites can incentivize prospective teacher candidates to attend the program. Prospective teacher candidates who value community-based work and a social justice orientation are attracted to programs that demonstrate those values through their activities to help schools and communities. Highlighting these efforts can engage prospective candidates to want to learn more about a program.

Faculty as Program

While much of this study has looked at the connection between teacher preparation programs and teacher candidates, the most meaningful connection that most candidates create is with faculty members. Faculty members work at the core of teacher preparation programs and embody both the positive and negative aspects of a program. In essence, what teacher candidates see faculty members value and espouse is what they believe the program is designed to accomplish and prioritize. As such, it is important that programs align their faculty members with the core program beliefs. Faculty members' research topics, their orientation towards pedagogy, their experience in schools, and their prioritization of social justice must be aligned with overall program goals. If not, teacher candidates will receive confusing messages from the

program. In addition, teacher candidates who are attracted to the highlighted priorities of a program might feel alienated by faculty members who do not actively display those priorities.

A key conjecture revealed by this study was the important role that supportive staff members play in helping to guide teacher candidates into, and through, their teacher preparation programs. However, faculty members must also support overall program goals and beliefs in order to present a cohesive message to teacher candidates – which both engages and inspires.

Foregrounding of Career Success

A common theme throughout the data collection and analysis phases of this study was the fact that teacher candidates to prioritize and choose programs that position them for career success. Two of the themes in the consolidated conjecture map dealt directly with this reality: “innovative curriculum and school culture” and “professional preparation for a financially viable career”. Three of the embodiments for “innovative curriculum and school culture” were discussed, in the context of preparing teacher candidates to excel in their careers and as teachers. (These three embodiments were “improve/innovative pedagogy,” “expanded student teaching experiences,” and “centers of teaching excellence.”) In addition, both of the embodiments for “professional preparation in a financially viable career” were discussed in the same context.

Teacher candidates were discerning about the ability of programs to help them attain successful careers; they sought programs that could produce positive returns on their investment. Teacher preparation programs that can convince prospective teacher candidates of the program’s promise of future success and provide the necessary tools for success are a preferred destination for racially diverse teacher candidates.

Equity as “table-stakes”

For racially diverse teacher candidates, equity is an extremely important issue. It is a guiding principle that influences how they approach school and work. None of the participating racially diverse teacher candidates disagreed about the importance of equity; however, equity did not feature prominently in discussions. Over the course of the study, it became clear that while equity was important, it was considered a baseline (or “table-stakes”) feature for teacher preparation programs. That is, programs that did not foreground equity or elucidate their view of equity in education would not even be considered by racially diverse teacher candidates. This is an important finding of the study, as equity is the only strategy used by many teacher preparation programs when recruiting and retaining diverse teacher candidates. While equity is important, by itself it is not enough to interest significant numbers of racially diverse teacher candidates.

For racially diverse teacher candidates, various other factors – explained in this study’s conjectures and themes – combine with equity to build the profile of an appealing program. In essence, teacher preparation programs that seek to recruit and retain racially diverse teacher candidates would be wise to focus on issues of equity as a first step in a multi-step process, to change how their programs are perceived. This would involve orienting the program staff, developing research agendas, administering equity-focused programs, and revamping marketing and website materials.

Overblown Importance of Financial Assistance

As is the case with equity, financial assistance is important to racially diverse teacher candidates. However, like equity, it is an aspect of program design that is only important when combined with other features that appeal to racially diverse teacher candidates. During the interview process, racially diverse teacher candidates commented on affordability, scholarships,

and innovative admissions programs as important aspects of program design. These conversations were nuanced and arose within the context of broader program appeal, which is created through a combination of appealing aspects of program design.

Teacher candidates were concerned mainly with perceived value. That is, regardless of the actual price of attendance, the attendance fees must be lower than the career and earnings boost that teacher candidates can expect to gain through completing the program. Financial assistance is important, but not as important as the ability of a program to prepare candidates for career success. Only when racially diverse candidates feel certain that a program will adequately prepare them to be professional educators, does financial assistance become an issue. At a practical level, this means that programs that strive to build financial assistance packages to attract racially diverse teacher candidates must equally attend to the quality of the program and other aspects of program design, as highlighted in this study.

Prestige as a Means to an End

Prestige is the traditional focus of institutions of higher education with regard to marketing and attracting potential students. Highly prestigious schools such as the Ivy League build their recruitment strategies around the name recognition of their program and their graduates. Rarely do these programs need to quantify outcomes for their students, even majors for which students often do not find employment or are underemployed. Return on investment is thus also rarely quantified. However, people in the program and interested candidates generally assume such returns are good. Lower tier schools often attempt to emulate the recruitment strategies of highly prestigious schools by highlighting how sophisticated their institution is.

One finding of this study was that “prestige” was a term used frequently by faculty and rarely by teacher candidates. When asked, teacher candidates agree that prestige is important.

However, teacher candidates used prestige slightly differently from the way most faculty members used it. Prestige, for teacher candidates, signified a program's ability to develop quality professionals and connect them to good jobs. By contrast, traditionally prestige has been viewed by program and faculty staff as a measure of the scholarship created by programs, the selectivity of the university, and the ability to secure grants. For racially diverse teacher candidates, these features are relatively unimportant; they view prestige more as a means to an end. That end is to find employment and to launch a successful career.

Limitations and Potential Bias

The methods used in this study resulted in several limitations regarding the generalizability and applicability of the findings to other teacher preparation programs. First, the central design conjectures in this study applied to a specific group of programs. These programs included traditional teacher preparation programs with over 100 teacher candidates. Alternative certification programs were not analyzed. Hence, alternative programs should not be viewed as potential users of the proposed design considerations.

Second, Historically Black Colleges and Universities, Hispanic Serving Institutions, and Asian American and Native American Pacific Islander Serving Institutions were not included in the study. Therefore, the results of this study should be applied cautiously to these institutions. Third, the sample was relatively small. The sample afforded a picture of design conjectures that was specific to the faculty and staff members and teacher candidates interviewed in this study.

Despite these methodological limitations, I believe the proposed design conjectures can help teacher preparation programs to improve their diversity efforts. Faculty members who seek to create positive change for their institutions would also be interested in the results of this study.

It is also important to note my position in relation to the work described in this study. I am an Afro-Latino male from a relatively privileged background. My family has a history of scholarship and knowledge creation in the fields of education, medicine, economics, and anthropology. I am currently employed by Educational Testing Service, where I have worked mainly in the Teacher Licensure and Certification Division on a range of projects. My relationship to the work is disclosed here to highlight how personal bias might have affected my collection of data, selection of methods, and interpretation of results. To overcome the illusion of complete objectivity, this disclosure – along with the stated limitations – is presented to help readers interpret my work accurately, and with a full view of the knowledge production process.

Implications

The conjectures and themes found in this study are important considerations for teacher preparation programs. When considered with the discoveries and nuanced interpretations of the conjectures, the themes have several implications for programs. These implications should inform the recruitment and retention efforts of teacher preparation programs regarding the design and implementation of salient program conjectures. Many of the implications are simply the elucidated underlying assumptions of this study. However, each implication should be carefully considered as programs build and modify their strategies.

In this section, the following implications are discussed: 1) teacher preparation programs should be purposeful in their approach to recruitment and retention of racially diverse teacher candidates, 2) racially diverse teacher candidates are ultimately consumers of teacher preparation, and 3) teacher preparation programs must work with diverse populations to determine the best structure and strategy for their programs. Table 12 shows the implications of this study.

Table 12.

Implications

#	<u>Implication</u>
1	Teacher preparation programs should be purposeful in their approach to recruitment and retention of racially diverse teacher candidates.
2	Racially diverse teacher candidates are ultimately consumers of teacher preparation.
3	Teacher preparation programs must work with diverse populations to determine the best structure and strategy for their programs.

Purposeful Approach

In my experience, teacher preparation programs often view themselves as bystanders that are experiencing historic declines in teacher candidate enrollments. Although programs desire to recruit and retain racially diverse teacher candidates, they do not see themselves as actors within the broader context of teacher shortages. Instead, teacher preparation programs often opine that little can be done to turn things around. While continued pipeline issues are indeed dire, teacher preparation programs can – and indeed must – be purposeful in their approach to recruiting and retaining racially diverse teacher candidates. Indeed, a main common thread among the teacher preparation programs included in this study was the importance and dedication of the faculty members and program overall in recruiting and retaining racially diverse teacher candidates. The success in diversifying a program is largely due to the willingness to tackle pipeline issues directly.

In addition, although many programs support the notion of equity, purposeful development and the analysis of recruitment and retention efforts transform a concern for equity into real-life action. Responses from racially diverse teacher candidates indicated that they paid

attention to the choices that programs make, and they analyzed programs to determine their ability to succeed. Ultimately, teacher preparation programs that are purposeful in their approach and open to change will be able to recruit and retain racially diverse teacher candidates.

Consumers of Teacher Preparation

Racially diverse teacher candidates are ultimately consumers of teacher preparation programs. Moreover, they are shrewd consumers, who understand the values they seek and the aspects of program design that are personally important. Although it is understood that racially diverse teacher candidates are consuming education, this fact is nevertheless an important implication of the study. In my experience, too often teacher preparation programs are viewed as relatively identical programs that simply provide a mandated pathway for teacher candidates to enter the classroom. This view is becoming less true as alternative pathways to the classroom continue to open and grow, and as students continue to pursue more lucrative careers outside of education. With the realities of a national teacher shortage and a dearth of racially diverse teachers in the classroom, teacher preparation programs must differentiate themselves; they also need to incentivize racially diverse teacher candidates to join their ranks. Practically, this means treating teacher candidates as consumers of their services and seeking to understand their customers' tastes and preferences.

Ask Racially Diverse Teacher Candidates

Perhaps the biggest implication – and underlying assumption – of this study is that if teacher preparation programs want to improve their recruitment and retention efforts, they should simply ask racially diverse teacher candidates for their opinions. This implication is a logical but important deduction. It arises through treating racially diverse teacher candidates as consumers of preparation programs. Taking a design-based approach essentially means foregrounding the

views, tastes, preferences, and concerns of users, when developing a program design. The simplest way to capture those preferences is to ask users (in this case, racially diverse teacher candidates) for their opinions. This type of feedback can be captured in many ways: informally, through conversations, by assessing the interest in certain programs, or through anecdotal conversations with similar institutions. It can also be formally measured through student satisfaction surveys, questionnaires at job fairs or other recruitment events, and exit interviews with graduating candidates.

My interactions with racially diverse teacher candidates during this study highlighted their willingness to speak about why they had decided to attend a program and how they were able to finish the program. In addition, participating teacher preparation programs were selected for this study because of their success in recruiting and retaining racially diverse teacher candidates. A program's ability to understand and articulate why racially diverse teacher candidates had decided to attend that institution illustrates how the program sought out such opinions and used them to shape the program design.

Future Research

There are many avenues for future research in this area of inquiry. First, this study surveyed only 6 states (Connecticut, New Jersey, New York, Pennsylvania, Delaware, and Maryland) in the Northeastern region of the US, to find exemplary teacher preparation programs. Other research projects should explore other regions. It is possible that regional differences may exist that impact salient design features. However, if design features are similar across different regions of the country, multiple studies taken together could perhaps deliver a framework that is relatively generalizable across contexts. If main differences in salient design features occur across regions, further research could identify why those differences exist.

Second, this study provided a high-level view of the salient program features (conjectures/themes) that enable the recruitment and retention of racially diverse teacher candidates. It did not delve deeply into understanding the meaningful aspects of embodiments that enabled those features to be effective. For example, what is the optimal size for a program's intimate cohorts? How long can a "fast-track" program be before it is considered too lengthy? Is classroom management the most important professional skill for racially diverse teacher candidates? Answers to such questions can inform how to develop program features.

Third, as is the case with teacher preparation programs, school districts must make themselves appealing to racially diverse teachers who are certified and have graduated. Much like teacher preparation programs, school districts face a dearth of racially diverse teachers in the workforce and are struggling to understand how to increase their numbers. Applying a design perspective at the school-district level, and possibly at the state level, to understand how to incentivize and attract racially diverse teachers to work in locations that currently lack diverse teachers could prove fruitful. Identifying exemplary school districts could uncover interesting design features that could be used in school districts across the country. Moreover, knowledge of the salient features that racially diverse teachers perceive in their professional contexts should be gained from engaging directly with those teachers. The resulting understanding could ultimately improve educational experiences and diversify the teacher workforce.

References

- ACT. (2016). The Condition of Future Educators 2015. Retrieved from <http://www.act.org/content/dam/act/unsecured/documents/Future-Educators-2015.pdf>
- Allen, D.M., "African American Teacher Recruitment: A Case Study in Oregon" (2017). Dissertations and Theses. Paper 3622.
- Alliance for Excellent Education. (2014). On the path to equity: Improving the effectiveness of beginning teachers. Retrieved from <https://all4ed.org/wp-content/uploads/2014/07/PathToEquity.pdf>
- American Association of Colleges for Teacher Education. (2013). The changing teacher preparation profession: A report from AACTE's Professional Education Data System (PEDS).
- Arcia, E. (2006). Achievement and enrollment status of suspended students: Outcomes in a large, multicultural school district. *Education and Urban Society*, 38(3), 359–369.
- Banerjee, N. (2017). Effects of Teacher-Student Ethnoracial Matching and Overall Teacher Diversity in Elementary Schools on Educational Outcomes. *Journal of Research in Childhood Education*, 1–25. <https://doi.org/10.1080/02568543.2017.1393032>
- Baxter, M. Y. (2015). Ethnically Diverse Students and K-12 Teacher Preparation Programs: An Analytical Study of Effective Recruitment and Retention Strategies in Select Midwest Colleges and Universities (Doctoral dissertation, Minnesota State University, Mankato).
- Beady Jr, C. H., & Hansell, S. (1981). Teacher race and expectations for student achievement. *American Educational Research Journal*, 18(2), 191–206.

- Beardsley, L. V., & Teitel, L. (2004). Learning to see color in teacher education: An example framed by the professional development school standard for diversity and equity. *The Teacher Educator*, 40(2), 91–115.
- Bell, D. (2008). Racial equality: Progressives' passion for the unattainable.
- Bennett, C. I. (2002). Enhancing Ethnic Diversity at a Big Ten University Through Project TEAM: A Case Study in Teacher Education. *Educational Researcher*, 31(2), 21–29.
<https://doi.org/10.3102/0013189X031002021>
- Boser, U. (2011). Teacher Diversity Matters: A State-by-State Analysis of Teachers of Color. Center for American Progress. Retrieved from
<https://login.proxy.libraries.rutgers.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED535665&site=eds-live>
- Bowen, Glenn A., 2009, 'Document Analysis as a Qualitative Research Method', *Qualitative Research Journal*, vol. 9, no. 2, pp. 27-40. DOI 10.3316/QRJ0902027.
- Brown, J. W., & Butty, J.-A. M. (1999). Factors that influence African American male teachers' educational and career aspirations: Implications for school district recruitment and retention efforts. *Journal of Negro Education*, 280–292.
- Bulmer, M., & Solomos, J. (1999). *Racism*. Oxford University Press.
- Carbado, D. W., & Gulati, M. (2002). The law and economics of critical race theory.
- Casey, L., Di Carlo, M., Bond, B., & Quintero, E. (2015). The state of teacher diversity in American education.
- Casteel, C. A. (1998). Teacher–student interactions and race in integrated classrooms. *The Journal of Educational Research*, 92(2), 115–120.

- Chung, J. Y., & Harrison, L. M. (2015). Toward an ethnic studies critique for teacher education. *Multicultural Perspectives*, 17(1), 4–12.
- Clewell, B. C., & Villegas, A. M. (1998). Introduction. *Education and Urban Society*, 31(1), 3–17. <https://doi.org/10.1177/0013124598031001001>
- Cochran-Smith, M. (2004). Walking the road: Race, diversity, and social justice in teacher education. Teachers College Press.
- Crenshaw, K. W. (1988). Race, reform, and retrenchment: Transformation and legitimation in antidiscrimination law. *Harvard Law Review*, 1331–1387.
- Crenshaw, K. W. (1995). Critical race theory: The key writings that formed the movement. The New Press.
- Cuellar, M. (2012). Latina/o student success in higher education: Models of empowerment at Hispanic Serving-Institutions (HSIs), emerging HSIs, and Non-HSIs (Unpublished doctoral dissertation), University of California, Los Angeles, CA.
- Darling-Hammond, L. (2012). Powerful teacher education: Lessons from exemplary programs. John Wiley & Sons.
- Darling-Hammond, L., LaPointe, M., Meyerson, D., Orr, M. T., & Cohen, C. (2007). Preparing School Leaders for a Changing World: Lessons from Exemplary Leadership Development Programs. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.
- Dee, T. S. (2004). Teachers, Race, and Student Achievement in a Randomized Experiment. *Review of Economics and Statistics*, 86(1), 195–210.
<https://doi.org/10.1162/003465304323023750>

- Dee, T. S. (2005). A teacher like me: Does race, ethnicity, or gender matter? *American Economic Review*, 95(2), 158–165.
- Dixson, A. D., & Rousseau, C. K. (2005). And we are still not saved: Critical race theory in education ten years later. *Race Ethnicity and Education*, 8(1), 7–27.
- Dusek, J. B., & Joseph, G. (1983). The bases of teacher expectancies: A meta-analysis. *Journal of Educational Psychology*, 75(3), 327.
- Easley, J., Moorehead, T., Gordon, O., Wickramasinghe, C., & Rojas, A. P. (2017). Minority Teacher Recruitment: A Root Cause Analysis in Connecticut. Eastern Connecticut University. Retrieved from https://issuu.com/easternctstateuniversity/docs/minority_teacher_recruitment?e=12068228/46288530
- Egalite, A. J., Kisida, B., & Winters, M. A. (2015). Representation in the classroom: The effect of own-race teachers on student achievement. *Economics of Education Review*, 45, 44–52.
- Ehrenberg, R. G., Goldhaber, D. D., & Brewer, D. J. (1995). Do teachers' race, gender, and ethnicity matter? Evidence from the National Educational Longitudinal Study of 1988. *ILR Review*, 48(3), 547–561.
- Eppley, K. (2009). Rural Schools and the Highly Qualified Teacher Provision of “No Child Left Behind”: A Critical Policy Analysis. *Journal of Research in Rural Education*, 24(4), 1–11.
- Evans, B. R., & Leonard, J. (2013). Recruiting and Retaining Black Teachers to Work in Urban Schools. *SAGE Open*, Vol 3, Iss 3 (2013), (3).
<https://doi.org/10.1177/2158244013502989>

Evans, M. O. (1992). An estimate of race and gender role-model effects in teaching high school.

The Journal of Economic Education, 23(3), 209–217.

Ferguson, R. F. (2003). Teachers' Perceptions and Expectations and the Black-White Test Score

Gap. *Urban Education*, 38(480), 460–507.

Ford, D. Y., Grantham, T. C., & Harris, J. J. (1997). The recruitment and retention of minority teachers in gifted education. *Roeper Review*, 19(4), 213–220.

<https://doi.org/10.1080/02783199709553832>

Gay, G. (1993). Building Cultural Bridges: A Bold Proposal for Teacher Education. *Education and Urban Society*, 25(3), 285–299. <https://doi.org/10.1177/0013124593025003006>

Gershenson, S., Hart, C., Lindsay, C., & Papageorge, N. W. (2017). The long-run impacts of same-race teachers.

Goldhaber, D., Theobald, R., & Tien, C. (2015). The theoretical and empirical arguments for diversifying the teacher workforce: A review of the evidence. *The Center for Education Data & Research, University of Washington Bothell*. Available at: [Http://Www. Cedr. Us/Papers/Working/CEDR% 20WP](Http://Www.Cedr.Us/Papers/Working/CEDR%20WP,202015-202019), 202015–202019.

González, J. M. (1997). Recruiting and training minority teachers: Student views of the preservice program. *Equity and Excellence in Education*, 30(1), 56–64.

Gordon, J. A. (1997). Teachers of color speak to issues of respect and image. *The Urban Review*, 29(1), 41–66.

Guarino, C. M., Santibanez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research*, 76(2), 173–208.

- Hanushek, E. A. (1992). The Trade-off between Child Quantity and Quality. *Journal of Political Economy*, 100(1), 84–117.
- Harris, M. (1964). *Patterns of Race in the Americas* (Vol. 1). New York, NY: Praeger.
- Hawley, W. D. (1989). The Importance of Minority Teachers to the Racial and Ethnic Integration of American Society. *Equity and Choice*, 5(2), 31–36.
- Hess, F. M., & Leal, D. L. (1997). Minority Teachers, Minority Students, and College Matriculation: a New Look at the Role-Modeling Hypothesis. *Policy Studies Journal*, 25(2), 235–248.
- Hrabowski, & Sanders, M. G. (2015). Increasing Racial Diversity in the Teacher Workforce: One University's Approach. *Thought & Action*, 101–116.
- Ingersoll, R. M., Merrill, L., & Owens, C. (2017). *A quarter century of changes in the elementary and secondary teaching force: From 1987 to 2012*. US Department of Education, Institute of Education Sciences, National Center for Education Statistics.
- Ingersoll, R., & May, H. (2011). Recruitment, Retention and the Minority Teacher Shortage (CPRE Research Report No. RR-69). Consortium for Policy Research in Education.
- Irvine, J. J. (1988). An analysis of the problem of disappearing Black educators. *The Elementary School Journal*, 88(5), 503–513.
- Irvine, J. J. (1989). Beyond Role Models: An Examination of Cultural Influences on the Pedagogical Perspectives of Black Teachers. *Peabody Journal of Education*, (4), 51.
- Jackson, C. L. (2001). *African American Education: A reference handbook*. Santa Barbara: ABC- Clio.

- Johnson, S. M., Kauffman, D., Donaldson, M. L., Kardos, S. M., & Liu, E. (2004). The support gap: New teachers' early experiences in high-income and low-income schools. *Education Policy Analysis Archives*, 12, 1–25.
- Jones, A. R. (2015). A multilevel structural analysis of predictors of urban teacher effectiveness.
- King, S. H. (1993). Why did we choose teaching careers and what will enable us to stay?: Insights from one cohort of the African American teaching pool. *The Journal of Negro Education*, 62(4), 475–492.
- Ladson-Billings, G. (1995). Toward a theory of culturally-relevant pedagogy. *American Educational Researcher Journal*, 32(3), 465–492.
- Ladson-Billings, G. (1998). Just what is critical race theory and what's it doing in a nice field like education. *The RoutledgeFalmer Reader in Multicultural Education*, 49–67.
- Ladson-Billings, G., & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers College Record*, 97(1), 47.
- Ledesma, M. C., & Calderón, D. (2015). Critical race theory in education: A review of past literature and a look to the future. *Qualitative Inquiry*, 21(3), 206–222.
- Little, J. W., & Bartlett, L. (2010). The teacher workforce and problems of educational equity. *Review of Research in Education*, 34(1), 285–328.
- Loehr, P. (1988). The urgent need for minority teachers. *Education Week*, 8(5), 32–33.
- Madkins, T. C. (2011). The Black Teacher Shortage: A Literature Review of Historical and Contemporary Trends. *The Journal of Negro Education*, (3), 417.
- Massey, D. S. and D. (1993). *American Apartheid. Segregation and the making of the Underclass*. Cambridge: University of Harvard Press.

Matsuda, M. J. (1987). Looking to the bottom: Critical legal studies and reparations. *Harv. Crim. Rev.*, 22, 323.

McDonough, J., & McDonough, S. (2014). *Research methods for English language teachers*. Routledge.

McGrady, P. B., & Reynolds, J. R. (2012). Racial Mismatch in the Classroom: Beyond Black-white Differences. *Sociology of Education*, 86(1), 3–17.

<https://doi.org/10.1177/0038040712444857>

Merriam, S. B. (2009). *Qualitative Research: a guide to design and interpretation*. San Francisco: Jossey-Bass.

Miles, R., & Brown, M. (2003). *Racism*. Psychology Press.

National Center for Education Statistics. (2005). *Public School Teacher Attrition and Mobility in the First Five Years: Results From the First Through Fifth Waves of the 2007–08 Beginning Teacher Longitudinal Study*. U.S. Department of Education. Retrieved from <https://nces.ed.gov/pubs2015/2015337.pdf>

National Center for Education Statistics. (2017). *The Condition of Education - Participation in Education - Elementary/Secondary - Racial/Ethnic Enrollment in Public Schools - Indicator May (2017)*. Retrieved January 2, 2018, from https://nces.ed.gov/programs/coe/indicator_cge.asp

Noel-Levitz (2013a). *2013 marketing and student recruitment practices benchmark report for four-year and two-year institutions*. Coralville, Iowa: Noel-Levitz. Retrieved from www.noellelevitz.com/BenchmarkReports

- Noel-Levitz (2013b). 2013 student retention and college completion practices report for four-year and two-year institutions. Coralville, Iowa: Noel-Levitz. Retrieved from www.noellevitz.com/BenchmarkReports^[11]_[SEP]
- Nunez, A. M., & Bowers, A. J. (2011). Exploring what leads high school students to enroll in Hispanic-serving institutions: A multilevel analysis. *American Educational Research Journal*, 48(6), 1286–1313.
- Office of Planning, Evaluation and Policy Development. (2016). The State of Racial Diversity in the Educator Workforce. U.S. Department of Education. Retrieved from <https://www2.ed.gov/rschstat/eval/highered/racial-diversity/state-racial-diversity-workforce.pdf>
- Office of Postsecondary Education. (2015). Title II: Higher Education Act - News You Can Use: Enrollment in Teacher Preparation Programs. U.S. Department of Education. Retrieved from https://title2.ed.gov/Public/44077_Title_II_Issue_Brief_Enrollment_V4a.pdf
- Omi, M., & Winant, H. (2014). *Racial formation in the United States*. Routledge.
- Ouazad, A. (2008). Assessed by a teacher like me: Race, gender, and subjective evaluations.
- Outcalt, C. L., & Skewes-Cox, T. E. (2002). The relationship between involvement and satisfaction for African American students at HBCUs and comparable predominantly White institutions. *Review of Higher Education*, 25, 331-347.
- Preston, H. F., V. (2016). The Professional Educator: The Case for a Teacher Like Me. *American Educator*, 40(3), 20–22.
- Quintana, C., Shin, N., Norris, C., & Soloway, E. (2006). Learner-centered design: Reflections on the past and directions for the future. In R. K. Sawyer (Ed.), *The Cambridge*

- handbook of the learning sciences (pp. 119–134). New York, NY: Cambridge University Press.
- Quiocho, A., & Rios, F. (2000). The power of their presence: Minority group teachers and schooling. *Review of Educational Research*, 70(4), 485–528.
- Riley, R. W. (1998). Our teachers should be excellent, and they should look like America. *Education and Urban Society*, 31(1), 18–29.
- Sandoval, W. (2014). Conjecture Mapping: An Approach to Systematic Educational Design Research. *Journal of the Learning Sciences*, 23(1), 18–36.
<https://doi.org/10.1080/10508406.2013.778204>
- Shipp, V. H. (1999). Factors influencing the career choices of African American collegians: Implications for minority teacher recruitment. *Journal of Negro Education*, 343–351.
- Siegel, R. (1997). Why Equal Protection No Longer Protects: The Evolving Forms of Status-Enforcing State Action. *Stanford Law Review*, (5), 1111.
<https://doi.org/10.2307/1229249>
- Sommerhoff, D., Szameitat, A., Vogel, F., Chernikova, O., Loderer, K. & Fischer, F. (2018). What Do We Teach When We Teach the Learning Sciences? A Document Analysis of 75 Graduate Programs, *Journal of the Learning Sciences*, DOI: 10.1080/10508406.2018.1440353
- Stewart, J. Y. (1997, November 25). Black colleges woo students alienated by Prop. 209. *Los Angeles Times*, pp. A1, 24, 26.
- Talbert-Johnson, C. (2001). The quest for equity: Maintaining African American teachers in special education. *Journal of Negro Education*, 286–296.

- TeachStrong. (2016). TeachStrong Policy Proposal: Principal 1 - Identify and Recruit More Teacher Candidates.
- Tenenbaum, H. R., & Ruck, M. D. (2007). Are teachers' expectations different for racial minority than for European American students? A meta-analysis. *Journal of Educational Psychology, 99*(2), 253.
- Torres, J., Santos, J., Peck, N. L., & Cortes, L. (2004). *Minority Teacher Recruitment, Development, and Retention*. Providence, RI: Northeast and Islands Regional Educational Laboratory LAB. Retrieved from <https://login.proxy.libraries.rutgers.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED484676&site=eds-live>
- Unger, R. M. (1983). The critical legal studies movement. *Harvard Law Review, 561*–675.
- United States Census Bureau. (2017). U.S. Census Bureau QuickFacts: UNITED STATES. Retrieved January 2, 2018, from <https://www.census.gov/quickfacts/fact/table/US/PST045217>
- Vegas, E., Murnane, R. J., & Willett, J. B. (1998). *From High School to Teaching: Many Steps. Who Makes It?* Retrieved from <https://login.proxy.libraries.rutgers.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED421571&site=eds-live>
- Villegas, A. M., & Lucas, T. (2002). *Preparing Culturally Responsive Teachers: Rethinking the Curriculum* (Vol. 53). <https://doi.org/10.1177/0022487102053001003>
- Yarnell, L. M., & Bohrnstedt, G. W. (2017). Student-Teacher Racial Match and Its Association With Black Student Achievement: An Exploration Using Multilevel Structural Equation Modeling. *American Educational Research Journal, 0002831217734804*.

Yin, R. K. (2013). *Case study research: Design and methods*. Sage publications.

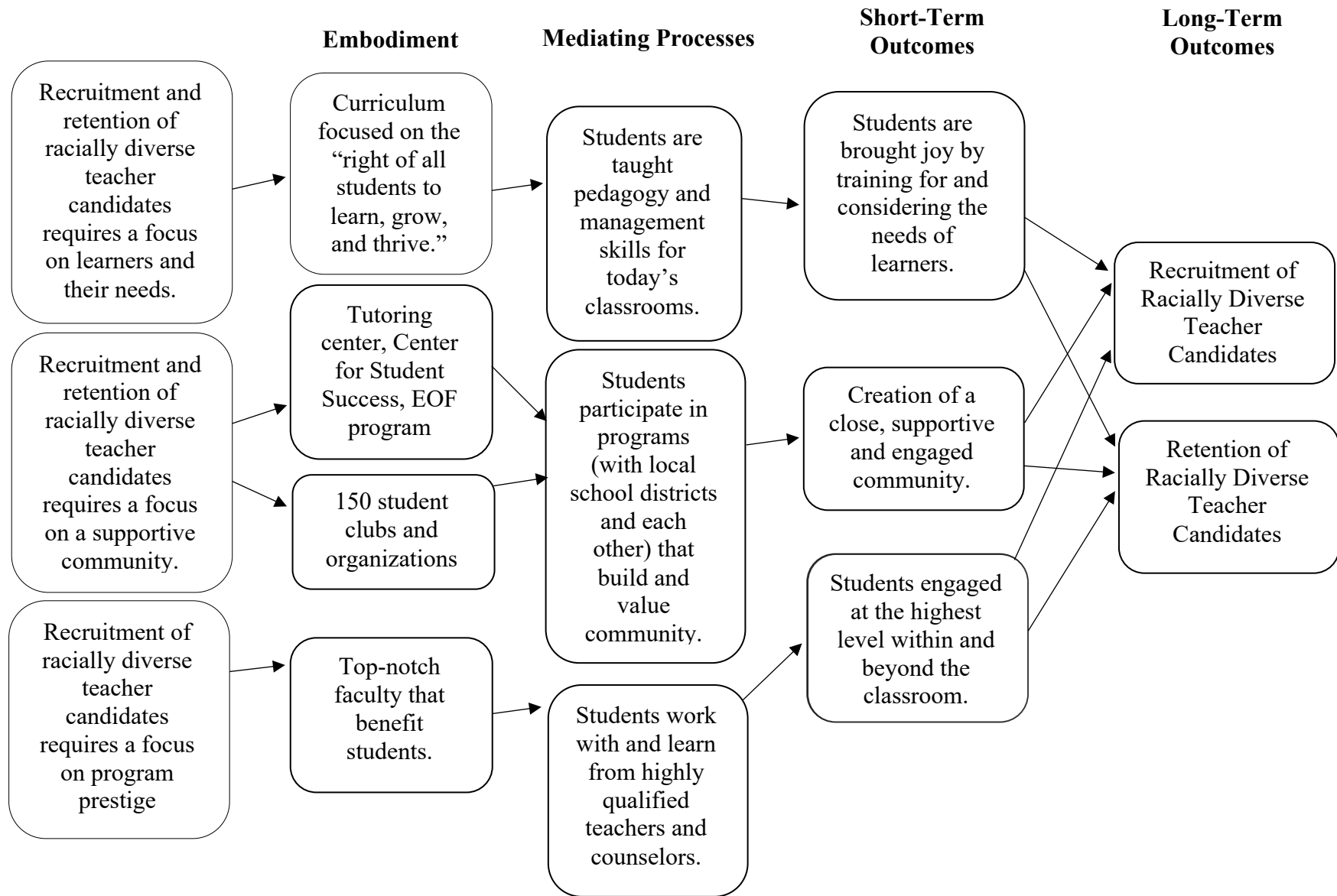
Yosso, T. J., & Solorzano, D. (2005). Conceptualizing a critical race theory in sociology. *The Blackwell Companion to Social Inequalities*, 117–146.

Yuan, H. (2018). Preparing Teachers for Diversity: A Literature Review and Implications from Community-Based Teacher Education. *Higher Education Studies*, 8(1), 9–17.

<https://doi.org/10.5539/hes.v8n1p9>

Appendix A - Example Conjecture Map

High Level Theories: Quality, Equity, Diversity, Social Justice, Community Involvement



Appendix B - Interview Protocol Faculty and staff

I'd like to begin by thanking you for taking the time to help me with my research study. Our discussion should take about 20 minutes. The objective of our discussion today is to discuss your teacher preparation program in order to understand how it is able to recruit and retain racially diverse teachers. I'd like to audio tape our discussion, so I don't have to take a lot of notes.

I will be the only person who will listen to the tape, and it will only be used to help me write my report on the findings from this study. As soon as I am finished with my report, the tape will be destroyed. Is that OK?

The comments that you make will not be attributed to you. I will use de-identified information to both track and report on our discussion. Your comments will be combined with the comments from others that I interview to protect everyone's identity who is taking part in this study.

Please keep in mind that this interview is about your experience and your thoughts about aspects of the design of your teacher preparation program. Even if you think that a thought might not be relevant, please share.

Do you have any questions before we begin?

Demographics

First, I would like to collect some background information from you.

1. What is your name?
2. What is your gender identity?
3. What is your race or ethnicity?
4. What is your role with the program?
5. When did you begin working at the program?
6. What was your experience prior to joining the program?

Warm Up Questions

Next, I'd like to ask you specifically about your program.

1. Why do you think your program was selected for the study?
2. What distinguishes your program from other programs?
3. What are the most special things about the program?

Program Design

4. What are the views of schooling that underlie this program?

Where and how do you see this emphasized in the program?

How is the program designed to do this?

5. Describe the views of school improvement that are evident in the program design?

Where and how do you see this emphasized in the program?

How is the program designed to do this?

6. Are you involved in the recruitment and selection of teacher candidates?

If so, what do you and your colleagues look for?

7. Where do most candidates come from?

8. How do you recruit racially diverse teacher candidates?

9. What does the program do to increase the diversity of the candidate pool?

10. What does the program do to ensure that racially diverse candidates are retained and graduated?

11. Why do candidates choose this program?

Who are the competitors?

What differentiates this program from others?

12. Overall, what are the goals of the program?

What is the program trying to prepare participants to do?

For each area of emphasis, where in the program does this get emphasized?

How do candidates learn this?

To what extent does program faculty share these goals?

13. How would you characterize your relationship with candidates?

Can you give examples of this?

What can you say about other faculty?

Conjecture Map

Please take a minute to look at the handout in front of you. This is a conjecture map of things I found on the website about your institution.

14. Do you think the box labeled #1 is a core belief of the program?

Do you think that the belief is embodied in the way described by box A?

15. Overall, what do you think the program is most successful at accomplishing?

16. Do you think that the box labeled #2 is a core belief of the program?

Do you think that the belief is embodied in the way described by box B?

17. Do you think that the box labeled #3 is a core belief of the program?

Do you think that the belief is embodied in the way described by box C?

18. What, if anything, would you add to this mapping?

What is missing?

Appendix C - Interview Protocol Teacher Candidate

I'd like to begin by thanking you for taking the time to help me with my research study. Our discussion should take about 15 minutes. The objective of our discussion today is to discuss your experiences in your teacher preparation program as a diverse teacher. I'd like to audio tape our discussion, so I don't have to take a lot of notes.

I will be the only person who will listen to the tape, and it will only be used to help me write my report on the findings from this study. As soon as I am finished with my report, the tape will be destroyed. Is that OK?

The comments that you make will not be attributed to you. I will use de-identified information to both track and report on our discussion. Your comments will be combined with the comments from others that I interview to protect everyone's identity who is taking part in this study.

Please keep in mind that this interview is about your experience and your thoughts about aspects of the design of your teacher preparation program. Even if you think that a thought might not be relevant, please share. I am interested in getting a full picture about your journey to and through the program.

Do you have any questions before we begin?

Demographics

First, I would like to collect some background information from you.

1. What is your name?
2. What is your race or ethnicity?
3. How old are you?
4. What is your gender identity?
5. Where did you attend high school?

6. What teaching license are you pursuing?
7. When did you begin the program? How long have you been in the program?

Warm Up Questions

Next, I'd like to ask you specifically about your program.

8. Can you describe how you made your decision to attend your preparation program?
 - a. How does this program prepare you for your career goals?
 - b. What are the program's distinguishing features?
 - c. What other programs did you consider?
 - d. How did they compare?
 - e. What was the deciding factor that brought you to this program?
 - f. If you did not consider other programs, why not?

Program Design

9. Can you describe your experience while in your preparation program and why you continue to enroll?
10. What do believe this program is trying to prepare you to be able to do?
11. What are the views of schooling that underlie this program?
12. How does this get emphasized in the program?
13. What aspect(s) of the program most influences your beliefs?
14. Does the program seek to prepare teachers for specific types of schools? If yes, what types?
15. Who knows you best in this program?
16. Who do you go to with a concern or issue?
17. Do you get the help you need?

18. Is there a faculty member or mentor who has had a particular positive impact on you?
19. The role and purpose of public education is emphasized differently in various teacher and leadership preparation programs. What does your program stress as the role and purpose of public education?

Conjecture Map

20. A key aspect of the recruitment design of your program is to market the social impact of teaching. Did this affect your decision to attend the program? How so?
- a. Would you have attended your program if this emphasis was not made explicit?
 - b. Did you choose to attend this institution over another because of this?
21. Another key design aspect of your program is the financial package offered for students. Did this affect your decision to attend the program? How so?
- c. Would you have attended your program without this benefit?
 - d. Did you choose to attend this institution over another because of this?
22. Your program supports a number of programs that are designed to keep students engaged and to help them towards completion. Can you describe what those programs are and how they have helped you?
- e. Do you think the programs helped to keep you enrolled?
 - f. What would your experience have been without those programs?
23. Are there aspects of the program that you think could be improved? How?
24. Is there anything else you'd like to share about this program and its influence on your leadership development?
25. If you had to do it over again, would you choose the same preparation program?