CAPSTONE

Why Teachers Don't Look Like Us

Critical Race Theory and Social Capital in Education

In fulfillment of the requirements for the degree of

Doctor of Education in Leadership and Organizational Systems

July 2020

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VANDERBILT Peabody College

Acknowledgements

For my *ancestors*, who struggled and persevered so that I could be here.

For my *grandmother*, who showed me the meaning of joy.

For my *grandfather*, who's pride in me is my driving force.

For my *students*, who gave me the honor of being called their teacher.

For *Eric* and *Day'Von,* whose short lives changed my own.

For my *family and friends*, who have always been the rainbows in my clouds.

For my *brother*, who is my unwavering North Star.

For my *mom*, who laid my life's foundation of education and justice.

For my *dad*, who always says yes to my dreams, then dreams along with me.

And for my *son*, my sun. La luz de todo lo que amo.
Lo hicimos.

Project Overview

This project is the culmination of three years of doctoral course work through the Peabody college at Vanderbilt University. I worked to identify an area of study that would be engaging and fulfilling to research as well as serve to further my learning in my professional equity career. I chose a large public university that is near the school district I work in, so that the proximity of location and impact could be capitalized upon. I chose to do a mixed-methods approach to collecting data, as the COVID-19 pandemic was in full force during this process. The data I was given access to from the university as well as the interviews I was able to conduct with students, helped me to provide a rich, descriptive analysis of the racial breakdown and social capital of students who are choosing a teaching career.

About the Author

Lauryn is a career educator who spent over ten years as an elementary classroom teacher in Denver and the Bay Area of California. She taught kindergarten, 1st, 2nd and 4th grades as well as being a literacy and intervention instructional coach. Her passion for Culturally Responsive Pedagogy led her to her role as a teaching and learning specialist with Teaching Tolerance, a project of the Southern Poverty Law Center. She holds a bachelor's degree in American and Ethnic Studies and a master's of education degree in culturally responsive teaching, both from the University of Colorado.

Lauryn is inspired by the equity-minded educators she works alongside each day, and is dedicated to closing the opportunity gap for young males of color. She is currently the Director of Equity Affairs for the 14th largest school district in the United States, Wake County Public Schools, which is located in Raleigh, North Carolina. Lauryn has made national news with her education and social-justice based writing, including recent coverage from TIME and The Washington Post. Lauryn is a single-parent to her young son, Jack Thomas, and enjoys building LEGO and sandcastles in her spare time.

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Executive Summary

The K-12 teaching career is a field that is heavily dominated by a white female demographic, with a large underrepresentation of Black and Hispanic educators. The United States is continually growing more diverse. There are more than 50 million students in the public school-age population, with over 40% of those students identifying as Black and Hispanic. This disconnect between student and teacher has been heavily researched. Among these studies, U.S. Department of Education (2016) statistics show that of all ethnic-racial subgroups of teachers in 2012–2013, Black teachers had the lowest retention rate, at 78%, as compared to 85% for White, 79% for Hispanic, 96% for Asian and Pacific Islander, and 89% for multiracial teachers (U.S. Department of Education, 2016).

In North Carolina, however, Black teachers constitute greater than 90% of the total population of teachers of color, with a 75% annual retention rate. This retention rate is three points lower than the national average and reflects an alarming trend in our nation. This capstone research study sought to understand more deeply the connections between race, social capital and the decision to enroll in and complete an education program in the NC State School of Education. Due to its status as one of the largest public universities in the Southeastern United States, and the self-proclaimed leader of student test scores among their alumni graduates, NC State was chosen to be a partner in this study. This capstone study then used a sequential mixed-methods approach to interview preservice teachers and analyze five years of enrollment data. The interview data used a master matrix to identify key concepts of Critical Race Theory and Social Capital Theory while the data analysis tracked trends across program completion for gender, race and generational status.

Further, two questions were proposed for guiding the larger study:
- Research Question 1
  - What demographic of students are more apt to enroll in certain programs within a college of education?
- Research Question 2
  - How do preservice teachers perceive race and social capital as influences to their career choice?

Context and Problem

There has been a great deal of research done on teacher retention and teachers of color in school settings. Where there is a lack of information is in the cyclical nature of who starts in schools vs who ends up in the teaching profession, and how that can be a continuously self-repeating cycle. This matters because we are seeing current and potential generations of students who do not see themselves as educators and instead enter other career paths, which in turn means generations of educators who do not look like the students they teach, and so on.

According to the National Center for Education Statistics (2016), only seven percent of k-12 teachers in the United States identify as African American or Black and only nine percent identify as Hispanic. Over 80% of public school k-12 teachers are White. Contrastly, out of roughly 50.7 million students in our K-12 public schools, over 43% are Black or Hispanic. Hispanic student enrollment increased each year between 2000 and 2017, more than doubling during this period--from 1.4 million to 3.3 million students, a drastic *142 percent increase*. This disproportionality of racial identity between student and teacher is a trend that is concerning, and can be a contributing factor in furthering the racial opportunity and achievement gap.

> Over 80% of public school k-12 teachers are white. Contrastly, out of roughly 50.7 million students in our k-12 public schools, over 43% are Black and Hispanic.

Institutional Context

North Carolina State University is a large, public, research university based in Raleigh, North Carolina. Currently, NC State has over 35,000 undergraduate and graduate students, over 2,000 members of faculty and 6,500 staff. It educates more students than any other institution in North Carolina, and has over 300 degree programs through 65 different departments of study. It is ranked in the top 10 for "Best Value Among U.S. Public Universities" by U.S. World and News Report. There are 12 colleges at the university representing major academic fields, one of which is the College of Education.

The mission statement for this college states: "The College of Education is a voice of innovation for learning across the lifespan. We prepare professionals who educate and lead. Our inquiry and practice reflect integrity, a commitment to social justice and the value of diversity in a global community." Further, their focus includes

"increasing opportunities for success in education and reducing achievement gaps." The school also boasts that their teaching alumni perform at the top of statewide performance measures in the state, and are the top producer of STEM educators in North Carolina.

There are three departments within the college of education:
- Educational Leadership, Policy, and Human Development (ELPHD)
- Science, Technology, Engineering, and Mathematics Education (STEM)
- Teacher Education and Learning Sciences (TELS)

For the purposes of this research study, data will be collected from two of the three departments: STEM Education and Teacher Education. The omission of the Educational Leadership, Policy, and Human Development (ELPHD) program is intentional, as it is solely a graduate department that focuses on career educators who wish to gain a doctoral degree. This research study hopes to gain insight about beginning teachers, and will therefore focus on the previously named two departments.

A message from the department head of the TELS department states, "Our mission is to advance education through scholarship, leadership and advocacy. We prepare professionals who are committed to equity and social justice, have deep content knowledge, demonstrate a strong working knowledge of effective pedagogies, and realize the potential of digital technologies to enhance learning. We shape the field of education by engaging in research that addresses current challenges and by participating in cross-disciplinary work that deals with real problems in forward-looking ways."

Our Mission

The College of Education is a voice of innovation for learning across the lifespan. We prepare professionals who educate and lead. Our inquiry and practice reflect integrity, a commitment to social justice and the value of diversity in a global community.

Our Vision

The College of Education will lead the way in North Carolina in increasing opportunities for success in education and reducing achievement gaps.

Our Impact

Through our academic, research and outreach programs, we work to ensure all learners-- from their childhood through adulthood-- are positioned for lifelong success.

Contrastly, the focus in the STEM department is "(fostering) a tightly knit network dedicated to success by preparing students, not only to teach, but to have a thorough knowledge of the reasoning and research behind motivating their pupils to have a genuine interest in these fields...From preparing to teach mathematics with technology to understanding nanotechnology in the science classroom, as well as research areas in K–12 engineering and design education, faculty and students work on understanding the logistics of learning and how to get K–12 students interested in STEM areas."

In looking deeper at these two statements, it is evident that even within their mission statement the different departments may be impacting the types of students they are recruiting. The TELS department emphasizes their focus on advocacy, social justice and cross-disciplinary work. The STEM department, however, focuses more on the content of STEM and sparking interest in the field. It is important to note the discrepancy in messaging when discussing the recruitment of future educators.

The table below (Table 1) is intended to act as a support in understanding the six programs of study that will be analyzed in this study. There are three programs from each of the two departments. Each has its own emphasis and program description.

Department of STEM education and Teacher Education (STEM)	Math Education- Middle School or Secondary	The mathematics education programs at NC State include a variety of general and professional components. The general education component consists of courses and experiences in the natural sciences, social sciences, humanities, and physical education that promote knowledge and enhance interests associated with a broadly educated person.
	Science Education- Middle School or Secondary	Our high-quality Department of STEM Education program thoroughly prepares secondary education teacher leaders for middle school and high school science teaching in the concentration areas of Biology, Chemistry, Physics, Earth Science and Middle Grades Science.
	Technology, Engineering and Design Education	Through the study of engineering and design processes, students learn how to solve technological problems, innovate and invent. They actively design, model, simulate and analyze solutions to technological challenges and explore the contributions of systems engineering for developing and sustaining a well-designed world. Methods in teaching middle and high school students about engineering and design processes are also covered.
Teacher Education and Learning Sciences (TELS)	Middle Grades English Language Arts & Social Studies Education	The MSL Program offers an undergraduate degree and initial licensure in two dynamic content areas that prepares teachers to effectively educate and impact the lives of young adolescents while being responsive to their unique needs, interests, and abilities. Students learn how to implement high-quality English language arts and social studies instruction with three major focus areas: digital literacies, inquiry-based learning, and citizenship.
	Education General Studies: Learning Design and Technology	Learning Design and Technology is a relatively broad description of a field that focuses on applying what is empirically understood about how humans learn and improve upon performance to the design, development, implementation, and evaluation of instructional and non-instructional processes and resources intended to improve learning and performance in a variety of settings, particularly educational institutions and the workplace.
	Elementary Education	Unique among undergraduate teacher education programs, this degree creates teacher-leaders with deep content knowledge in all elementary disciplines with a special emphasis on science, technology, engineering and mathematics for a strong STEM-focused instruction.

Table 1: Description of programs and corresponding elements. (NC State website, 2020).

Definition of Problem

NC State is lauded as one of the main teaching universities in North Carolina and the nation. The dean of the college of education, Dr. Mary Ann Danowitz, states that the core mission of the school is to "impact education at all levels." Additionally, her statement highlighted by the school includes the use of the term "all learners." The state's largest district, Wake County Public School System, also includes "all learners" in their core belief statements. The use of these terminology is not happenstance, it is indeed a direct nod to students who come from diverse and varying ethnicities, races, cultures, languages and beliefs.

However, *all learners* in North Carolina and the nation represent a marked decline in students who racially identify as White and an increase in students who identify as Hispanic or Asian (NCDPI, 2019). This increase in Hispanic and Asian students is met on a local and national scale with a stagnant and consistent

"Our core mission is to impact education at all levels. We are committed to achieving high goals for the greatest good that includes the educational success of all learners across North Carolina and beyond."

—Mary Ann Danowitz, D.Ed.
Dean, NC State College of Education

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representation of White educators. Across all areas and regions of North Carolina, there is a higher proportion of white teachers than white students. (Table 2, EdNC, 2019).
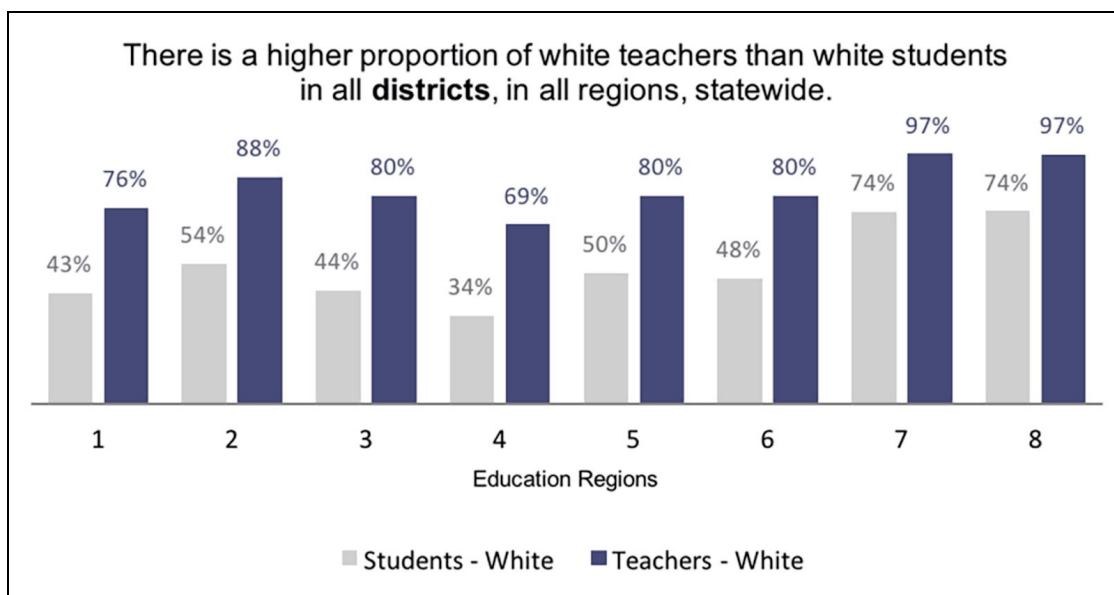

Figure 1: North Carolina proportion of White teachers in all districts, regions and state-wide areas. (EdNC, 2020).

A report on the state of racial diversity in the workforce by the United States Department of Education finds that "A large majority of education majors and, more specifically, students enrolled in teacher preparation programs, are White. In the 2012–13 school year, 25 percent of individuals enrolled in a teacher preparation program based in an institution of higher education (IHE) were individuals of color. In comparison, 37 percent of all individuals (regardless of major) in those same institutions were individuals of color." Additionally, projections from the National Center on Education Statistics (2016) show that the number of White students is expected to continue to drop, while the number of Hispanic students will rapidly increase through 2024 (Table 3). This difference is notable, and one explanation for the lack of representation for students of color as they move through their K-12 educational journey.
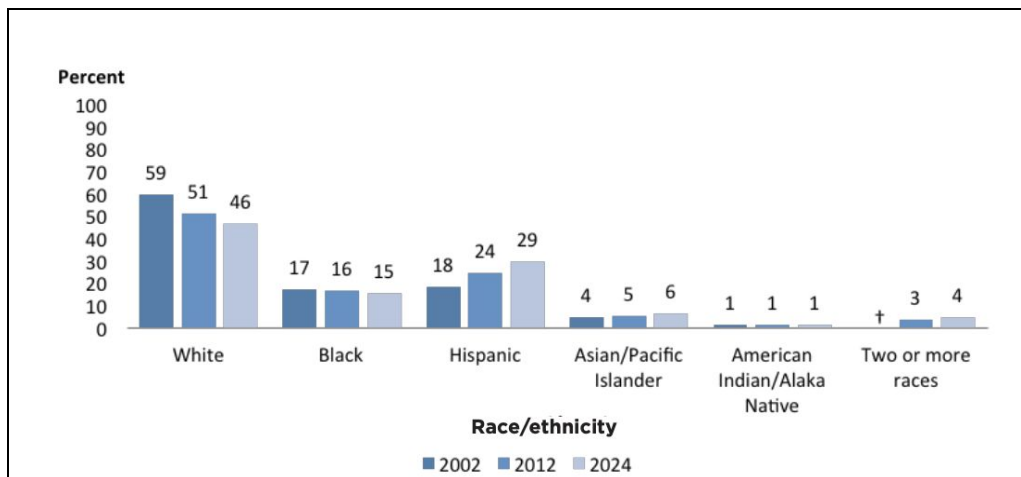

Figure 2: Percentage of students enrolled in public elementary and secondary schools, projection through 2024. (NCES, 2016).

The "educator pipeline" as it has commonly referred to (Figure 3) is a metaphor for the major events or benchmarks along the journey of a teacher from their K-12 education into the classroom. This figure, pulled from the Department of Education (2016), shows how diversity decreases at every point along this pipeline, and slowly creates a funnel shape that tapers at the end. The amount of students who graduate high school and then enroll in postsecondary schools starts out as a wide and diverse group of students. However, as this study will show, the number of diverse candidates who then complete a program within the college of education drastically reduces the pipeline's diversity. By the time students have completed postsecondary courses and entered into the workforce, the pipeline is extremely small and monoracial. Indeed, many students will complete their K–12 education without ever being taught by a single teacher of color (Irvine, 2003).

Figure 3: Visual representation of teacher pipeline. (Department of Education, 2016).
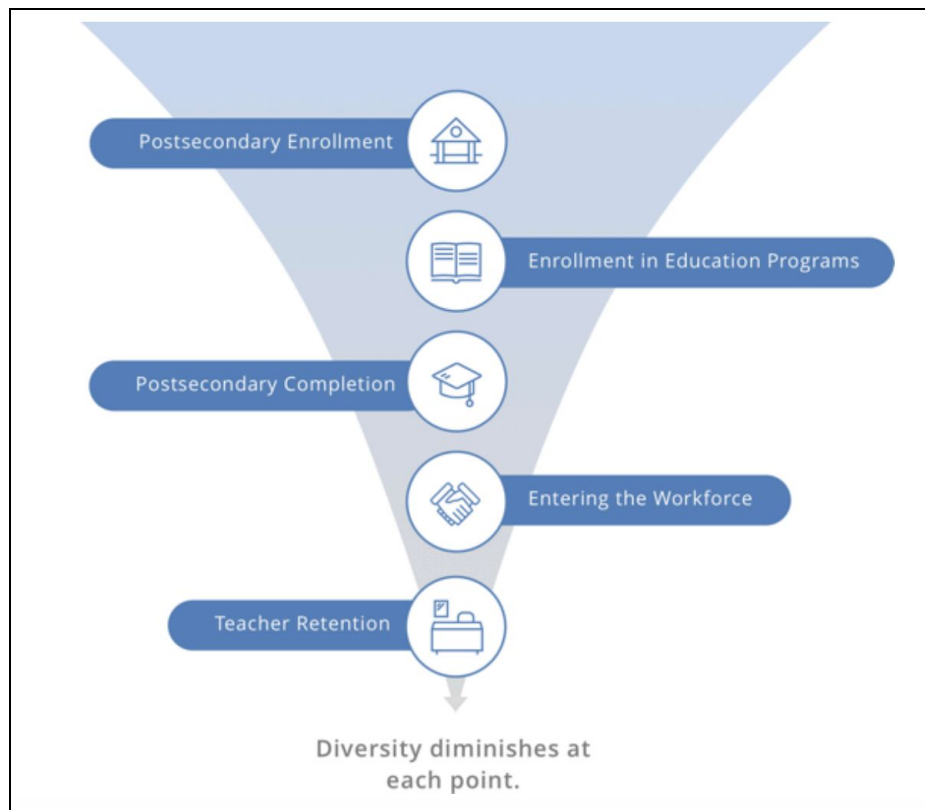
This lack of representation has been researched over time to show detrimental education and life outcomes for students of color. The benefits of access to teachers of color have been noted across multiple areas of education, including academic success and reduced discipline disproportionality. Lindsay and Hart found in a 2017 study that "results suggest that Black students see modest, but consistent, reductions in exclusionary discipline exposure when they are matched with larger shares of Black teachers. We find that Black teachers are associated in particular with reductions in office referrals for defiance-related offenses."

Similarly, a 2017 study on teacher representation and academic achievement found "small but significant positive effects when Black and White students are assigned to race-congruent teachers in reading (.004-.005 standard deviations) and for Black, White and Asian/Pacific Island students in math (.007-.041 standard deviations)." The study also looked at the effects of race matching by students' prior performance level, "finding that lower-performing Black and White students appear to particularly benefit from being assigned to a race-congruent teacher (Egalite, Kisida and Winters, 2017). Notably, Ladson-Billings and Tate (1995) argued that education policies and practices in the United States often contribute to inequitable educational outcomes for students of color and was a logical consequence of a larger inequitable social and political system that is premised on the subordination of people of color and people who live in poverty.

Research Questions

Taking into account the specific context of NC State University as well as the larger issue of diversity in preservice teacher enrollment in schools of education, there are two main research questions this capstone study seeks to address:

Research Question 1: What demographic of students are more apt to enroll in certain programs within a college of education?

This etiology research question attempts to best understand the cause or set of causes for the demographic trends within the NC State School of Education.
   a. What are the demographic trends for students in the NC state school of education?
   b. What is representation of students of color, specifically Black and Hispanic, in each program?
   c. What are the trends for students of color?
   d. What is representation of first generation college students throughout the school and in each program?
   e. What is gender representation both school-wide and by program?

Research Question 2:
How do preservice teachers perceive race and social capital as an influence in their career choice?

This meaning research question seeks to further analyze how preservice teachers racially connect to teaching as a profession in addition to their relationship with educators and if it impacted their career choice.
   a. How do preservice teachers connect to social relationships with those who are in the education field?
   b. How do preservice teachers view representation as a factor to pursuing education as a career?
   c. How do preservice teachers racially connect to their decision to be educators?
   d. Was their decision to become a teacher based on their racial identity?
   e. Was their relationship to or lack of relationship to an educator a determining factor in their decision to become a preservice teacher?

Conceptual Framework

The conceptual framework for these research questions relies heavily upon two different frameworks, namely Critical Race Theory, and Social Capital Theory. As educators, it is critical that we seek to understand the intersections of pedagogy and student achievement more fully. This requires digging deeper into so that our students of color, who are the rising majority in the United States, see more teachers who look like them and understand their culture. Through this representation in the classroom, and the intentional building of social capital, the more culturally responsive and rich our student's education will be--and the more successful their academic outcomes.

Critical Race Theory

"Although race currently holds little salience as a biological concept, it retains power as a construct that has social, political, legal, and even religious dimensions." This quote from an article by Omi and Winant (1994) encapsulates the deeply embedded roots of race within every aspect of our society. The 400 year history of racial injustice in the United States has shaped the systems and structures which define our national institutions. Currently, we find our country in the midst of the largest racial uprising and protests in its history. While race has zero biological basis, it is nevertheless a powerful and deeply damaging entity within the United States.

> In contemporary times, the struggle for equity is waged in city centers, not only to learn to read and write but also for the very right to attend a high-quality and well-resourced school with expert teachers (Dixson, 2018).

Education, as one of the largest and most stratifying of U.S. institutions, is not immune to the effects of these racial roots. More than twenty years after Gloria Ladson-Billings' "initial publication on Critical Race Theory (CRT) and education, Critical Race Theory has been integrated into scholarship and common vocabulary as a way to see and construct meaning. Critical Race Theory offers voices and perspectives to provide avenues by which the testimony of previously marginalized groups can describe the impact that "race" as a construct has had on their life experience (Delgado, 2000), including schooling. Dixson (2018) discusses how the effects of race and white normative curriculum, practices and norms in schools means that students receive an educational experience that is "distorted and often patently incorrect." Dixson goes on to say that this educational experience impacts students in terms of what they understand about the history of the United States but also what they can imagine as possible in terms of social change and living in a multicultural society.

A basic tenet of CRT is the permanence of racism in U.S. society and that systemic racism infiltrates political, social, and economic domains (Bell, 1992). Therefore, the analysis of teacher representation in a college of education and the racial and social implications for their choice of study/career path is parallel to CRT. As marginalized groups seek access to opportunity, their experience with and within the institution of education is a dominant and looming inequity.

Critical Race Theory will be applied to data from both quantitative and qualitative sources to help pull out the voices and stories of historically marginalized groups. Critical Race Theory involves looking at societal structures and analyzing how they then intersect with race, power, and privilege. CRT challenges the way institutions and laws have been created to uphold white supremacy and privilege. This is accomplished through various concepts (Brown, 2014; Dixson and Rousseau 2006), which include, but is not limited to, the following:

- The pervasive role race plays in society and within a larger socio-historical context;
- counter-narratives and storytelling;
- rejection of objectivity, neutrality, color-blindness and meritocracy;
- addressing the racial inequities in the context of remedies that serve and maintain dominant white interests

Education is a societal construct that can indeed be critically examined through a CRT lens for how the education system serves to uphold White culture. As Keffrelyn Brown (2014) writes, there is a "sustained and growing mismatch between the background and experiences of aspiring and preparing teachers and the larger K-12 student population in which these teachers will serve." It is then because of this mismatch that we apply CRT in order to more fully understand what said mismatch means for our students.

Social Capital Theory

The second piece of this capstone's conceptual framework will center around Social Capital Theory. Social Capital Theory is connected to personal relationships and how access (or lack of access) to familial/collegial/friendly relationships and positional authority allows for movement within society. In the flagship work *An integrative Theory of Intergroup Conflict* by Tajfel and Turner (1979), the authors refer to social mobility as a belief system that is "based on the general assumption that

> "... [there is a] sustained and growing mismatch between the background and experiences of aspiring and preparing teachers and the larger K-12 student population in which these teachers will serve."

the society in which the individuals live is a flexible and permeable one..." In this theory, social mobility comes about as a result of social capital.

This study seeks to understand how preservice teachers may use their connections to others who are in the education field (social capital) to impact their choice or enable their access to education as a career. This study also seeks to find if a lack of social capital with others in the education field may also impact a preservice teacher's decision to not choose education as a field of study. The Integrative Theory of Intergroup Conflict helps to conceptually understand the relationship between social capital in the form of relationships with educators and educational values at home, and a student's belief/choice that they will aspire to then be an educator.

Tajfel and Turner's work is essential to understanding the connections that are made between a student and their teacher. In an interpersonal dynamic, only the individual is considered whereas in intergroup dynamics, individuals rely on a deep group mentality. Students are often caught between the two worlds of individualistic self-interest and group-think. Depending on the culture and race of the student, they may perceive education and teachers differently in terms of intergroup conflict. Tajfel argues that the "evaluation of one's own group is determined with reference to specific other groups through social comparisons in terms of value-laden attributes and characteristics." How a student then attributes positive or negative characteristics to teachers and educators will then determine their own group membership with them or outside of them.

Lee (2010) provides a deeper lens to which we can apply these social relationships between student and educator. Having a social relationship with an educator, either within the school system or outside of it, provides a source of social capital that the student can then draw from. Lee contends that relationships are not social capital itself but 'sources' of social capital. If students have various and wide ranging social relationships in which resources are embedded, they then have a wide range of 'sources' of social capital that they can access or utilize. For students, this could include relationships with family and community members, educators, and more.

Furthermore, this capstone project will utilize social capital theory as discussed by James Coleman. Coleman argues for an integration of two streams of intellectual thought in regards to social capital- that it is neither wholly based on environment nor wholly based on individualistic and self-interested goals. Instead, "Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors-whether persons or corporate actors-within the structure (Coleman, 1988)." As this project seeks to understand a student's ambition to be an educator, Social Capital Theory will help to create a scaffold for the interpretation of interview results.

This relationship between social capital and educational outcomes is evidenced in Table 2 below. The table controls for human capital and financial gain, and looks at the effect of social capital on dropout rates. When we look at the rates for single parent households (line 1) and the effects of multiple children in the house (line 2) together, it becomes clear that the ratio of adults to children acts as a measure of how much social capital is accessible within the family. Line 3 of this chart shows that even with one additional parent who brings their social capital to the family, the dropout rate decreases by half. The social capital of a family involves interfamilial relationships between children and parents, as well as other caregivers. Coleman asserts that if the human capital possessed by parents is not complemented by social capital embodied in family relations, it is irrelevant to the child's educational growth whether that parent has a great deal, or a small amount, of human capital. In other words, the human capital of a parent must be combined in tandem with the social capital embodied in family relations in order to impact a child's educational success.

	Percentage Dropping Out	Difference in Percentage Points
1. Parents' presence:		
Two parents	13.1	6.0
Single parent	19.1	
2. Additional children:		
One sibling	10.8	6.4
Four siblings	17.2	
3. Parents and children:		
Two parents, one sibling	10.1	12.5
One parent, four siblings	22.6	
4. Mother's expectation for child's education:		
Expectation of college	11.6	8.6
No expectation of college	20.2	
5. Three factors together:		
Two parents, one sibling, mother expects college	8.1	22.5
One parent, four siblings, no college expectation	30.6	

[a] Estimates taken from logistic regression reported more fully in App. table A1.

Table 2: Dropout rates for students with differing social capital courses, controlled for financial capital. (Coleman, 1988).

Research Design

Rigorous quantitative and qualitative methods were used for this research design, with the aim of providing a rich description of demographic data and student voice in a deliverable to the faculty of the NC State College of Education. Using a sequential mixed methods model was critical in being able to gain perspective from the essential stakeholders at the center of this problem of practice. Research began with forming a relationship with multiple professors within the NC State College of Education. I was invited to attend multiple classes and to attend office hours with two professors who teach preservice teachers. Additionally, one of the assistant professors asked if I would be willing to give a lecture to one of her seminar classes, and this proved an excellent opportunity to ask some of the students if they would be open to interviews.

Ultimately, the progress with scheduling and conducting interviews was interrupted drastically by the COVID-19 crisis. Students were moved off campus and many of the students I had originally made contact with became difficult to reach, and the decision was made not to further pursue interviews with these students during such a high-stress time. I was thus able to complete interviews with four preservice teachers who are enrolled in the college of education at NC State. The interviewees are in different programs within the school and are looking at different career trajectories, although all solidly within the teaching umbrella. Their names, hometowns, or specific educational tracks will not be discussed, as their identities would be compromised with such details. All four students were enrolled in the NC State college of education. One student was enrolled in the Elementary Education program, two were enrolled in Middle Grades English Language Arts & Social Studies Education, and the fourth student was in the Education General Studies: Learning Design and Technology program. One student was Black, and the other three racially identified as White. Two students were freshmen and had just entered the college of education, and two were sophomores.

After emailing students and confirming their participation in interviews, I scheduled individual Zoom video-conference calls for each of them. Zoom was chosen as a platform because of the ease of use in scheduling, accessibility for users, and it's automatic recording and transcription features. Each interview took anywhere from 15 minutes at the shortest length to 45 minutes at the longest. I encouraged them to be comfortable and answer as honestly as possible. I asked an array of questions with most centering around what factors contributed to the said student pursuing education as a profession.

The following questions are the sample interview flow and sequence (Table 3).:

- What program/department are you currently enrolled in?
- Why did you choose to enroll in the College of Education?
- Did your racial identity have anything to do with your decision?
- What level and content area do you plan to teach?
  - Why did you choose that?
  - Was that your first plan or has it changed?
- Who was your favorite teacher in your k-12 education?
  - Why?
  - Tell me more about them.
  - How did they make you feel?
- Who did you know outside of school that was a teacher?
  - What was your relationship like with them?
- How was education valued in your household?
- How do you racially identify?

Table 3: Interview sequence and flow of questions. (Mascareñaz, 2020).

Many of the questions detoured from this set when a student would offer an anecdote that I would ask more about. In a conversational tone, I often implored them to speak more about their anecdote or about a certain topic that they smiled or laughed about. A few of them had very fond memories of educators in their lives and were willing to speak at great length about them.

After the interviews were conducted, I was able to download the transcripts for each interview and begin to look for pertinent information to draw out and analyze. This information, found in Appendix C, is included on a master matrix. The matrix includes three separate bins for allocating and organizing anecdotes: Critical Race Theory, Social Capital Theory and Representation. The third bin, representation, was then allocated to CRT or Social Capital Theory depending on the comments' proximity to race or relationships. All four interviewees offered perspectives on education and their path to being a preservice teacher that were valuable and applicable to the research problem at hand.

The next step of the mixed-methods process was to acquire a data set of demographic data from the school of education. After contacting assistant professors who I had built a relationship with, I was able to get in touch with the data manager for the school of education. I provided her with my proposal and helped her to understand the overall context of my research. She gave me a large unit of raw data that covered 5 academic school years from 2014-2019. The data was collected from the students as they were admitted into one of the six programs in the school. It contained gender, race, college generational status, and citizenship status. While citizenship status was collected, there was only one student who

divulged their undocumented status. This could be due to many reasons; including the sensitive nature and political climate involving citizenship status.

Over a five year period, roughly 665 unique students completed six different programs in the college of education: Math Education- Middle School or Secondary, Science Education- Middle School or Secondary, Technology, Engineering and Design Education, Middle Grades English Language Arts & Social Studies Education, Education General Studies: Learning Design and Technology, and Elementary Education. The collected data is for students who have graduated from that program. There is no data available to show attrition or retention rate based on enrollment versus completion in each program. Field placements and paths to licensure are available for all of the programs with the exception of Education General Studies. So, five of the programs are catered to licensure and field placements that are intended to educate and guide students into their teaching career. Educational General Studies, however, is for students who wish to work in instructional design as content developers rather than as teachers. Over the five year span of 2014-2019, each program had anywhere from 50 to over 200 students complete each program. Science Education had the smallest number of students who completed the program while Elementary Education had the largest.

Findings for Research Question One

Research Question 1:
What demographic of students are more apt to enroll in certain programs within a college of education?

Upon analyzing the data, it shows a clear indication that the overall demographics for students in the NC State college of education are in line with larger national trends for teacher race and gender. I will start first with a description of the overall demographic trends of the college of education and it's six programs, and then move into more detailed and specific trends for students of color and first generation students.

Of the 665 students who graduated from these programs from 2014-2019 that data was collected for, 525 racially identified as White. This means that 79% of the students who began their preservice teaching or education careers in the NC State college of education racially identified as White, which is almost directly in line with the national average of 80%. Conversely, there were only 39 students who racially identified as Hispanic and 50 who racially identified as Black over the same 5-year period. These two groups *combined* amount to a mere 13% percent of the total students in these six programs at NC State from 2014-2019. (Figure 4).
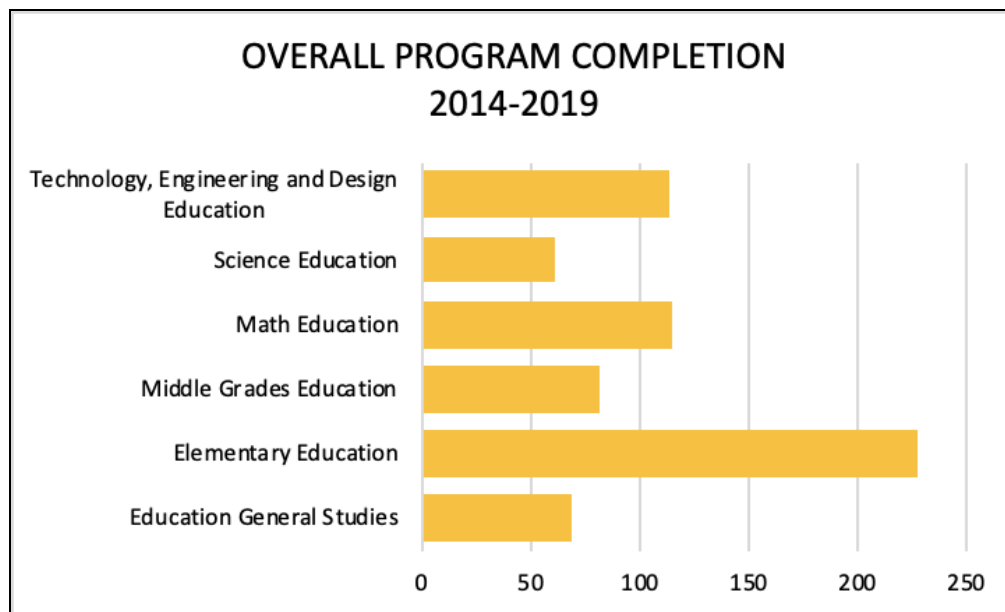

Figure 4: Chart displaying overall numbers of students who completed programs in NC State College of Education from 2014-2019.

Below (Figures 5-10) shows the individual completion numbers for each program. In looking at this data set, we see that the trajectories for each program are distinctly different, with some seeing consistency across the denoted years while others experience sharp inclines or declines. Elementary Education and Math both saw declines of program completion in the 2016-2017 school year, while Middle Grades Education and Science programs saw their lowest numbers of completion in 2017-2018. The only program seeing a decline in the 2018-2019 year, however, was Technology, Engineering and Design.
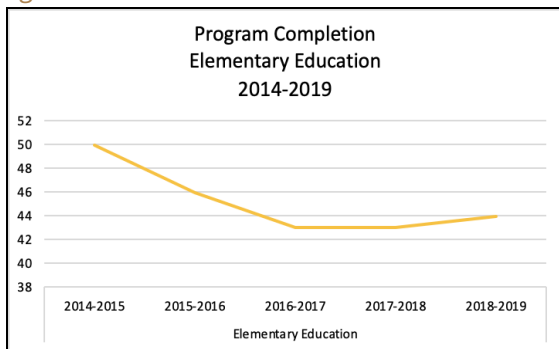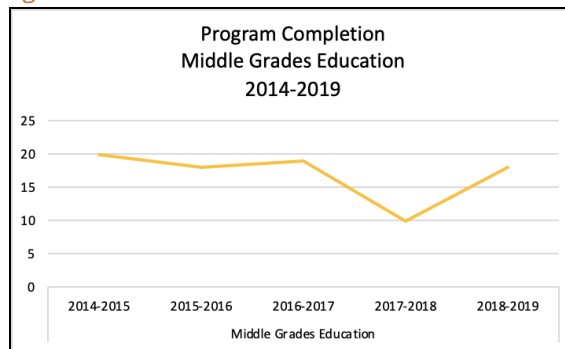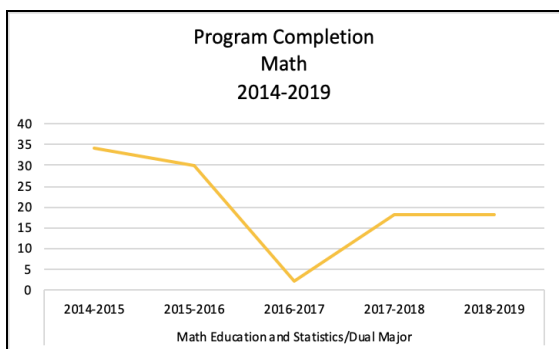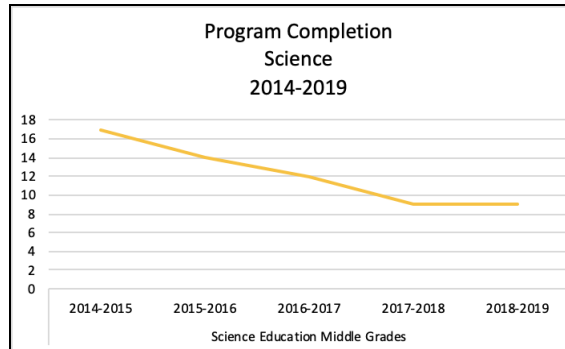
Figure 5

Figure 6

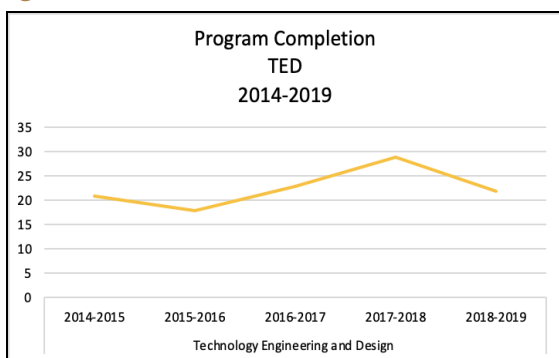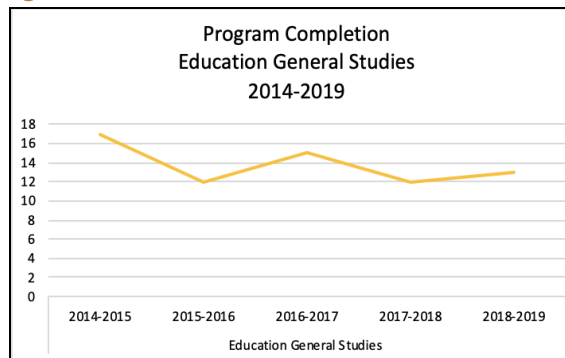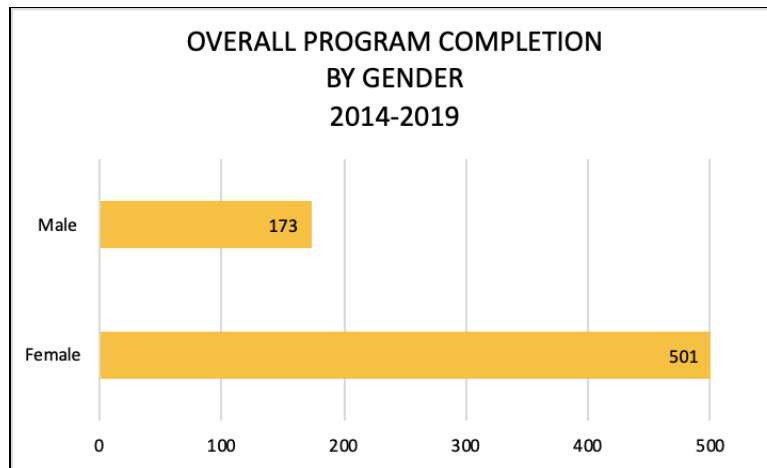
Figure 7

Figure 8

Figure 9

Figure 10

Figures 5-10: NC State College of Education individual program completion numbers from 2014-2019.

In keeping with national averages, the school saw over 500 preservice teachers who identified as female (Figure 11) complete programs in the college of education. What this shows is that 74%--nearly two-thirds of the total students enrolled--identify as female, which is again closely in-line with the national average of 76%.

Figures 11: NC State College of Education program completion by gender identification, 2014-2019.

Additionally, when students were asked if they were a first generation college student, a vast majority of the students in the data set marked "no." Of the total students for whom this data was collected, 457 marked "no", implicating some sort of family history with attending college. These 457 students account for 68% of the NC State school of education data from 2014-2019. Conversely, 22% of the students indicated that they were indeed first generation students (Figure 12). While this is close to a quarter of the students, it is far below the national average of 56% for undergraduate students.
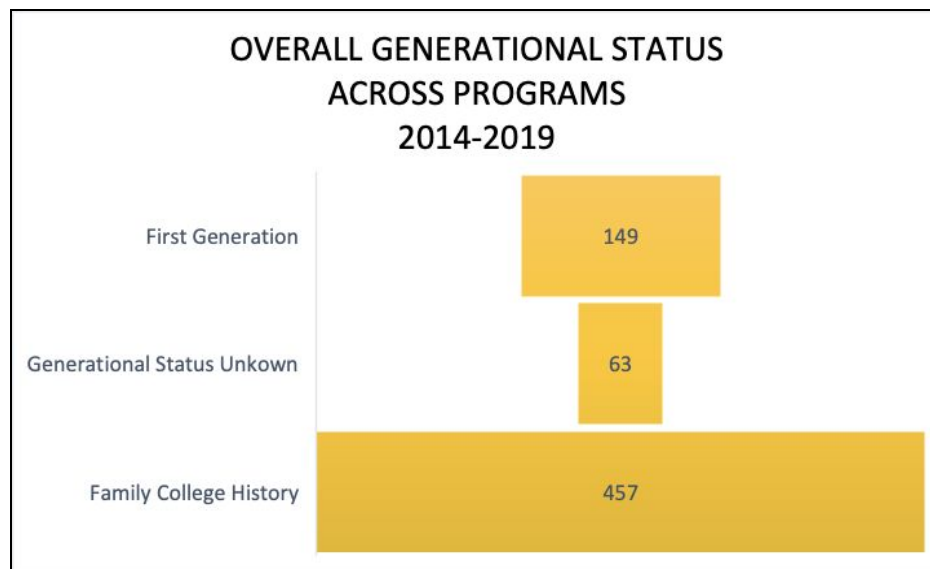
Figures 12: Overall generational status of students who completed programs at NC State College of Education, 2014-2019.

After reviewing the larger overall demographic trends at NC State, the following charts will dig deeper into the nuances of race, gender and generational status by program completion. Race across program completion showed the largest demographic of White teachers in the elementary education program, followed by the math education program. The number of White pre-service teachers who completed the elementary program was 199, more than twice as much as the second highest population of 91 in the math education program. The amount of White teachers in the elementary education program is also roughly 25 times greater than the next largest demographic in the program, which was Hispanic. Across all programs in the five-year period covered, White students outnumbered all other subgroups combined. This data (Figure 13) also shows that the largest group of preservice teachers of color completed the education general studies program, where Black and Hispanic students represented about 35% of the total students who completed that program. An alternative look at this data can be seen in Appendix A.

PROGRAM COMPLETION BY RACE
2014-2019
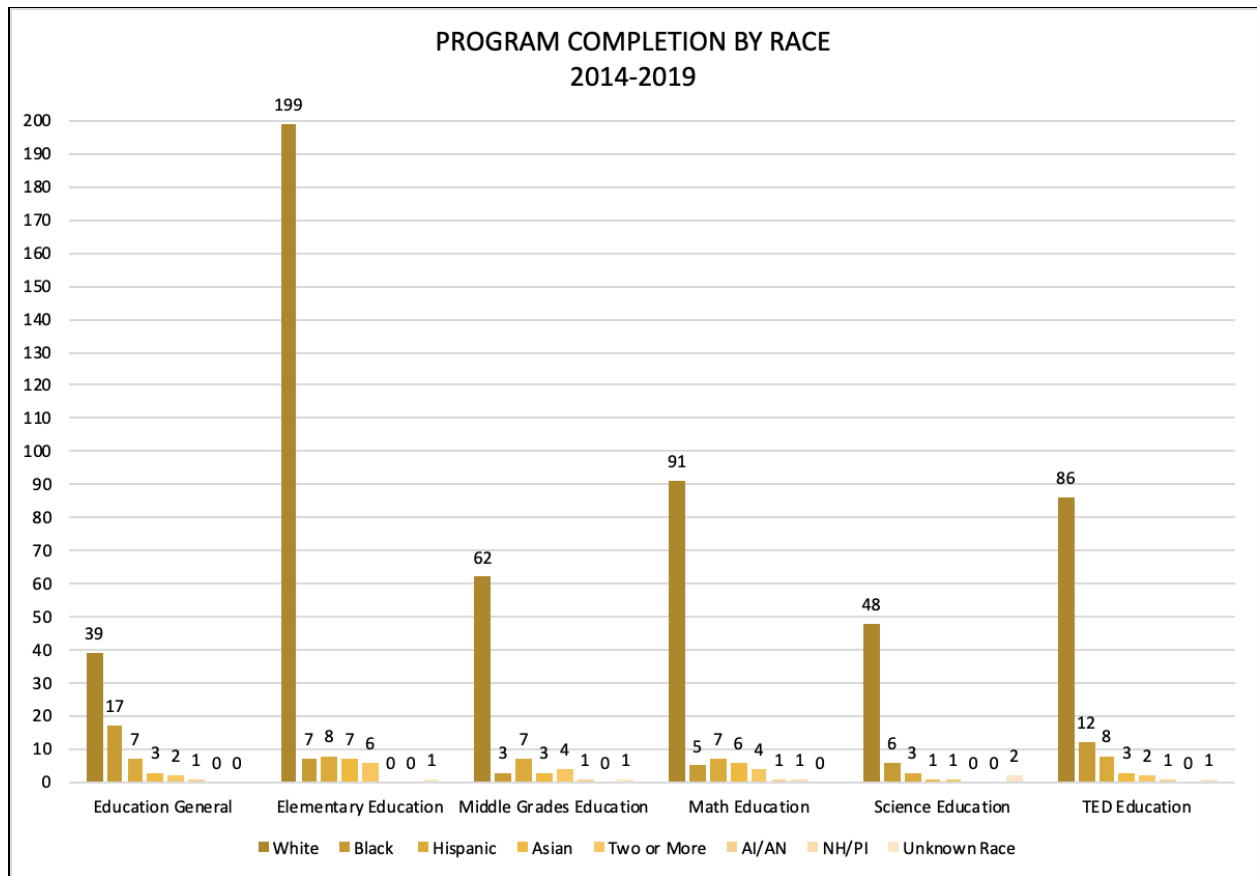
Figure 13: NC State College of Education program completion by race, 2014-2019.

By far, the greatest representation across all programs is students who identify as female. In the elementary education program, specifically, only 0.1% of the preservice teachers identify as male (Figure 14). Conversely, in the Technology, Engineering and Design program, 80% identify as male. These trends show a deepening of the status quo, in which White female-identifying teachers dominate the profession demographically, especially in elementary education (NCES, 2016). The representation of teachers who identify as male rises in middle and high school grades.

PROGRAM COMPLETION BY GENDER/PROGRAM
2014-2019
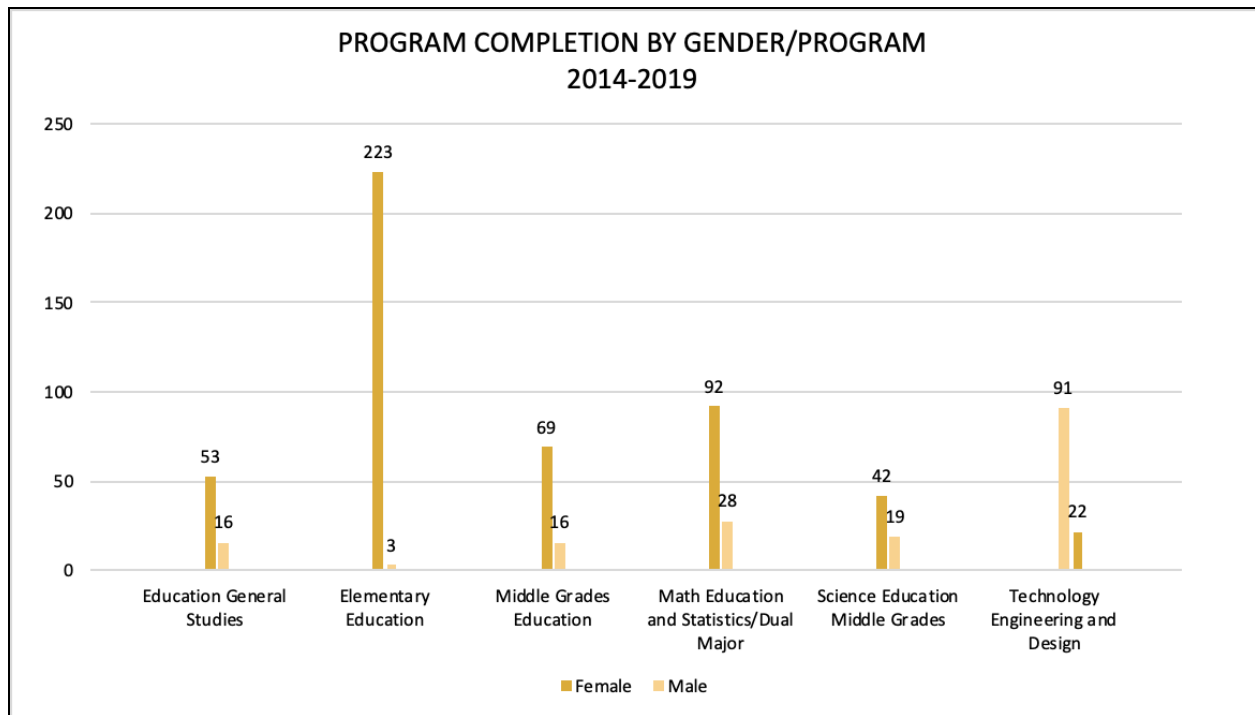
Figure 14: NC State College of Education program completion by gender, 2014-2019.

In analyzing the data regarding generational status, a few different trends became clear. First, as stated in the previous large-scale overview of generational status at NC State, 68% of the total student population who completed programs in preservice teacher programs were not first generation college students. When breaking down generational status by program, we see that the largest percentage of first generation college students is found in the Middle Grades Education program, representing 28% of the 85 students who enrolled in the program from 2014-2019 (Figures 15-20). On the other end of the spectrum, Elementary Education is the program with the least amount of first generation college students, where just 16% of the 226 students who were in that program from 2014-2019 identified as such.

Figure 15

Generational Status:
Elementary Education
2014-2019

[Bar chart showing: Family College History 184, First Generation 37, Unknown 5]

Figure 16

Generational Status:
Middle Grades Education
2014-2019

[Bar chart showing: Family College History 47, First Generation 24, Unknown 14]

Figure 17

Generational Status:
Education General Studies
2014-2019

[Bar chart showing: Family College History 41, First Generation 17, Unknown 11]

Figure 18

Generational Status:
Math Education & Statistics
2014-2019

[Bar chart showing: Family College History 80, First Generation 28, Unknown 7]

Figure 19

Generational Status:
Technology Engineering and Design 2014-2019

[Bar chart showing: Family College History 65, First Generation 31, Unknown 17]

Figure 20

Generational Status:
Science Education Middle Grades
2014-2019

[Bar chart showing: Family College History 40, First Generation 12, Unknown 9]

Figures 15-20: Student generational status by program completion, 2014-2019.

National trends for Hispanic enrollment in undergraduate environments show that between 2000 and 2016, Hispanic undergraduate enrollment more than doubled (a 134 percent increase, from 1.4 million to 3.2 million students (NCES, 2016). However, other racial groups also increased at a steady rate from 2000-2010 but then showed a decline after that. For example, Black enrollment increased by 73

percent between 2000 and 2010 (from 1.5 million to 2.7 million students) but then decreased by 17 percent to 2.2 million students in 2016 (NCES, 2016). The specific causes for these trends amongst racial groups are up to interpretation and further research, yet speak to a national pattern that can be used to contrast local enrollment data against.

At NC State, Hispanic program completion (Figure 21) across all programs increased from a previous decline and low point during the 2015-2016 school year. In the 2015-2016 school year, Hispanic enrollment was close to zero. By the 2018-2019 school year, however, the number of Hispanic preservice teachers who were completing programs had risen to 14 students across all programs, a *six hundred percent* increase. While the total number of students is still relatively low in terms of total school numbers, the upward trend and dramatic increase cannot be ignored.
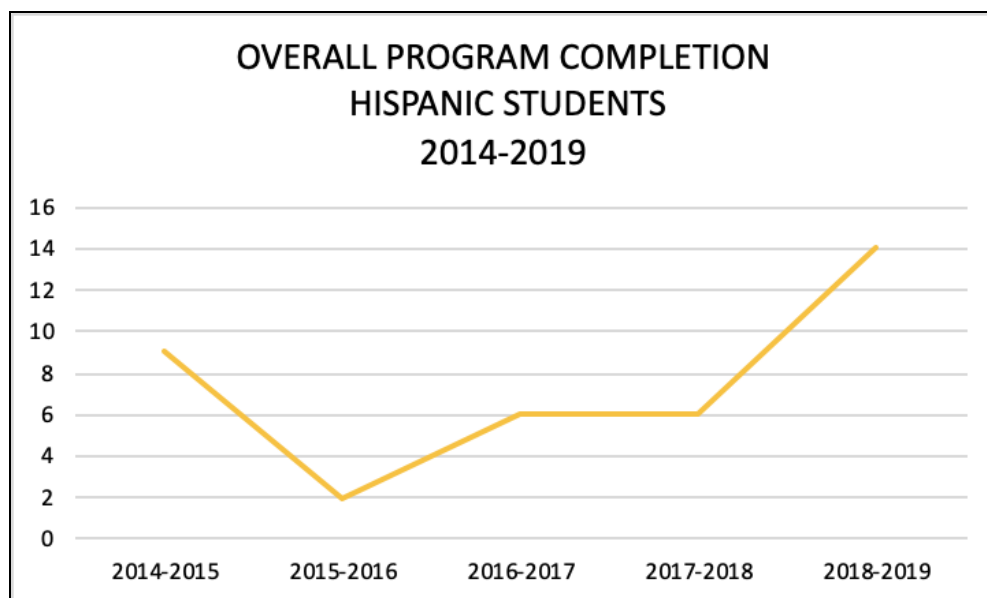
Figure 21: Hispanic student's program completion at NC State College of Education, 2014-2019.

When looking at the number of Black students who completed education programs, the data shows (Figure 22) trends in the opposite direction of Hispanic students data trends. From a high point of enrollment in 2014-2015 with 16 students enrolled, the number of Black students who are completing courses in the NC State school of education has dramatically fallen over the course of the five academic years in question. Indeed, by 2018-2019, only two students completed a program across the school's six education programs. This is a significant decline in demographics for a school that is already 79% white. The reduced amount of Black students in the school equals an over 87% negative slide in program completion.
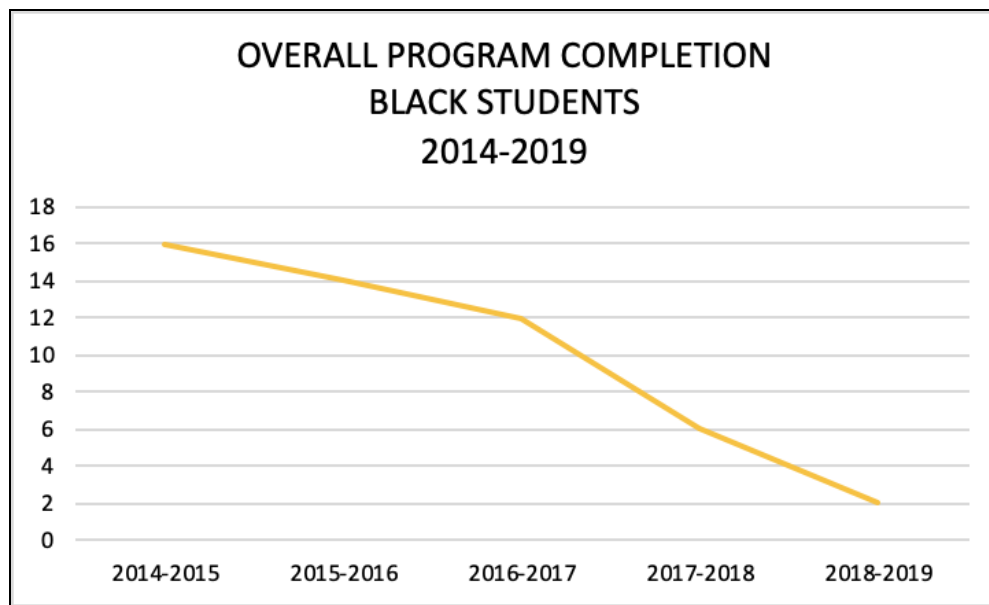
Figure 22: Overall program completion for Black students at NC State College of Education, 2014-2019.

When we then analyze this number further, we can see that Black students experienced a decline in program completion across all six programs. Figure 23 shows trajectory lines of different colors for each of the six programs. The Technology, Engineering and Design program was consistent across the first four years then saw a sharp decline to zero in the last year. The Science program saw a decline from four students to zero students from 2014-2016, then stayed at zero through 2019. Both the Math and the Middle Grades programs saw a plateau that ended in zero Black students completing programs in 2017 and 2018, respectively. Elementary education previously had a steady incline of Black students who were completing programs from 2014-2015, then that number declined steadily to zero in 2018.

COMPLETION BY PROGRAM
BLACK STUDENTS
2014-2019
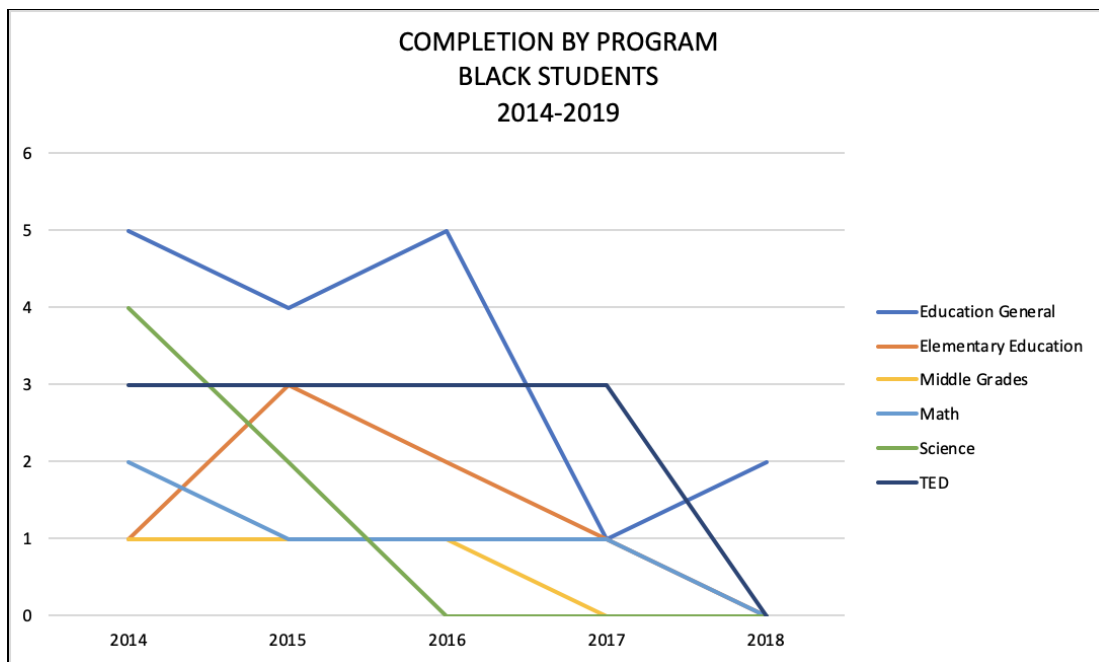
Figure 23: Black students completion rate in individual programs, NC State College of Education, 2014-2019.

In contrast, the steady enrollment of white students in the school of education must be displayed as a counterpart to the above data on Hispanic and Black enrollment. White student enrollment (Appendix B) has stayed steady across the five years of data, with a slight dip in total enrollment over the time period.

The final figure of program completion data (Figure 24) is an overlay of students who identify as Black, Hispanic and White. When seen together, the differences between these three subgroups is stark. First, the number of White students who are completing programs in the college of education has maintained steady from 2014-2019. Secondly, the sharp increase of Hispanic students who are finishing programs is apparent, especially in the final two years. And lastly, that the number of Black students who are finishing programs has steadily *decreased* over the same time period.
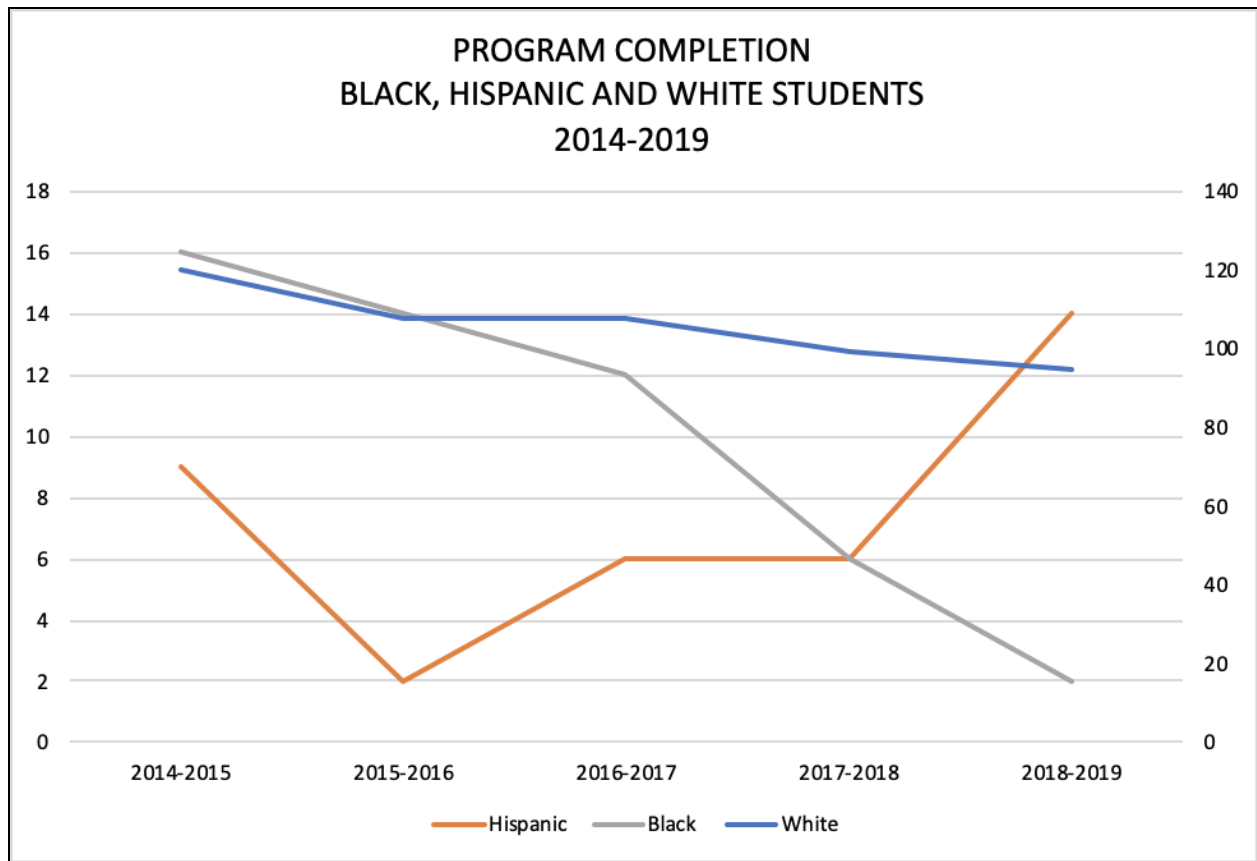
Figure 24: Black, Hispanic and White students who completed programs at NC State College of Education, 2014-2019.

Findings for Research Question Two

> Research Question 2:
> How do preservice teachers perceive social capital and race as an influence in their career choice?

A total of four students were interviewed for this capstone study. They were racially diverse and complex in their reasoning behind pursuing an education career. For anonymity purposes, and given the small number of racially diverse preservice teachers, they will be referred to as Students 1, 2, 3 or 4. All four students are enrolled in the TELS side of the college of education. This is a limitation to the study, as more interviews would have hopefully included a wider range of program enrollment and included the voices of those in the STEM side of the college. Similarly, the four interviewees represented three out of the six programs, with two being enrolled in the Middle Grades program, one in Elementary Education, and another in Education General Studies.

In order to analyze the interviews for salient information to this study, I created a master matrix to organize quotes and pertinent remarks. This master matrix (Appendix B) is separated by the concepts of Critical Race Theory, Social Capital and representation. The third concept, representation, was then allocated to CRT or Social Capital Theory depending on the comments' proximity to race or relationships. After the interviews were complete, transcripts of the four students were viewed with the lens of these three concepts, and quotes were then allocated to a corresponding concept. Additional notes and remarks were noted, such as an increased enthusiasm or emotion in that piece of the conversation.

Critical Race Theory

The issue of race in education is a deeply embedded one, and as the findings for research question 1 show us, the education field is deeply segregated and racially dominated by white teachers. While there are hundreds of years of laws, exclusionary practices and systems that will lend itself to the explanation of this concept, this study instead seeks to create individual connections between race and a student's decision to enroll in preservice teacher education. Kohli's 2016 research is rich in conversation around white cultural values within schooling systems and that many teachers who are products of these K-12 systems find themselves with deeply ingrained white norms and cultural values. This leads students of color who find themselves as educators to be socialized to see non-white cultural knowledge as inferior tothat of the dominant culture.

A few of the students spoke about race directly when discussing their career choice in education. For one, it was the pivotal factor in deciding why they chose to be a teacher. Two interviewees made racial comparisons and generalizations about their K-12 teachers that highlighted their view of them in comparison or contrast to race stereotypes.

Student 1 began by talking about the differences between their rural education for elementary and secondary schooling, but then moving to a larger suburban/urban area for high school. They remarked that there were a few teachers of color in his rural district but they were surprised to see even less teachers of color when they came to the larger district. They said "well, it's already not enough within the system, but definitely not in rural areas." When asked about their reasons for choosing teaching as a career path, they went on to say, "I just really wanted to be a teacher because there aren't a lot of us [black men] in the education system." This awareness of racial identity and representation is paramount to the connection between Critical Race Theory, social capital, and representation. Student 1 was not only aware that there were few educators who looked like them, they chose teaching as a profession *because of it*.

> "I just really wanted to be a teacher because there isn't a lot of us in the education system."

Student 3 was equally reflective about race and how it played into their decision to be a teacher. The interview question "Did your racial identity have anything to do with your decision?" was met with more dialogue than other questions I had asked. Student 3 said, "I found that, you know, because I was able to relate to, like, a lot of the younger kids at my high school, you know. . . And going in those classes and understanding how to be seen in those classes. It was like, 'Okay, this is where I need to be.' Because I really didn't think about going Into higher grades education but it was like, 'Where are you going to find the most fulfillment and where are you gonna be able to fulfill your purpose?'"

This quote shows a couple of layers of connection as it relates to Critical Race Theory. First, their awareness of being able to racially relate to students in their own high school was a moment of peak identity and decision making. This was then followed by how students were being overlooked or seen in those classes. The final layer is their specificity in addressing that it was not an original decision to be in high school education but after asking themselves a few questions, they were able to come to a conclusion about where they needed to be. The interviewee states, "Where are you going to find the most fulfillment and where are you gonna be able

to fulfill your purpose?" This deeply personal and wise question was in direct relation to being racially aware and seeking representation in this school.

Student 2 was asked about their favorite teacher, and spoke with great enthusiasm about their high school english teacher. The interviewee racially identified the teacher within the context of the conversation without being asked to do so. They also made value statements about the teacher and their race through a few casual comments about their interactions with the students and their type of classroom management. ". . .even though she was white, she played no nonsense. But I think because she was so passionate in teaching us, we were able to take that and we were able to grow from that. And we saw that. . . because a lot of the older kids my freshman year that she had taught came back to see her." The value statement "even though she was white, she played no nonsense" was especially pertinent to the racial aspect of this study. The statement leads to a belief that non-white educators are the default for being "no nonsense" and that because the teacher was white, this was surprising. Additionally, there was a tone of adoration as they spoke about this teacher. Indeed, they were discussing a response to "who was your favorite teacher", yet this leads to further possibilities that this specific teacher created a model for the student of what an educator could be, despite racial identity and cultural norms.

The interviewees were open and honest about their connections to educators they knew. Representation, for the purpose of this study, is understood to be a concept in which an individual's identity is linked with others. This could be a link of representation across lines of race, gender, sexuality or interest that results in the individual *seeing themselves* in the other. Since representation is closely involved with the work of Critical Race Theory in education, it is important to note anecdotes by the interviewees that are related solely to representation and how they saw themselves in their teachers. Often, representation can mean the formation of friendly and/or mentor relationships with teachers. We know that this type of relationship impacts a student's ability to succeed in the classroom and school environment (Nieto, 2010; Stanton-Salazar, 2004). Indeed, it was exactly this kind of relationship that was a driving force for many of the preservice teachers, including for those educators for whom they shared no racial similarities. This cross-racial connection has further implications for how a current, non-representative demographic of teachers can connect and serve as models and be representative for their diverse student demographic.

Social Capital

The research of Tajfel argues that social capital is derived from social groups that individuals have ownership or identify with. These social groups, "understood in this sense, provide their members with an identification of themselves in social terms...It is in a strictly limited sense, arising from these considerations, that we use

the term *social identity.* It consists, for the purposes of the present discussion, of those aspects of an individual's self-image that derive from the social categories to which he perceives himself as belonging." When we discuss students and teachers, there are multiple social identities that are on display. Further, each individual belongs to a set of social groups that have their own norms. Business, home, family and school relationships all exist as social groups that individuals have access to social capital through. However, Lee (2010) contends that " While the numbers of siblings or parents, for example, are an important dimension of family structure and resources, those types of variables are still limited in their ability to fully encompass the concept of social capital and therefore capture social capital effects."

Many of the students interviewed spoke about their deeply personal and life-changing experiences with educators. The dichotomy of interpersonal and intergroup relations is on display here. Students 1, 3 and 2 all spoke at length about their family's dynamics and values when addressing education. Interviewee 4 was difficult in obtaining much feedback from, however they did affirm a "strong family value" for education. Student 2 spoke about the family expectation to go to college, stating, "It was always like, ok, we have money saved for you to go to college or whatever you want to do. It was just expected." This form of family social and financial capital combined created a strong impetus and pathway for student 2 to go to college. This student's access to generational college family history is reflective of the overwhelming number of students in the school of education who shared this in common.

Additionally, Student 2' relationships within school built their connection to a social group of educators that they had access to. This privilege afforded her a deeper connection to education, and a personal identification with the teacher social group. Student 2 fondly recalled a teacher that they had a bond with and stated, "I remember her all the time. I go back and visit her whenever I'm by there." This extension of the social group extends then to her post K-12 career, in which educators become friends that they have casual and lasting relationships with, further expanding their social group and capital.

When Student 3 was asked about their family and their educational values, they laughed about their family's reaction to them choosing to be a teacher while in college. "It was very shocking because a lot of people weren't expecting me to be a teacher." When asked to clarify, they said, "No one in my family is a teacher." When treating this secondary comment as a clarifier for the first, logic follows that *because* no one in the family was a teacher, the decision to become a teacher was in itself shocking. This form of family social capital then displays intragroup values and norms around legacy careers and which paths are deemed "non-shocking". This would then necessitate further research into which careers would be normative for this social group, and if the function of a career is to benefit the group or the

individual. Tajfel defines social groups and categories associated with them as having positive or negative connotations: "Hence, social identity may be positive or negative according to the evaluations of those groups that contribute to an individual's social identity." Therefore, we assume that being a teacher carries a positive or negative connotation for this social group, and impacts how the individual--Student 3-- lives and functions in society as a reflection of the group.

Student 1 referred to their parents as a part of their conversation around their decision to be an educator. "My mom went to school, but she didn't go to school for education, like school for economics or for business. So it was like okay, you know, on my dad's side I'm first gen. But I'm also second gen. So it's like okay um, where do I go?" The emphasis on generational status as it related to their career decision was a unique component for Student 1 that was not referenced by others. Being a first and second generation student caused some confusion for Student 1, as evidenced by them noting "where do I go?" While Student 1 relayed extremely positive and influential educational values in the home, when a career choice was made, they relied on their generational status and the unknown of what to do. The family social group and it's norms, as referred to when discussing Student 3, can be persuasive and influential for individual members of the group. Student 1 battled with which career path to take in part due to the multiple paths that their family had embarked upon before them. This social group influence can be seen in families that all attend the same alma mater or generations of whom pursue the same career or vocation.

> "I think the day I graduated, I became friends with all my teachers on Facebook."

Student 1 continued the discussion by speaking about how their former teachers had become important parts of their friend and social circle. They said, "I think the day I graduated, I became friends with all my teachers on Facebook." This points to a direct comfort level with their teachers as well as an inclusion and acceptance into each other's social groups. This social capital will then remain for Student 1 as they finish their college education and enter into the teaching field. The teachers and connections they have access to widen their social group even further into connections and friends of those teachers, and so on. Thus, Student 1 and their social identity is linked with a dynamic and ever-shifting network of educators with capital to use.

Student 4, as noted previously, was difficult to gain confidence and information from, but was content with speaking about what kind of teacher they wanted to be. The idea of having a safe classroom was, for them, an important aspect of becoming a teacher. They spoke at length about how school was a safe space for

them and that being able to create that for others was a large piece of their decision to become a teacher. "I guess that's kind of what I want [my students] to remember. I want my classroom and me personally to just be a safe place for students to be. I had a couple of teachers like that. And that's kind of how I remember them. So I guess that's how I want to be remembered too." This powerful statement about emulating a teacher shows how early and how intentional future teachers are in their identity as teachers. In a 2015 study by Pardal et al, data suggested that "future teachers: i) are holders of "professional" teaching knowledge; ii) have a sense of the professional identity of the group to which they feel they belong; iii) have their own vision of their courses of action while future professionals in teaching."

This study is evidenced further by Student 2, who spoke with great detail about their 7th grade teacher, who helped them through an emotionally and mentally difficult time. "Fourth grade to around ninth grade was a really tough time for me like mentally and emotionally and I'm still working on that. Now it's still hard, but um, she was really the one that sparked like my huge love for poetry specifically. And she would give me other assignments to do in class but she didn't make me." While the student does not directly credit the teacher with being their reason for being a preservice teacher, they do refer to them when talking about a particularly difficult time for them, and instilling a love of poetry, all while holding them accountable to learning without pushing them too far. This educator clearly left a lasting impression upon Student 2. Pardal et al (2015) further argues that teacher identity: "as seen in students' representations, cannot be separated from the construction of the content and structure of teachers' work." Student 2 saw teacher identity as inextricably linked to the content and structure of education work. This dynamic may contribute to Student 2's decision to embark upon a teaching career.

When asked why they decided to become a teacher, Student 3 talked about how they originally wanted to be a marine scientist, "And then I got to junior year and I had this creative writing teacher and he was the best teacher ever. And I was like, this. I want to do this." This is the only student who pointed to a direct correlation between a teacher and their choice to pursue teaching as a career. However, Younger et al. (2004) reported that about one third of their respondents explained that their motivations to teach stemmed from their own positive schooling experiences. This data point has far-reaching implications for the amount of direct influence teachers as "institutional agents" have on a student's decision to enter the teaching profession.

"About one third of respondents explained that their motivations to teach stemmed from their own positive schooling experiences."

Stanton-Salazar (1997) defined institutional agents as "adults who are positioned to provide key forms of social and institutional support for others. In the role as an institutional agent, the sharing of support, resources, opportunities, privilege, or services to another person within the organization that has social inequality is key for the disruption of power (Stanton-Salazar, 2011)." The next section that discusses recommendations for policy and practice, will discuss this relationship further.

Recommendations for Institutional Policy and Practice

Currently, there is a great deal of research that is being done on how to create a "teacher pipeline" of sorts that will recruit and maintain teachers of color. As the data and research shows, many students of color have never considered becoming a teacher, which contributes to the lack of teacher diversity within an increasingly diverse student population. This self-fulfilling cycle is deeply rooted in K-12 and undergraduate education. In what ways can the NC State college of education address race and social capital in order to disrupt this cycle?

The recommendations for institutional policy and practice are made on the basis of four major findings from this study:

1. *A significant decline in Black students who complete programs in the college of education.*
2. *A significant increase in Hispanic students who complete programs in the college of education.*
3. *The Education General Studies program completion numbers have the largest percentage of students of color out of the six researched programs.*
4. *All students interviewed stated that the decision to become a teacher was made prior to college.*

Based on these findings, two recommendations are made for the consideration of the NC State College of Education. The table below (Figure 25) lays out the recommendation, the major points of the recommendation, and its alignment with addressing a specific research finding.

Recommendation	Details:	Alignment to key finding:
Affinity Grouping (Support spaces for marginalized students)	• Improve social-capital and group identity • Student, faculty, staff or mixed-role groupings • Offer counter-narrative for who a teacher is • Provides support and space for marginalized groups experiencing isolation	**1.** *A significant decline in Black students who complete programs in the college of education.* **2.** *A significant increase in Hispanic students who complete programs in the college of education.*
Recommendation	**Details:**	**Alignment to key finding:**
Dig for Oil (Early intervention systems for recruitment)	• Students interviewed are making up their minds about career decisions before college • Social capital-relationships to educators is a lifelong experience	**3.** *The Education General Studies program completion numbers have the largest percentage of students of color out of the six researched programs.* **4.** *All students interviewed stated that the decision to become a teacher was made prior to college.*

Figure 25: Recommendations for institutional policy and practice with alignment to key findings.

Affinity Groups

Affinity grouping is offered as one consideration for institutional change. Affinity groups of under-represented students, faculty and staff would increase social capital amongst students and allow critical relationships to be formed. This would contribute to the larger group identity of teachers, and provide a counter-narrative to the status quo. The data from NC State that was analyzed shows that Black students, Hispanic students, male-identifying students, and first generation students are all under-represented in preservice teacher programs.

Critical Aspects of Affinity Groups

- Voluntary
- Safe space (emotionally, mentally, physically and intellectually)
- Group-derived purpose and goal
- Group-derived norms and logistics
- Intersectional by nature
- Homogenous by race, gender, sexuality, generational status or other identity

Racial affinity groups serve as healthy, supportive learning environments that are culturally responsive to a specific group who similarly experience the racism and/or oppression of institutions (Mosely, 2018). Both Achinstein and Ogawa (2011) and Jackson and Kohli (2016) have argued that teachers of color can be supported by being intentional in their efforts to have conversations about the implications of systemic racism. Affinity groups can be composed of same-role members (such as student to student) or cross-roles (such as faculty and student) and still maintain their identity as a group as they approach such topics and critical conversations through a social group lens. Further, these groups can use a strengths-based approach to both their own culture and community.

The school culture of separation from, rather than solidarity with, communities of color further alienates marginalized people within schools and can contribute further to feelings of racial isolation. Affinity groups offer space for individuals to be able to talk freely with other group members, a sentiment that many feel they could not do when their white peers were present (Pour-Khorshid, 2018).

Many future teachers also experience a "double-bind" when encountering systems of education. The term "double-bind" was first used to characterize problems in which there is no solution. It is often created by a complex system that an individual is a part of. Future teachers experience this double-bind when, once involved in the system of education they wish to change, they find they cannot confront, comment upon, opt out of, or resolve the dilemma. (Achinsteing & Ogawa, 2012). This sets up future teachers from marginalized groups to be caught in a system that did not serve them, then when they try to change it, they see that they cannot. This double-bind can serve as critical loss of morale and investment in an education career on behalf of the future teacher.

Typically, many teachers of color themselves have been educated by an oppressive schooling system that promotes white cultural values. (Apple, 1991; Clark and Flores, 2001). If we ask them to work within this system, we must allow space for future teachers to speak with others in affinity spaces where they can use serial testimony and story-telling in order to form a social community and heal from their own schooling. Racial-affinity group support for educators of color found that group members regularly reflected on their positionalities and experiences navigating the world as people of color. Beyond race, members also reflected on how their gender, sexuality, religion, language and other forms of identity

oppression shaped and influenced their lived experiences as individuals and educators (Pour-Khorshid, 2018). The support and social capital that is gained from these groups will help these future teachers as they head into the workforce. We know that teachers of color are more likely to be initially placed in high-need schools that serve a large proportion of poor and minority students and that these teachers of color possibly have a higher turn-over rate than that of White teachers (Ingersoll & May, 2011). That's why it is critical that these teachers have a strong support system in order to disrupt the current cycle of lack of teacher representation.

NC State already has a number of student groups, including an education council and a "Passport to Success" club that focuses on cross-cultural diversity. There is a Multicultural Young Educators Network, which states that its purpose is "to promote unity among diverse groups of students in the college and in the university, to prepare future educators to be competent in diverse environments, and to perform service projects related to education with a focus on cultural awareness." While this is a worthy purpose, it stops short of intentionally creating space for marginalized groups of students to discuss race and to support each other as individuals and as future educators.

Cheruvu (2014) argued that "all preservice teachers would benefit from continued guidance and modeling of how to engage in critical and authentic conversations about race. Similarly, given that students have varying prior experiences in engaging in such conversations and/or participating in cross-racial dialogue, there is a need to develop these skills with preservice teachers." Pre-service teachers need to not only be able to talk about race for themselves but also for their future students, who will also necessarily be engaging in racial conversations.

Dig For Oil

The teacher pipeline has long been discussed as a method of teacher recruitment, especially in an attempt to lure students of color into becoming part of a more representative teacher workforce. However, the point in the pipeline in which teachers are pulled off into different programs in college is often the point when it most drastically shrinks. By the time potential educators enter college, they have already decided to choose an alternate career path. Early intervention with young students of color will begin to address the key finding from this study that students choose their career path as an educator prior to entering college. This means that recruitment and interest in education as a career has to start much earlier.

Additionally, this intentional recruitment effort prior to college addresses another key finding: that students of color are enrolling in and completing the Education General Studies program at a higher rate than any other program. Indeed, it was the only program to show an increase of program completion, and as earlier data showed, that the largest percentage of students of color (35%) were enrolled in this program.

However, this is the only program in the NC State College of Education that does not have a field study component or a path to teacher licensure. Students of color are engaging with this program more because *it is not* a path to becoming a teacher. It is a program rooted in education, design and content creation that is specifically non classroom-based. This tells us that students of color are interested in the field of education but turned off by being in a classroom. Why? The interviewees from this study spoke of surprise from family members when they chose education in college and not one of the interviewees mentioned a significant family relationship to an educator. In order to reach students who do not have social capital with other educators and who may not connect culturally with the idea of being an educator, systems and programs of early intervention and recruitment would be imperative to interrupting the status quo of teacher demographics.

Targeted recruitment should be done with the requirement of deepening the value we place on, and the experience of, teachers of color. These teachers serve as models to students of color, and can help them gain confidence and more deftly navigate a future education career. Their cultural competency and ability to effectively engage with multiple systems/languages/demographics gives them an advantage among educators. Moreno (2018) discussed the importance of teachers and students of color who engage in a mentor-protégée relationship. "The mentors were essential in bridging networking and social capital for the protégées. Through the nurturing of the mentoring relationship, support systems created relationships to support the protégées. This helped to inspire youth to follow their passion as they learned about their future career."

A mentor-protégée program such as this, where a teacher of color is able to engage as a mentor to future teachers as young as 6th grade, also helps to shift the cultural identity of teachers. Findings from Achinstein and Aguirre (2008) have demonstrated that "programs of teacher education fail to adequately prepare new teachers of color to negotiate their racial identity within the school context. Such lack of attention leaves them in positions where they must make sense of their racial identity as teachers outside of the support of their preparation program, often making them particularly vulnerable to attrition." Early mentorship and cultural-match programs, sponsored and supported by the college of education, could work to nurture the racial and pedagogical development of current teachers as well as preservice teachers as well.

Additionally, early conversations and initiatives that challenge the status quo about *who* an educator is are essential to students of color seeing early on that education is a major component to justice, liberation and equity. The narrative of who a teacher is--and what their role in society is--must be rewritten in order to compel young students of color into seeing themselves as educators. Right now, they see predominately White women in front of them and the opportunities to talk about and engage in topics like race and social justice in the context of curriculum and school and life, are often skipped over completely. In a study on preservice

teachers, Phillips (2011) encourages us to ask deeper questions about not only who an educator is but what they do. "We must engage our prospective teachers in understanding why teachers do what they do. In what historical context do they situate their practice? How does their work fit in a vision of a just and equitable world? How is their practice embedded in their understanding of social change?" To this end, the NC State College of Education can encourage their own educators--perhaps through the venue of affinity grouping-- to discuss and engage their students with these concepts of education. Furthermore, programs that are linked to districts, school-boards and the department of instruction could work to celebrate and socialize teachers of color and their actions both in the classroom and beyond.
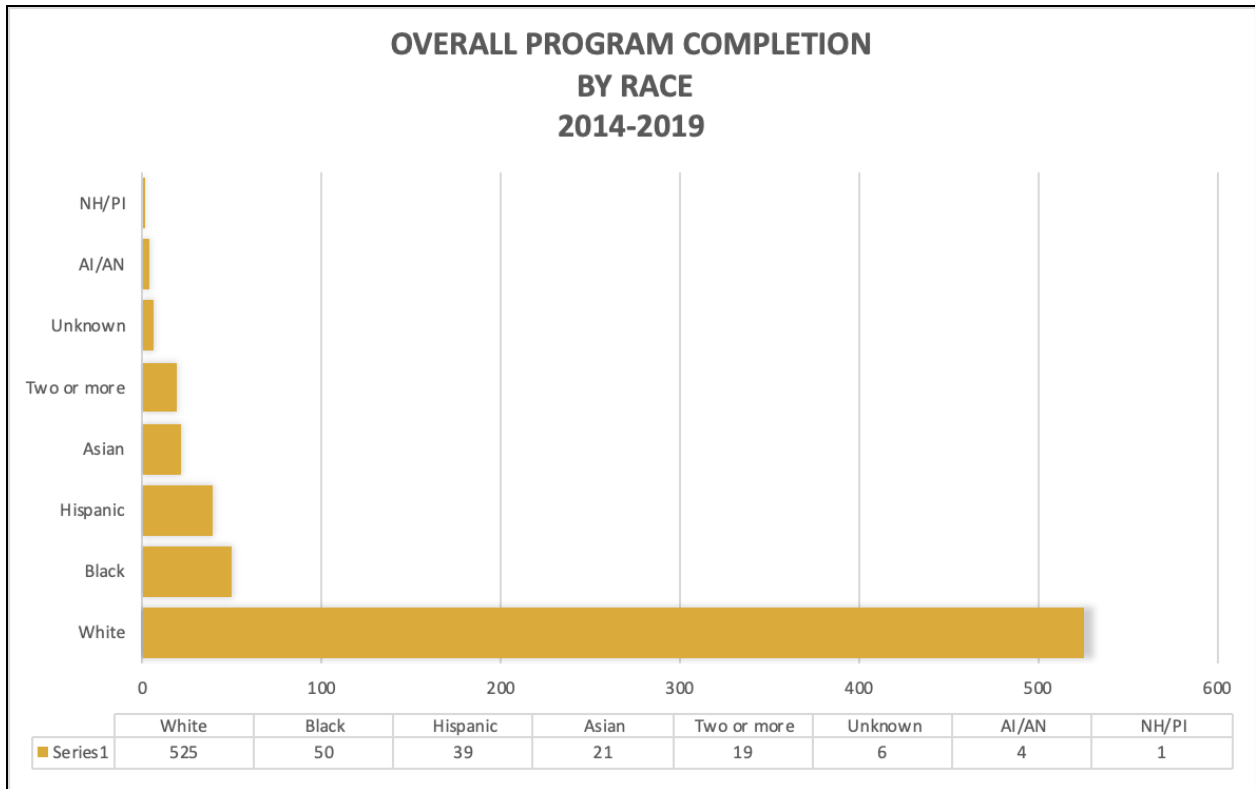
Conclusion

As Irvine's (2003) research on the teacher pipeline and data from the National Center for Education Statistics show, by the time students of color have completed postsecondary courses and entered into the workforce, the teacher pipeline is extremely small and monoracial. We know also that many students will complete their K–12 education without ever being taught by a single teacher of color. This lack of representation shows detrimental education and life outcomes for students of color. This sequential mixed-methods research study with the NC State College of Education explored both quantitative program completion data and qualitative analysis of student interviews. The key findings were: A significant decline in Black students who complete programs in the college of education; A significant increase in Hispanic students who complete programs in the college of education; The Education General Studies program completion numbers have the largest percentage of students of color out of the six researched programs; and all students interviewed stated that the decision to become a teacher was made prior to college.
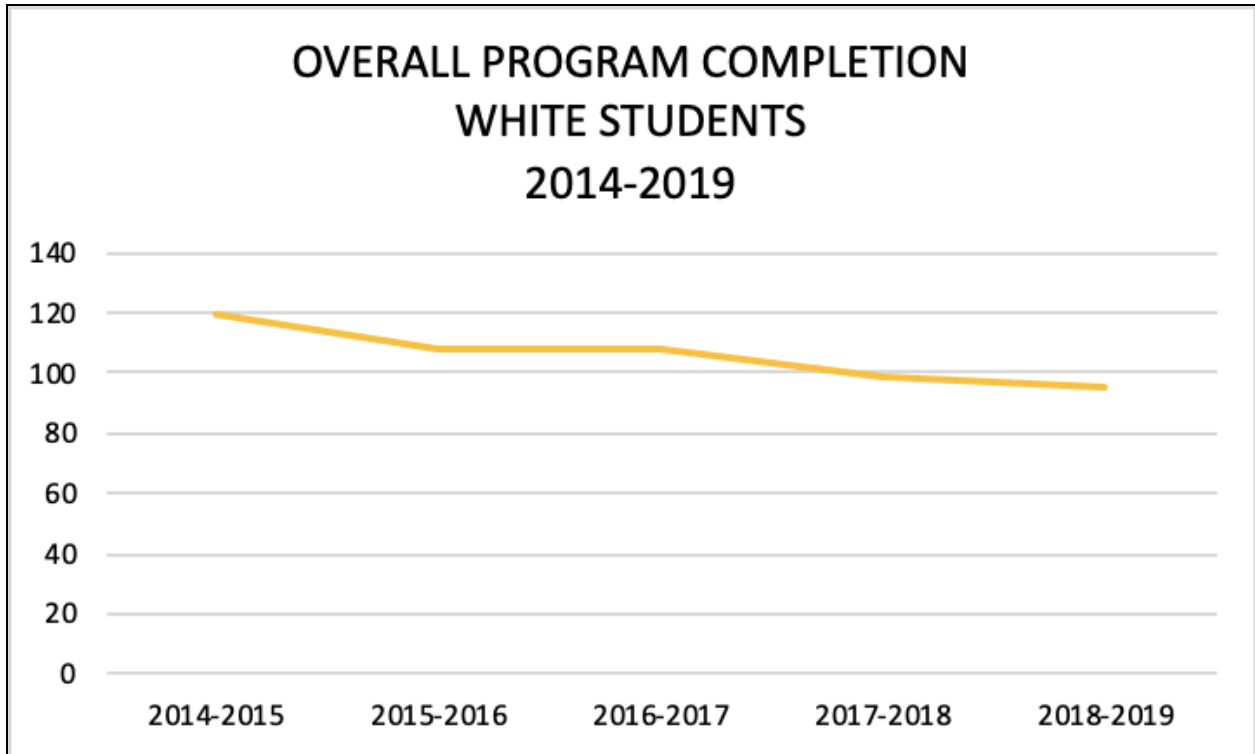
Because of these findings, two recommendations were made for institutional policy and practice. The first is to create affinity groups within the college of education that will serve as supportive and safe spaces for marginalized groups. The second recommendation is to implement any number or combination of early intervention practices to target recruitment of students of color into the teaching profession. These could be, but are not limited to: mentor-protégée programs, initiatives focused on socializing and celebrating teachers of color, and encouraging the conversation around the wider role and responsibility of being an educator in today's society. Close attention to these recommendations will likely increase and continue the amount of Black and Hispanic students who complete programs in the college of education, aid in rewriting the narrative of an educator to increase enrollment of students of color in pre-service education programs, and encourage a more diverse group of students to enter into the teaching profession.

Appendices

Appendix A

	White	Black	Hispanic	Asian	Two or more	Unknown	AI/AN	NH/PI
■ Series1	525	50	39	21	19	6	4	1

Appendix B

OVERALL PROGRAM COMPLETION
WHITE STUDENTS
2014-2019

Appendix C

Master Matrix
Qualitative Analysis of Interviews

Bin/ Concept	Key Quote	Observation/ Notes
Social Capital	"I remember her all the time. I go back and visit her whenever I'm by there."	
	"My mom went to school, but she didn't go to school for education, like school for economics or for business. So it was like okay, you know, on my dad's side I'm first gen. But I'm also second gen. So it's like okay um, where do I go?"	
	"It was very shocking because a lot of people weren't expecting me to be a teacher."	
	"It was always like, ok, we have money saved for you to go to college or whatever you want to do. It was just expected."	*very second nature to talk about college
	"I think people have forgotten how noble of a profession that teaching is because of what all the media puts out. And the standards that teachers are held to are very rigid and [people] don't understand that these are people too."	
	"And like, she just... she loves me. I love her."	
	" I remember her all the time. I go back and visit her whenever I'm by there."	
	"I think the day I graduated, I became friends with all my teachers on Facebook."	
Critical Race Theory	". . .[even though she was white] she played no nonsense. But I think because she was so passionate in teaching us, we were able to take that and we were able to grow from that. And we saw that. . . because a lot of the older kids my freshman year that she had taught came back to see her."	
	"I found that, you know, because I was able to relate to, like, a lot of the younger kids at my high school."	*racially

	"I just really wanted to be a teacher because there isn't a lot of us [black men] in the education system. And then there's very. . .well, it's already not enough within the system, but definitely not in rural areas."	
Representation (to be integrated in CRT or SC)	"And then I got to junior year and I had this creative writing teacher and he was the best teacher ever. And I was like, this. I want to do this."	With such conviction and confidence
	"Now it's still hard, but um, she was really the one that sparked like my huge love for poetry specifically. And she would give me other assignments to do in class but she didn't make me."	*helped during mental health struggles
	"I guess that's kind of what I want [my students] to remember. I want my classroom and me personally to just be a safe place for students to be and I had a couple of teachers like that. And that's kind of how I remember them. So I guess that's how I want to be remembered too."	
	"I just really wanted to be a teacher because there isn't a lot of us [black men] in the education system. And then there's very. .well, it's already not enough within the system, but definitely not in rural areas."	*very pointed about specifics between rural and "urban"

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