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Small In Number, Large In Impact: The Recruitment And Retention Of Middle School African American Male Stem Teachers

Cris L. Garner II

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THE RECRUITMENT AND RETENTION OF

MIDDLE SCHOOL AFRICAN AMERICAN MALE STEM TEACHERS

A Dissertation

by

CRIS L. GARNER II

Submitted to the Office of Graduate Studies of
Prairie View A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2024

Major Subject: Educational Leadership

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ABSTRACT

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(August 2024)

Cris L. Garner II, B.S. in Interdisciplinary Studies, Prairie View A&M University.

M.Ed. in Curriculum and Instruction, Prairie View A&M University

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Watson and Smitherman (1996) emphasized the important role African American male teachers can play in schools, particularly in those with African American male students. They argued that these teachers serve as positive role models and provide culturally relevant support. Gay (2020) highlighted that the lack of African American male teachers exacerbates the challenges faced by African American male students. This underrepresentation can lead to feelings of isolation and a lack of engagement. Furthermore, it may contribute to lower academic achievement and fewer opportunities for success among African American male students.

The study sought to determine (1) the perception of the need for African American male teachers in K-12 STEM Education, (2) the perception of African American teachers regarding their personal STEM education based on their decision to enter the teaching profession, (3) their perception of the value and accomplishments as African American male teachers in K-12 STEM classrooms, and (4) their perception of

the impact that African American male STEM educators on African American STEM male students.

This study examined the underrepresentation of African American male STEM educators in middle schools. This research study utilized a qualitative design. The conceptual frameworks leading the study were African American Male Theory and Critical Race Theory. The results of this study revealed African American male teachers and preservice teachers' perspective of their impact as STEM educators not only regarding the field of education but also regarding the STEM disciplines, as it is theorized that positive interaction in STEM areas in middle schools could lead to more African American males to pursue careers in STEM fields. The belief is that the results of this study may reveal the deficit of African American male teachers, specifically in STEM education. Findings from this study may also aid in the recruitment, retention, and incentivization of African American male STEM teachers in K-12 school systems and teacher preparation programs, both traditional and alternative routes.

Keywords: phenomenology, African American Male STEM teachers, Critical Race Theory, African American Male Theory, underrepresentation in STEM education, African American male middle school teachers

DEDICATION

This research would not have been finished without God's mercy and grace. I want to dedicate it to my grandmother, Martha Green, my mother, Jacqueline Green, and my father, Cris Garner, the people I admire most. Thank you for laying a strong foundation upon which I could build my education and for always pushing me beyond what was expected regarding schoolwork. Without your love and support, I would not be here today.

This is dedicated to all the young boys who want to make a difference in STEM education in subsequent generations. Dream big because although it may seem impossible now, your dreams will come true one day. This is for the young African American males who want to be successful in life – let this serve as proof that anything is possible when you believe in yourself and work hard at it. Never lose hope because your longing for achievement will ultimately lead you there, so always remember these things. Darkness has covered them, or they have gone unnoticed by others, but they still mean much; someone somewhere needs such brightness.

ACKNOWLEDGMENTS

Thank You, LORD, for giving me the courage to finish this enormous work. It was a tiring and challenging journey. I did it all alone, but with each step, you were there.

My family for the constant support and encouragement. My grandma, mom, and dad – thank you. Without you, none of this would be possible. My sister and brother – your words kept me going even when I wanted to give up.

I am grateful to my committee chair, Dr. Smith, committee members Dr. Butler, Dr. Moore, and Dr. Parker for guiding me throughout the research process. There are no words to express how much I appreciate you. Also, to the six African American male STEM teachers who agreed to be part of my study- a very big thank you!

To friends who have been sounding boards in times of need, cheerleaders during moments of joy, and constant sources of happiness through support, I could not have done it without your support along this entire journey. I know that we faced challenges but without your patience and encouragement, I am afraid none among us would have made it this far.

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CHAPTER I

INTRODUCTION

Lewis and Toldson (2013) proclaimed that the nation's most academically credentialed and professionally experienced teachers are African American male teachers. The sentiment of the importance of African American male teachers in the United States speaks to the need for African American males to answer the call to pursue classroom teaching as profession. Toldson's (2013) analyzation of the top 10 occupation among African American and White men, found that, secondary teachers ranked number five amongst the two groups.

The shortage of African American male teachers is vast across the United States. Recently, post-COVID, we have entered a period of growing concern for school district's human resources and alternative teacher certification programs. Specifically, African American teachers' science, technology, engineering, and mathematics shortages remain low. Gay (2020) revealed that the underrepresentation of African American males in the teaching force could intensify African American male challenges and underwrite low achievement levels. Specifically, African American teachers' shortages in middle school science, technology, engineering, and mathematics remain low. Davis (2014) asserted that Black males and societal laws, policies, and practices in the U.S. echo concerns of the national focus to provide equitability in K-12 schools. In the wake of school

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This dissertation follows the Publication Manual of the American Psychological Association, 7th Edition.

desegregation, Black teachers have been marginalized and devalued through recruitment practices that are racist and deficit perspectives (Foster, 1997). Extensive scholarships have explored culturally mediated perspectives that form Black teachers' pedagogical expertise on Blacks, offering a foundation for the hiring and retention of Blacks in the teaching profession (Brockenbrough, 2013; Foster, 1994; Irvine, 2002; Ladson-Billings, 1995).

Background of Problem

The K-12 education field shows an inadequate supply of African American male teachers in STEM areas, and teacher preparation programs have enrolled few African American males in STEM certification areas. The national U.S. public schools are staffed with an overwhelmingly unparalleled number of Caucasian female teachers. The Covid pandemic, economic challenges to produce adequate compensation, and growing demands left K-12 education baron, and in desperate need of teachers. According to Bristol (2015) Latino, Black, Asian, and Native American teachers are 17% of all U.S. public school teachers but only two percent are Black men. However, more than half of all public schools' students are children of color. Bristol's highlight of demographic comparison of teachers and students in America tells the story of many middle school campuses. Davis (2014) suggested that middle school math is a tipping point in African American males' academic careers where they either experience mathematics success or failure, making it a critical aspect regarding their achievements and experiences in mathematics education.

The ramifications from the lack of Black male presence have had and continue to have a lasting impact on American society as well as the African American community

and perspective on education. African American teachers benefit the education system as they identify as role models for African American youth who, in other circumstances, may not encounter African American males who exhibit and reinforce positive traits that society deems respectable. The subjects that see superior deficits in African American presence in schools identify STEM (Science Technology Engineering and Mathematics). In an analysis managed by Dee (2004), the researcher observed the results of the pairing of students and teachers on test scores from the Tennessee Project Star Public Access records. Dee (2004) discovered that learners, including African American males, showed growth in reading and math achievement results by two to four percent when scholars learned from an instructor of their same race.

Many students graduate from K-12 education never having encountered an African American male teacher. Research indicates that African American students need positive role models to whom they can relate. Many African American students see images and models from the media and their neighborhoods that glorify a lifestyle of drug trafficking, incarceration, homicide, and substance abuse. Subgroup teacher populations offer mentorship and guidance that have the potential for minority student populations to consider selecting education as a future career (Buxton, 2000).

Assibey-Mensah (1997) found that African American males from 10 to 18 years chose famous sports figures as their role models compared to preferring role models in academia. He found out that the scarcity of relevance in educational role models accredited to the deficiency of experience with African American male teachers in their K-12 educational journey. Culturally relevant teaching serves as a voice to students and caring for the student's asset components is essential to the profession of African

American male educators. Ladson-Billings (1995) acknowledged that all learners must accomplish criteria of culturally relevant pedagogy. For instance, academic achievement by all learners, development and maintenance of cultural competence by students, and acute student awareness to defy the current environment.

Ladson-Billings (1995) reasoned that the distinction between effectual and ineffectual teaching of African American students is that effective teachers implement culturally responsive teaching practices that engage the students' background to help them achieve. The superlative manner of facilitation permits learners to preserve their cultural individuality while desiring advantage academically. Foster (1989) implied that effective educators use flair packed with cadenced dialectal, swift tone, and positive signals which result in learning being a communal experience as opposed to an unaccompanied effort. These factors open the door for cultural responsiveness that attributes to strengthening learning by students, specifically African American males because they have a social consideration on how African American students experience the learning process.

McDougal (2009) studied the relationship between African American male learning styles and their teachers' teaching styles. McDougal conducted interviews with 29 African American male students ranging from grades seven to 12. The study assessed their views of how they learned and the strategies they preferred to comprehend content. The responses exposed that 45% of students learned best when the teacher clarified what they were acquiring, modeled processes and activities, and explained the relevance to their lives outside of school. McDougal (2009) concluded by suggesting that teachers investigate their students' backgrounds and interests to align instruction with the

refinement of the student and suggested vigorously conscripting African American male educators.

Statement of Problem

Snyder (2008) reported that recruiting teachers provided an unmatched difficulty level. An additional difficulty to the effort is that diversified students and the public regard education to be of low prestige and a low-paying career choice. With satisfaction and income in the balance, numerous males decline to take a chance on educating children. The minority teacher count has deteriorated recently, and experts in the field acknowledge it is growth in opportunities in more profitable areas that in the past, people of color had more difficulty acquiring (Snyder, 2008).

Professional fields such as business, medicine, law, and psychology account for the missing African American male teachers (Toldson, 2013). The career fields, seen as higher salaries and better benefits, take interest and attention away from education career pathways. Snyder (2008) asserted various explanations for why men abjure the education profession, including low pay and low status in the professional realm. Furthermore, outside of athletics, education professions perpetuate a themed women's work stereotype, particularly at the lower grade levels (Snyder, 2008).

The harsh realities of recruiting African American male teachers in school districts and candidates for certification to teacher preparation programs continue to persist as weak points on both fronts. The shortage of math and science teachers strikes schools more now than ever. Conjointly, the lack of African American male teachers in middle school science, technology, engineering, and mathematics is critical.

Purpose of Study

This study examined the underrepresentation of African American male STEM educators in K-12 schools. The purpose of this study was to provide a framework for recruiting African American males into teacher certification preparation programs and K-12 school systems. The results of this study revealed select African American male teachers and teacher candidates' perspectives of their impact as STEM educators in the field of education. It is theorized that positive interaction with African American male STEM educators in K-12 education could lead to more African American males pursuing careers in the STEM fields. Therefore, there is lack of studies about African American males who intentionally pursue certifications in middle school science, technology, engineering, and mathematics.

Research Questions

Daniels (2010) suggested that in order make it possible to make an impact on the next generation, the impact of African American male teachers on the academic achievement of African American male students must be strategically addressed. The researcher explored the perspectives of STEM certification candidates on their significance in the education profession. For the purposes of this study, the following three questions were answered:

1. What is the motivation of African American males to enter the teaching in STEM content areas?
2. How do African American male STEM teachers and teacher candidates from four separate certification areas understand the need for African American male STEM educators?

3. What factors contribute to the decision of African American male STEM teachers and teacher candidates to pursue a career in the teaching profession, explicitly in STEM content areas?

Definition of Terms

Several working definitions of terms aid in the comprehension of the research study presented. The following definitions of terms were applied for the purposes of this research:

African American: any certification candidate who identifies with African American descent (Wimbush, 2012).

Alternative Certification Program (ACP): a post-baccalaureate teacher training program that yields initial teaching certification (Trevino, 2013).

Certification candidate: preservice teachers, seeking initial teaching certification (Trevino, 2013).

Engineering Certification: the *EC-12 Technology Application* teaching credential (Trevino, 2013).

Male: refers to the gender identity of African American males, shaped by both biological and sociocultural factors, including systemic inequities and stereotypes that impact their educational experiences (Howard, 2013).

Math Certification: the four through eight Mathematics teaching credential. (Trevino, 2013).

Middle School: a critical stage of education, typically encompassing grades 6 through 8, during which students undergo significant developmental changes (Ladson-Billings, 1994).

Recruitment: advertisement to appeal to African American males to the teacher preparation programs (Lewis, 2013).

Retention: programs designed to keep African American males in the teaching profession (Lewis, 2013).

STEM: the cumulation of science, engineering, technology, and mathematics content areas (Bentley, 2021),

Science Certification: the seven through 12 Life Science teaching credential. (Trevino, 2013).

Technology Certification: the six through-12 Technology Education teaching credential. (Trevino, 2013).

Assumptions

In the broader context, certain aspects of the research topic are widely accepted, not only by scholars but also by the general public. A prevailing belief, for instance, is that Black male college graduates predominantly choose career paths outside of K-12 education. This assumption is not just common but deeply ingrained, shaping public perception and educational discourse. It reflects an overarching narrative that suggests Black males are drawn to fields seen as offering more prestige or financial reward, further distancing them from careers in education. This widely accepted notion subtly influences both the educational workforce and recruitment strategies.

Limitations

Candidates for certification in seven through 12 Life Sciences and four through eight Mathematics: this study was limited to the participation of six males who identified as African American, were currently a teacher or enrolled in a teacher education program

focusing in science, technology, or mathematics. Thus, the study was limited to the following constraints:

1. The sample was limited to six interviews.
2. Certification in science and mathematics.

The study was limited to one university based alternative certification program in Texas. Because this study was qualitative in nature, it was limited to only those who participated in the study; therefore, an effort to go beyond the scope of participants of this study was not pursued.

Delimitations

The sample size encompassed both practicing teachers and teacher candidates in the state of Texas. Specifically, it included African American male teacher certification candidates focused on four through eight Mathematics and seven through 12 Life Science subject areas enrolled in Prairie View A&M University's alternative certification program. Additionally, the research also incorporated practicing teachers within these subject areas across the state, providing a comprehensive view of the field. This broad inclusion of both current educators and those in training allowed for a more extensive analysis of the experiences and perspectives within the Texas educational system.

Significance of Study

Although statistics report growth since the 1990s, minorities in STEM careers are still underrepresented. Birdwell (2015) noted,

> African American and Latino workers also now represent 29 percent of the general workforce population (up from about 24 percent in 2001), but just 16 percent of the advanced manufacturing workforce, 15 percent of the computing

> workforce, and 12 percent of the engineering workforce – all rates that have remained essentially flat. (p.15)

With STEM at the forefront of schools providing students with college and career preparedness, schools around the United States have seen a shortage in the area that most districts deem a critical need. This study is important to the field of education for the recruitment of African American males to alternative certification programs to seek teaching credentials in STEM subject areas.

Summary

The need for African American male STEM teachers is at an all-time critical need in the era of post-covid learning. Ladson-Billing and Tate (1995) contended that African American learners' quality and quantity of mathematics and science curriculum was attributed to social constructs such as race and property value. Berry and McClain (2010), Berry et al. (2011), Nyamkye (2010), and Thompson and Davis (2013) proclaimed that middle school was crucial for African American males to develop healthy mathematic, racial, and cultural identities. Berry (2003) and Thompson and Davis (2013) suggested that student-teacher relationships were critical to the African American males' aptitude in middle school mathematics. A relationship that shows significant relatability to learners' identities and teachers' identity has proven to have shown significant success in middle school math.

An astonishing two percent of all teachers in the United States identify as African American males. The percent drastically decreases when the African American male subgroup is departmentalized by subject, specifically STEM content areas. Bryan and

Ford (2014) explained that due to the significance of role models in the lives of children and youth having few African American male teachers is problematical.

This study sought to be an addition to the literature surrounding recruiting African American male candidates for certification as well as African American males' perspectives of their role in the teaching profession, specifically in middle school science, mathematics, technology, and engineering.

CHAPTER II

LITERATURE REVIEW

Rice and Goessling (2005) articulated that a desperate need for male teachers exists mainly due to the lack of a strong male presence in society and the lack of male interactions at schools. Grusky (2002) maintained that the male teacher shortage tended to be critical. This study aimed to foster an understanding of why African American male teachers, especially focusing on middle school STEM content areas representation, are at such a large deficit. Moreover, this study focused on the following: (1) history of African American male STEM teachers in middle schools, (2) presence of African American male STEM teachers in middle schools, (3) significance of African American male STEM teachers in middle schools, and (4) Alternative certification program involvement in recruiting, preparing, and retaining African American male STEM certification candidates.

The approach implemented for searching the literature was concentrated heavily on scholarly research that highlighted the connection to the significance of African American male teachers in STEM subject areas. For this to be accomplished, the researcher implemented library digital database searches on African American male teachers in middle schools and the role of alternative certification programs in recruiting African American males to teaching programs. Scott and Rodrigues (2015) concluded that the research on African American pre-service teachers was limited. Current studies explore on the resilience of African American men and their experiences with stereotyping and marginalization in education. Pang and Gibson (2001) protested that it was calamitous that African American teachers were habitually omitted as they

contributed genuine, heritable culture in classrooms, which was not reflected in research. This research takes an approach to understand the lack of African American males in education and subsequent fields of work.

Foundations of STEM Curriculum

Science Technology Engineering and Mathematics (STEM) is a model based on the four aforementioned specific subject areas. The subjects facilitated with both an interdisciplinary and applied approach. STEM curriculum is not merely facilitated as four separate areas of focus but integrated as an interconnected learning opportunity with emphasis on real-world applications. The critical goal for STEM education initially termed SMET is to provide learners with a comprehensive learning opportunity to use creative problem-solving techniques. Margot and Kettler (2019) stated that elementary and secondary classrooms were integrating STEM curriculum and pedagogy into their school day to address the need for more science, technology, engineering, and mathematics (STEM) literate workers. In their article, Margot and Kettler (2019) provided an in-depth look into the perceptions of STEM education as a basis for the facilitated curriculum.

Since the 1990s, subpopulations in STEM have seen growth; although, minorities in STEM career fields are still underrepresented. Birdwell (2015) reported that African American and Latino workers represented 12% of the engineering workforce and 29% of the general workforce population. With STEM being at the forefront of schools providing students with college and career preparedness, schools around the United States have implemented STEM models to the curriculum and instructional agendas.

STEM as a Foundation of Curriculum

Mann and Mann (2017) proclaimed that STEM pedagogy leads students to a more in-depth understanding of content in practical, real-world situations. STEM curriculum encompasses students applying engineering design and technology using math and science concepts they have learned. Hockett (2009) examined significant curriculum recommendations for gifted learners and found the following five principles were necessary for STEM embedded curriculum: (1) the curriculum emphasizes problems, products, and performances that are real-world based with transformational results, (2) the curriculum uses a conceptual methodology within a discipline, (3) the curriculum allows learners to practice advanced levels of understanding, (4) the curriculum is flexible enough to allow self-directed learning to take place with student interest at its center, and (5) the curriculum requires students to use materials and processes that imprecise practicing professionals in the same area. STEM pedagogy contains all five principles by allowing students to work as professionals within science, technology, engineering, and math while solving real-world problems of their interests.

The Missing Puzzle Piece in STEM Classrooms

With STEM as the forefront of education, the importance and impact that African American male teachers possess on the next generation of leaders remains a topic of discussion. African American and minorities in general benefit greatly from diverse learning environments in which African American men lead classroom engagement. Green (2020) and Thompson and David (2013) stated that African American teachers were instrumental in African American male students in their educational familiarities, including those in STEM fields. Corbett and Wilson (2002) concluded when African

American teachers engage and build relationships with African American students, students have improved persistence in their academic performance. Coleman and Davis (2020) stated it was no surprise that teachers of African American male students, who tend to be White, middle-class females, lack knowledge of their social and academic needs. Sheppard (2009) claimed that pre-service mathematics teachers' field experiences should be positioned in a manner that allotted them sovereignty to modify lessons to authentically incorporate African American male students' experiences.

Brown and Butty (1999) proclaimed that the relationship between African American students and teachers was symbolic in nature. Their examination of the pipeline leading to African American male teachers revealed leaks. The pipeline sees the number of African American male teachers as subjective to the African American male's completion of college which is subjective to the population of African American males who graduate high school. Lewis and Toldson (2013) reported that historically, African American students have not had the experience that Caucasian students have, namely, the much-needed experience of learning from someone with the same appearance.

Bryan and Ford (2014) reported that when gender and race were combined, African American male teachers accounted for only one percent of the profession. Davis and Jordan (1994) clarified this argument by stating, "The increased presence of committed and successful black male adults in educational settings is essential for enhancing black boys' academic and social development" (p. 571). Foster (1997), Ladson-Billings (2009), and Noguera (2003) suggested that recruiting and retaining African American male teachers would have a positive impact on African American students both academically and socially.

Furthermore, James (2019) reported that “Black students generally experience a schooling system in which a web of stereotypes operates to racialize and marginalize them” (p. 377). That has been enabled through structuring their learning process, social opportunities, life chances, and educational outcomes (James 2012). The negative beliefs of students can be alleviated by inserting African American male personnel into schools. Newell (2013) articulated that consistent and constant reminders by minority men to their African American students to know that they are educated, hard workers, and they believe in them.

According to Landings and Billings (2011), African American males are a problem that America seeks to eradicate. James (2019) relegated the importance of middle school years to student academic and post-academic years educationally and socially. Yuan (2018) summarized that the divide in demographics produces a condition in which racially diverse students and teachers negotiate their own racial identities as they interact within educational environments. The racial disparities amongst students and teachers have implications that exceed academics. For example, quasi-studies covering the relationship between African American male students in a predominately Caucasian female American school system implicated a system of critical and crucial discipline practices that ultimately limited the success of African American male students academically. Cochran-Smith (2004) theorized that the divide in demographics also equated to the likelihood that learners in urban areas lacked access to classroom instruction that aligned with their knowledge and experiences.

Eddy and Easton-Brooks (2011) positioned that African American student with African American teachers tended to achieve higher scores on standardized exams than

African Americans students with Caucasian teachers. Gay (1993) suggested that racially diverse teachers provide cultural experiences and knowledges that are conversant, comfortable, and advantageous for students of racially diverse backgrounds. Irvine (1989) posited that the following two benefits existed within the experience and knowledge match of racially diverse teachers and learners:

> Racially diverse teachers are more likely than White teachers to decrease the alienation of racially diverse students by serving as 'cultural translators', and racially diverse teachers use unique teaching styles that appear to be related to the success of some racially diverse students. (p. 52)

"Educational performance during the middle school years is foundational to the high school programs into which students are streamed or placed, and is also critical to later educational, occupational, and social achievements" (James, 2019, p. 36). These attributes to African American student success prove to be intricate positions of academic readiness that set students up for their future. Many students lack male presence in the classroom specially in middle school math and science. Cross (2014) determined that due to the ongoing evolution of diverse populations in school, the diminuendos of the culturally diverse world had become both complicated and difficult.

Kissel et al.'s (2010) analysis of *Schools and Staff Survey and Teacher Follow-Up Survey* data exposed that minority male teachers leaving the field as opposed to minority female educators is more likely. Bristol (2018) contended that African American males who identified as the lone African American male teacher on a campus often had a desire to leave their campus due to feelings of isolation.

More Than Just a Teacher

The experience of African American male teachers is one that other teachers do not share. Due to their ability to occupy, relate, and levy the behavior of African American male students, African American male teachers have an added bonus of being a major stake holder in the discipline of African American male students. Black and Rice (2020) made known that there exists a higher priority for African American male teachers' ability to discipline students than comprehending pedagogical practices. Wallace and Gagen (2019) said that

> The power of a positive role model in the form of a male educator of color has the potential to nurture the development of a positive self-image for males of color and turn the tide of academic achievement for this demographic. (430)

"For the Black male teacher, there is the added responsibilities of mentoring and dealing with discipline for many of the students at the school site" (Black and Rice, 2020, p. 18). As such Black and Rice (2010) listed these five key points from their *Men in Teach* group conversation: (1) discipline, (2) money, (3) peer groups, and (4) role models that reflect the struggles of first- and second-year teachers.

Often African American male teachers serve as primary father figure to students, specifically African American male students from single parent households. Black and Rice (2020) contended that many of their participants struggled with classroom management in the beginning stages of their teaching careers and were routinely assigned difficult students or expected to discipline male students. Brockenbrough (2018) proclaimed that African American teachers' pedagogical effectiveness with African American students was also credited to their firm, straightforward tactics to discipline

and classroom management that reflected the corrective styles often experienced by African American students in their home lives. Black and Rice (2020) stated that many males are not disciplinarians. Thus, the on-going use of African American teachers in this manner adds to the dwindling number of African Americans males in classrooms.

Brown (2008) incited that one major cause for the lack of African American male teachers is the low return in salary. As such, Black and Rice (2020) decreed that in their study with *Black in Teach* that all of their participants conveyed concern regarding sufficient income to provide for their families. The cry for teachers to be fairly compensated does not only appear in the research of scholars. It is also echoed throughout national and local news as many school districts are adopting more comprehensive and competitive pay for educators.

For example, in summer 2022, Houston Independent School District, the largest school district in the state of Texas, approved a salary increase for educators that provided beginning teachers with at least 60,500 salaries with additional sign-on bonuses and critical shortage stipends for math and science teachers. These types of increases in salary are what districts believe are compensations to drive the recruitment of more educators to fill a magnitude of vacancies across the district. In Lynn's (2006) study, one participant stated:

> You know; a lot of brothers really don't have that love for our people to take a pay cut. You know; I was around Brothers who could've made $100,000 a year and were making $50,000 because they wanted to be in the community. They really wanted to make a difference. And being around Brothers like that teaches you the importance of dedication in your life and purpose of your life. (p. 37)

The selflessness of African American males who pursue education as career although a career in other fields would lead to financial wealth showcases their commitment to inspiring the next generation's community leaders. Thus, there is a need for culturally relevant education that supports low economic, academic, and excessive disciplinary challenges that plague African American students in urban and rural schools.

Johnson (2008) stated that due to the lack of positive male figures, African American males were suffering within academic and social constructs. Meier et al. (1989) highlighted that in schools with large populations of African American teachers' fewer African American students were placed in special education classes and suspended or expelled. Instead, in those schools, more African American students were enrolled in gifted and talented courses and more African American students graduated from high school. Couch-Maddox (1999) proclaimed that African American teachers were more likely than their Caucasian counterparts to describe African American male students as intellectually capable.

Black and Rice's (2020) research into African American male teachers listed peer groups as essential for retaining African American males in the profession. In their *Black in Teach* dialogue with participants, it was determined that having a group of racially diverse cohorts to share experiences and gain guidance was necessary to the continued growth in abilities as African American men in education. African American male teachers on campuses that have opposing demographics such as a majority Caucasian female staff may find it difficult to find solace in such a professional environment as it would call for them to conform to the professional norms that engulf that climate's culture.

Role models are not only needed for students to show academic proficiencies. They are also needed by African American male teachers. The mentorship of African American male teachers is a heavy contributor to retaining African American males in the profession. Many school districts set teacher mentorship and induction as a priority for beginning teachers to provide support for their success in the classroom. Many African American male teachers do not receive the luxury of obtaining another African American male teacher as their mentor. This dynamic is majorly important as African American teachers share the same experiences when it comes to their off-contract additional responsibilities such as disciplinarians and strongholds for their counterparts.

Middle School Mindedness

Okoroji and Oka (2021) positioned that due to developed abstract thinking, increased grated knowledge of racial identity, and sensitivity to mistreatment derived from social category, middle school is a crucial period for examining perceptions. Lynn (2016) declared that the experiences of Black male teachers, their cultural pedagogies, and community traditions and influence were analytical in the considerations, conversations, and contests on education career preparation. Noguera (2003), Ladson-Billings (2009), and Foster (1997) argued that through presenting themselves as respectful and self-disciplined that the recruitment and retention of African Americans have a positive impact on African American male students. Challenge cited by Pabon et al. (2011) include the lack of effective good teaching practice models and culturally responsive curriculum during teaching preparation.

Morettini (2017) explored the reasoning for educators of color to enter the profession. Minler (2006) solidified the idea that because of the possession of colorful

stories of history filled with lessons of overcoming, endurance, oppression, and life familiarities, more many diverse student populations may benefit from African American teachers. Beady and Hansell (1981) concluded that African American student- teacher pairings have had strong positive correlations to African American students attending and completing college due to having greater expectations. Murrell (1994) researched teaching practices for African American males in math classes, in which his findings showed that societal perspective of learning to be critical and consistent interactions, communal understanding, and synchronized activities were crucial in engaging African American male students.

"Educational performance during the middle school years is foundational to the high school programs into which students are streamed or placed, and is also critical to later educational, occupational, and social achievements" (James, 2019, p. 36). That shows that African American students' success proves to be intricate positions of academic readiness that set students up for their future. Many students lack male presence in the classroom especially in middle school math and science.

The Significance of Teacher Preparation Programs

Teacher preparation programs are responsible for implementation of courses, preparation and accountability for the development of preservice teacher. These programs are varied between university based and state approved certification programs. Black and Rice (2020) contended that teacher preparation programs on the university and outside levels provide a generalized curriculum that does not match the type of schools that many African American teachers experience. The disconnect in the teacher preparation curriculum and experiences lend to many not making it past five years in the profession.

Furthermore, Goings (2015) also made note that African American male teachers may experience hostile work environments and encounter colleagues who will clandestinely and blatantly regard them as social pariahs. Black and Rice (2020) bluntly stated that teacher preparation programs have not made a discerned effort to prepare teacher candidates for poverty driven, diverse populations, an environment many African American male teachers enter. Instead, the focus on the *perfect world* school is perpetuated in an attempt to prepare candidates for successful completion of certification assessments.

HBCU's Stake in Producing African American Male Teachers

Dilworth (2012) declared that the commitment and mission of historically Black colleges and universities' educator preparation is to prepare quality teachers and leaders who are successful in cultivating student learning and achievement. Lomotey and Aboh (2009), on the other hand, stated there was little to no difference in the beliefs and cultural direction of the curriculum in the majority predominantly White institutions and historically Black colleges and universities. Wallace and Gagen (2019) contended that historically Black colleges and universities were responsible for the production of many of the African American teachers in the field. Irvine and Fenwick (2011) protested that historically Black colleges and universities in both, rural and urban areas dispense high quantities of teachers to local school districts, which has subsequently been responsible for diversifying the field of education. Collins et al. (2013) claimed that through their ability of producing graduates and capability to address the disparity of African Americans in the teaching profession, historically Black colleges and universities produce a broader pool of well-qualified African American educators. Thus, having the

potential for shrinking the achievement gap between Caucasian and non-Caucasian students.

On minority serving institutions that produce diverse teachers, Brooks et al. (2012) stated:

> Multicultural teacher education at higher education institutions of color has been a vital source for equipping public education with well-prepared, culturally competent educators. These institutions understand the implicit, complex roles of teachers of color and have developed culturally based teacher education pedagogy. (p. 349)

The complexity that plagues African American male teachers in working with African American male students in low-economic, at- risk heavy, behavior-ridden environments is a topic that must be addressed on the preparation level in order to prepare male teachers to enter the classroom. Culturally based teacher education pedagogy is crucial to meeting the social and academic needs of African American male students.

Milton-Williams and Bryan's (2016) research focused on the dynamic that family and community play on the pedagogical practices of African American male teachers. Their multidisciplinary framework included Critical Race Theory and Culturally Relevant Pedagogy. Sleeter (2005) declared that teachers with restricted diversified familiarities and subpar expectancies of culturally varied students may have less success in diminishing the achievement disproportions.

Darling-Hammond (2006) acknowledged several areas that were required for an effective culturally relevant alternative certification program by incorporating the

following factors: (a) a vision for effective teaching that is understood by all students and underscored in all of their coursework and field experiences; (b) professional standards created out of the program's vision, which guide and evaluate the students' coursework and field experiences;(c) a curriculum that authentically parallels the students' field experiences and considers in context the various developmental stages of children; (d) extended, authentic clinical experiences that span for at least 30 weeks; (e) consistent utilization of learning methods that urge students to apply the curriculum to their practice and evaluate their practice using the curriculum; (f) the implementation of intentional strategies that assist teachers in confronting and challenging their biases; and (g) genuine relationships fostered between the university and its partner schools, in which they work collaboratively toward a common vision.

The seven features identify areas in which an alternative teacher certification can adequately prepare teacher candidates to serve in schools with diversified populations by adjusting both the curricula and field experiences to give candidates a more realistic portrayal of the diverse environment they will encounter in the field of education.

Where's the Support After Certification

Achinstein et al. (2010) found that mentoring, financial capital/teacher salaries school conditions, professional development, and teacher autonomy were contributors that impacted a teachers' choice to stay in the profession past two years. Borko's (2004) literature unveiled that involvement in professional development activities by motivated teachers can have an impact on teacher education and development. Underwood et al. (2019) made mention that efforts to retain African American male teachers in the

classroom have not been successful, using the number of teachers in the demographic as evidence.

Collins et al. (2013) suggested that diverse teachers who are prepared accurately and receive on-going supported professional development make significant influence on the diverse students they engage in learning. Scott and Alexander (2019) studied the recruitment and retainment of African American male special education teachers. In their study, they made mention of the need for mentorship of African American teachers from mentors with diverse backgrounds. Warren (2013) stated that true mentors and collaborators desire to learn mentees as much as the mentee desires to learn from the mentor. Mentors allow for new teachers to have a space for support. Grantham (2002) stated that "honest dialogue among teachers within professional development workshops for informed discussion on the factors creating the relationship between low nominations of minority students for gifted programs and teacher attitudes (51)." Wallace and Gagen (2020) proclaimed that professional learning communities impacted the retention of teachers. "A learning community that encourages group study, provides activities connecting students with public schools in the area, and emphasizes the positive aspects of entering the field of education has the potential to increase teacher education program retention" (Wallace & Gagen, 2020, p. 420). Buch and Spaulding (2011) stated that research has proven that professional learning communities impact grade point averages and teacher retention positively. Wallace and Gagen (2020) stated that African American males could benefit from participation in learning communities with other African American male teacher certification prospects.

Theoretical Frameworks

Critical Race Theory

Critical race theory is a concept that spans the last 40 years with a core idea that race is a social construct that shapes the foundation of policy and legal systems. The tenets of Critical Race Theory, also known as CRT, emerged from a legal analysis framework by scholars such as Kimberlè Crenshaw, Richard Delgado, and Derrick Bell. The Critical Race Theory analysis of ongoing racial and gender inequality proves how CRT builds upon long-standing philosophies and perceptions and is sustained by years of multidisciplinary study. The idea that racism is embedded in the underpinning of American society drives Critical Race Theory in its quintessence. Critical Race Theory attempts to redirect the terms in which race and racism are conveyed in the American consciousness. George (2021) listed the following points as the main principles of Critical Race Theory: (1) acknowledgment that race is not organically authentic but is socially fabricated and socially meaningful, (2) recognition that racism is a habitual feature of civilization and is embedded within systems and institutions that reproduce racial inequality like the legal system. It discharges the indication that racist incidents are abnormalities but instead are demonstrations of organizational and systemic racism, (3) refutation of widespread supports about discrimination, such as influences that confine racism to a few individuals and creates the narrative that non-minority Americans wish to convey. Critical Race Theory distinguishes that racism is systemized in law, entrenched in structures, and interlaced into public policy while also rejecting claims of racial inclusiveness, and (4) acceptance of the lived experiences of minority groups, including

those conserved through tradition and storytelling, and negating ill-informed research that excludes the limits the knowledge of people of color.

Ideologies of Critical Race Theory: The Past and Present. Although not given a name at the time, the ideologies of Critical Race Theory were promoted by civil rights leaders such as Frederick Douglass, Antonio Gramsci, Sojourner Truth, and W.E.B Dubois. Camera (2021) explicated that Du Bois stated that a primary area of his work was to illuminate aspects of the Nlack experience. Du Bois' belief in elucidating the Black experience is a foundational support for the Critical Race Theory principle based on accepting the lived experiences of minorities, including those acquired through storytelling. To expound on how Critical Race Theory influenced the American public in the past, Sawchuck (2021) cited decisions in the 1930s, in which government officials drew lines around areas regarded as underprivileged financial risks, in many cases, explicitly due to the racial configuration of inhabitants. Financial institutions consequently denied mortgages to African Americans in those areas.

More recently, the death of George Floyd, an unarmed Black man murdered by Caucasian police officer Derek Chauvin while three additional officers observed, two of whom identified as minorities, made Critical Race Theory explode as a hot topic amongst more than just scholars. Following the release of the video footage from Floyd's interaction with law enforcement and his ultimate demise, many began to rally in the name of civil rights for Floyd and countless other unarmed people of color dying at the hands of law officers due to excessive force or preconceived thinking based on racial identification. George Floyd's death was not the first-time Critical Race Theory was

promoted amongst the public; however, it did spawn a more widened spotlight on the term and its influences on the American education system at large.

Critical Race Theory as a Construct in Education. The American school system has seen a growing concern for Critical Race Theory being taught in classrooms across the country in recent years. Ujifusa (2021) mentioned that, in 2020, then-President Donald Trump made a foray into the dispute during his re-election campaign when he disparaged the focus on racism and bias in social studies classes as left-wing indoctrination. Moreover, his push for patriotic education and against training in racism and bias has influenced lawmakers' actions this year.

As with all controversial topics, sides are chosen, and Americans are split between *Team 1776*, which was coined based on the year in which the United States was founded, and *Team 1619*, which refers to *The 1619 Project*, a collection of writings that exposed Critical Race Theory as a foundational principle of America's history with African American successes and contributions at its center.

As recent as 2021, states have debated, and some even passed into law the prohibition of Critical Race Theory as a tool for educating students on issues of racism in the United States. States such as Texas, Florida, New Hampshire, and Arkansas already have laws in place banning Critical Race Theory in classrooms. Although parents, politicians, and the public voiced concerns that Critical Race Theory was being taught in classrooms, it has not been written in curriculum presented in schools. However, traditional curricular dialogues mislead, stereotype, and overlook experiences of minorities. Constructs in the curricular such as segregated schools, underfunding of majority-minority heavy districts, unbalanced disciplining of African American students,

impediments to gifted programs, and curricula support racially suppressive ideologies. Traditional curricular dialogues mislead, stereotype, and overlook the experiences of minorities. Yosso (2002) facilitated that critical race curriculum exposes the Caucasian dispensation sustained by conventional curriculum structures and challenges institutions to disassemble them.

Yosso (2002) also declared that school curriculum was not simply the information included or excluded during instruction. Rather, it also included the configuration of the class and the practices by which students were assigned the class. Curriculum structures are supported by procedures in which learners are granted or denied access to gifted and talented education or magnet programs, as well as accelerated, honors, and advanced placement tracks. Traditional curricular processes fail to prepare students of color to achieve a higher education (Yosso, 2002). George (2021) articulated that Critical Race Theory was not a fundamental course or workshop; however, she highlighted Critical Race Theory as an approach through which teachers help learners assess the role of race and racism in American history and society. George (2021) continued her claim by declaring that in K-12 classrooms, Critical Race Theory can be a tactic to aid students in comprehending how racism has sustained past the civil rights era through systems, laws, and policies. This type of approach to viewing racism can allow students to think progressively and institute a more transformative society in which race is not used as a barrier. An immense spotlight illuminates Critical Race Theory taught in history classes across the United States as it threatens the very ideological facades in which American society wishes to depict. The ultimate debate derives from people who think learners should not be encumbered with the past and those who want students to understand how

the legacy of racism in the past shapes American society. *The 1619 Project* curriculum does not diminish the history of the United States as it relates to its establishment and foundation of the country; however, it does recenter the curriculum to emphasize the contributions of the African American experience as significant to American society. Critical Race Theory in school curriculum is being denied across the United States. States have either banned the instructional practice citing it as divisive ideology of American societal structure. By banning Critical Race Theory from schools, legislatures reveal their willingness to continue omitting minority contributions and lived experiences as valid to American society.

African American Male Theory

Bush and Bush (2013) introduced African American Male Theory as a theoretical framework used to explain the position and path of African American boys and men in society by drawing and accounting for pre- and post-enslavement experiences while capturing the psychological, social, and educational development and sustainability. Bush and Bush (2013) stated the following as the six tenets of African American Male Theory: (1) the individual and collective experiences, behaviors, outcomes, events, phenomena and trajectory of African American boys and men's lives are best analyzed using an ecological systems approach, (2) there is something unique about being male and of African descent, (3) there is a continuity and continuation of African culture, consciousness, and biology that influences the experiences of African American boys and men, (4) African American boys and men are resilient and resistant, (5) race and racism coupled with classism and sexism have a profound impact on every aspect of the lives of

African American boys and men, (6) the focus and purpose of study and programs concerning African American boys and men should be the pursuit of social justice.

The tenets of African American Male Theory allow for comprehensive engagement into African American boys and men experiences. Bush and Bush (2018) asserted that the environmental influences that touch African American boys and men are abundant and distinguished. African American Male Theory incorporates multi-disciplinary and trans-disciplinary approaches.

Bush and Bush (2013) stated that the African American Male Theory tenant *African American boy and men are resilient and resistant* speaks to the resilient nature of African American boys and men. African American Male Theory encompasses resilience theory and opposes shortage in paradigms, practice, and thinking. From this viewpoint, it is apparent that innate biological or cultural deficiencies socially constructed systems add to the social and educational challenges that face this group.

Resilience theory, introduced by Holling (1973), is focused on the aptitude, capability, and supremacies that people or systems demonstrate that lets them to succeed in the face of adversity. African American Male Theory particularly takes interest in microsystems, that is, personality, beliefs, perceptions, and intellect; outer microsystem, which includes home, family, peer groups, and church; subsystem, which is comprised of supernatural, collective will and unconsciousness, and finally, mesosystem that views how each system interact with one another. African American Male Theory portrays the many forms of resistance and opposition exhibited by African American boys and men. However, some demonstrations may be counterproductive to what is viewed as achievement and constructive in White conventional society.

Qualitative Research

Creswell and Poth (2013) stated that conventionally, qualitative research has been described as an approach to explore an explicit social, human, or phenomenological issue in the natural setting with attentiveness to the participants and environment of interest. Denzin and Lincoln (2011) declared that qualitative researchers mean to study phenomena comprehensively to interpret or bring meaning from the individual's viewpoint. Creswell and Poth (2016) synthesized that in differentiation of qualitative versus quantitative research, qualitative researchers use text to connect individuals' experiences, where quantitative researchers use figures, such as statistical data to report their results. Fundamentally, gaining insight from the perspective of an individual's experience can be transformative by grounding policies, guidelines, and directives in the experiences of those to whom they apply, thereby contributing to individualized experiences in education in the context of their own environment.

Creswell and Poth (2016) summarized that qualitative research can be descriptive with a focus on method, meaning, and comprehending through the use of words or pictures versus numbers. It is inductive, in which, the researcher clarifies abstracted concepts, and constructs, theories, and frameworks. Qualitative research uses the researcher as the primary instrument for data collection as it is the researcher who engages the participants directly to acquire data.

Phenomenology

Douglass and Moustakas (1985), Eddles-Hirsch (2015), and Moustakas (1994) revealed that phenomenology seeks to comprehend the social and psychological essences from the perspectives of the people who are directly inserted into the phenomenon.

Clandinin (2006), Connelly and Clandinin (1990); Haydon et a., (2018), Karpa (2021), and McCabe and Van De Mieroop (2021) suggested that phenomenology allows for research to identify imperative occurrences shaping the lived experiences of individuals.

Moran (2000) described phenomenology as a practice rather than a system that attempts to unearth the truth of matters, describe a phenomenon, in the broadest sense as whatever emerges in the manner that it emerges. Patton (2002) proclaimed that phenomenology embraces the idea of an essence or essences to shared experiences that are the core meaning to understand through a phenomenon of shared experiences. Stolz (2020) statedbthat phenomenology highlights what is known or distinct in perspective experiences in accord with the undertaking of consciousness. Eddles-Hirsch (2015), Groenwald (2004), and Marshall (1985) asserted that phenomenology offers relational guidelines to guarantee rigorous trustworthiness. Douglas and Moustakas (1985) proclaimed that phenomenology facilitates the emergent nature of qualitative inquiry.

Kimbrough-Scott (2022) emphasized that phenomenology contains an influence. These influences are used as a key constituent to lived experiences. Phenomenology neither negates the influence or interprets the influence as immaculate or fictional. Phenomenology clears the path for inquiring, understanding, and the susceptibility of experiences so that the purpose of realization is increased in free self-expression. Phenomenological studies offer a multifaceted examination of the participants lived experiences, which the depth is only as profound as the participant is willing to divulge. Kimbrough-Scott (2022) also asserted that additional exploration into phenomenon can open the door to more inquiry of an individual, therefore, contributing to further intellectual considerations. Descriptive phenomenology, as such, is a sound method in

which to capture the essences that are shared amongst participants of the study. Capturing the lived experiences of preservice African American male STEM education teachers is an important factor in understanding how to improve recruitment and retention efforts for teacher certification programs, which led to more African American male STEM teachers in classrooms.

Literary Deficits

Lewis (2013) said that many have discussed and written about the recruitment and retention of African American men in education, few have captured the lived experiences of African American men in education in qualitative research, allowing for their voices and stories to be uncovered. The available literature lacks the ideologies that focus on the stories of African American preservice middle school STEM educators. The Literature, although available, only tells a small portion of the stories that leads to derailment of African American males joining the teaching workforce, specifically in STEM academic subject areas.

Summary

The review of literature presented information on the significance of having African American male teachers. As the population of minority students continues to grow, more African American male STEM teachers are needed to open the doors to the realm interest to STEM careers. The literature also deems the need for African American teachers as role models as a favorable component to student success. The importance of having African American males include (a) utilizing culturally relevant pedagogy and care to increase academic achievement and (b) serving as a voice and advocate for students. While the significance of having African American male middle school STEM

teachers is stressed throughout the literature, additional findings is required to confront the shortage of African American male middle school STEM teachers.

The literature presented numerous explanations for the shortage of African American male middle school STEM teachers in K-12 public education. These reasons were: (1) discipline, (2) money, (3) peer groups, and (4) role models (5) pipeline problems that reflect the struggles of first- and second-year teachers. African American males who prevail over the extrinsic factors and choose to remain in the profession do so because they view themselves as role models and understand their need to be in classrooms. It is evident that until obstacles are addressed, and equal representation of students and teachers is made a reality, this difficulty will remain present.

The literature suggested a need for greater recruitment approaches and additional teaching programs to recruit more African American males into the profession. Recruitment efforts should include financial motivations, such as salary increases, loan forgiveness and tuition assistance student, alternative routes to attaining teaching credentials, and an African American male mentors to encourage younger African American males to enter and remain in the profession. Approaches such as the ongoing support through mentorship from mentors with diversified backgrounds and participation in learning communities with other African American male teacher candidates are required. These efforts tend to be critical in the retention of African American male teachers.

The literature review featured discussion related to Critical Race Theory and African American Male Theory. The two frameworks coupled as the foundation of qualitatively enhancing the literature available for recruiting and retaining African

American male STEM teachers. Critical Race Theory proclaims that racism is routed in the systems of the American education system through the five following tenets: (1) the perception that racism is not aberrational and ordinary; (2) the notion of an interest convergence; (3) the social construct of race; (4) the idea of storytelling and counter-storytelling; and (5) the idea that whites benefit from civil rights legislation. The fourth tenet of storytelling and counter storytelling provides a path to phenomenological qualitative study that results in a sound telling of African American male teachers' lived experiences.

African American Male Theory stands on the basis of the plight of African American men and boys. African American Male Theory is routed by the resilience theory introduced by C.S. Holling in 1973. The following are tenets of African American Male Theory: (1) the individual and collective experiences, behaviors, outcomes, events, phenomena and trajectory of African American boys and men's lives are best analyzed using an ecological systems approach. (2) there is something unique about being male and of African descent. (3) there is a continuity and continuation of African culture, consciousness, and biology that influences the experiences of African American boys and men (4) African American boys and men are resilient and resistant (5) race and racism coupled with classism and sexism have a profound impact on every aspect of the lives of African American boys and men.

The literature suggest that qualitative studies tend to relay the quality of life that is associated with human and societal concentrations. Phenomenology takes the individual lived experiences and manifest them into coherent similarities or themes that appear

among the individuals' lives. Utilizing phenomenology, Critical Race Theory, and African American Male Theory, agrees that the culture enrich lived experiences.

CHAPTER III

METHODOLOGY

Research Objective

The purpose of this study was to illuminate perspectives of African American male teachers who elect to enter education to provide data that alternative teacher preparation programs can use to improve their ability to recruit and retain racially diverse teacher candidates, specifically African American males in STEM content areas. The methods that were commissioned for this research sought to identify, understand, and provide context to the needs and necessities for alternative teacher preparation programs to successfully recruit African American male teachers in STEM content areas. This study drew upon previous research and the theoretical frameworks of Critical Race Theory and African American Male Theory as foundations to methodological evaluations and analyses the research methods used to conduct this research.

Research Questions

This qualitative phenomenological research study was guided by three research questions. The data collection and data analysis strove to provide garish concise answers to the following questions:

1. What is the motivation of African American males to enter the teaching in STEM content areas?
2. How do African American male STEM teacher and teacher candidates from four separate certification areas understand the need for African American male STEM educators?

3. What factors contribute to the decision of African American male STEM teachers and teacher candidates to pursue a career in the teaching profession, explicitly in STEM content areas?

Research Design

This research focused on qualitative methods. Bolte (2014) stated that qualitative research assists in asking the right questions and unlocking unsurfaced comprehensions of human processes. This research focused on qualitative methods. McRoy (1996) stated that qualitative research concerns the analysis and inquiry of social phenomena by use of nonstatistical methods and uses detailed descriptions from the perspective of the research participants as means of examining specific issues and problems under the study. Gall et al., (2007) made mention that the selection of participants in qualitative research is intentional and purposefully. This research adopted a phenomenological approach. Phenomenology, as a qualitative design type, was deemed relevant to employ as an innovative way of understanding the perspectives and experiences of pre-service teacher candidates and veteran teachers with certification areas in Math, Science, Technology Education, and Technology Applications.

The research was localized to one state to make the data manageable by narrowing the setting and sample. As the researcher currently teaches a middle school STEM course, recognition of the risks presents in studying one's organization must occur. Creswell (2007) stated that such a study in one's own backyard raises concerns of influence and threat to the researcher. He recommended various authentication approaches be commissioned to assuage the risk. This proposed research design included bracketing, utilization of interviews to substantiate the evidence, and incorporate the

participants' perspectives of the results and clarifications as credibility to the explanation produced.

Phenomenological Research

Williams (2012) stated that there have been numerous theories describing the shortage of African American males in education and the phenomenon of African American males in education has been discussed and that although the quandary of African American males in education can be highlighted in percentages, charts, and demographic statistics, phenomenological research approaches are required to understand the beliefs, attitudes, and perceptions of African American male teachers related to the underrepresentation in the profession. The data points are comprised of participants' thoughts about the phenomenon, which in this case is the underrepresentation of African American males in STEM education. Husserl (2001) stated that bracketing is essential in qualitative research. Bracketing is the undertaking in which the researcher interrupts their previous views of the world prior to the phenomenological analysis process. Assumptions and generalizations about African American males in STEM education exist and therefore must be that must be eliminated in order to maximum the accuracy of the study. Greening (2009) stated that "in research that involves multiple participants, it is easier to note the strength of inferences that are heightened by the rapidly occurring actors with more than one participant" (p.2). Byrne. (2001) suggested that phenomenological studies are designed to explain a phenomenon through the lived experiences of humans.

Participants

This study included a roster of six teachers and teacher candidate located in Houston, Texas. Participants were filtered to those who were African American, male,

and currently teaching a STEM subject area. The preliminary analyses of these questionnaires shaped the foundation of the selection criteria. It was reasonable to assume that participants' knowledge may depend on several factors, some of which were their field experiences, experiences with other African American K-12 teachers, and their experience in an alternative teacher curriculum. Emerging perspectives exposed during the initial interviewing phase directed the selection process.

This sampling included teachers and pre-service teachers with content areas in science, mathematics, technology education, and technology applications and capture a range of experiences, with the rationale that different experiences may influence their perspectives, willingness, and preparedness to foster successful outcomes with African American male students, access to relevant on-going professional development opportunities, and support from the university program. Strauss and Corbin's (1990) systematic approach involved between eight to 10 questionnaires were needed to reach a level of saturation. A saturation level is not possible within the confines of the empirical setting chosen and a cohort of African American male STEM pre-service teachers at a specific historically Black university.

Informed Consent and Confidentiality

The participants were provided with a consent form before they agreed to be included in the research study that detailed all expectations as a subject in the research study (see Appendix B). The complete consent forms remain secured on a secure encrypted external hard drive with only the researcher having access to protect the identity of the participants. The participants also received a copy of the research study participant rights. The individual participants reserved the right to review any responses

collected from them during the study as well as the findings. At any stage during the research, the participants were open to relieve themselves without any penalization.

The confidentiality of all participants was secured for the entirety of the research study, especially during the data collection process. The identity and demographics of the participants were concealed by using pseudonyms. The participants were referred to as African American Male STEM Teacher (AAST) and a number (1-8) depending on when they were interviewed (Appendix C).

Site

The participants in this research study, both practicing and studying, were located in Southeast Texas, particularly in the vibrant and diverse city of Houston. Houston was chosen as the ideal location for this study because it boasts a substantial population of African American teachers and teacher candidates. This demographic richness provided a fertile ground for the researcher to identify and recruit a diverse group of teacher candidates who could offer valuable insights into their experiences and motivations. By focusing on Houston, the study capitalized on the city's unique educational landscape, which is characterized by a variety of schools and educational institutions that serve a large and diverse student body. This setting not only enriched the data collection process but also ensured that the findings would be relevant and applicable to similar urban regions.

The researcher successfully gathered data from African American male teachers and teacher candidates, all of whom were based in Houston, Texas. This focused approach allowed the researcher to explore the specific challenges and opportunities faced by these educators in their local context. By engaging with both current teachers

and those in training, the study captured a comprehensive picture of the career route from pre-service education to professional practice. The insights gained from these participants were crucial for understanding the factors that influenced their recruitment, retention, and professional development. Ultimately, the data collected from this Houston-based sample provided a vigorous basis for generating actionable recommendations aimed at recruiting and retaining African American male STEM teachers.

Instrumentation

Key (1997) stated that the human serves as the primary data collection instrument, which is the researcher. The researcher uses a variety of methods to collect data, thus the obligation of assembling valid and precise data points lies on them. Key (1997) also concluded that the human instrument must detach themselves from the research study to concentrate on the method of data collection by removing all assumptions, biases, and preconceived ideas about the phenomenon. In this qualitative phenomenological study of pre-service African American males in the educational profession, the human instrument conducted interviews with individuals to uncover the essential perceptions of African American male teachers.

Interviews

In this qualitative phenomenological study of pre-service African American males in the educational profession, interviews revealed the core thoughts and perspectives that African American teachers had concerning their place in the profession. Gall, et al. (2007) explained that the informant interviews are used to collect data from individuals who have unambiguous awareness or opinions not openly presented to the researcher.

This qualitative research interviews were conducted to define and discover significances of themes in focus (Kvale, 1996). McNamara (1999) stated that an interview is exceptionally advantageous in attaining thorough information about a topic from a participant's personal experience According to Gall et al. (2007) interviews allow for flexibility, authorizing confidence and an affinity initiated to acquire data the respondent would not normally reveal by any other methods of collecting data.

Interview Question Construction

In this research study, the interview questions used were standard open-ended interview questions. Gall et al. (2007) contended that interview questions should be in a predetermined sequence and the same wording of the set of questions asked to each informant. The interview questions were concise and designed to elicit information on a specific topic. Valenzuela and Shrivastava (2005) stated that it could jeopardize the results or purpose of the study if interview questions were not written with a bias. The construct of the questions reflected the purpose of the current study with the objective of facilitating the exploration of the views and lived experiences of African American male pre-service STEM teachers related to their underrepresentation in the teaching profession. This research study used one set of interview questions selected to determine the perspectives of STEM teacher and teacher candidates.

Interview Protocol

The researcher conducted all interviews during the entire process. This helped to guarantee uniformity across all interviews. Because the same individual conducted each of the interviews, the transferability, which is the range of findings and results of the study is ensured to make it functional to other perspectives or factions (Bryman, 2016).

The researcher utilized standard interview protocol questions developed to discover the perspectives and lived experiences of African American STEM male pre-service teachers related to the underrepresentation of African American males in the teaching profession, specifically in STEM content areas.

The interviews were conducted using a set of instructions and prompts that were pre-constructed. Participants were provided a link to a document with prompts and instruction. The interviews took place in a virtual environment that provided a sense of comfortability for the participants.

The entire interview was via video conferencing, audio recorded and transcribed using Microsoft Teams, a web-based program that records video and audio and also translates speech to text, which allowed the interviews to be conducted verbally and transcribed posthaste. The rationale for Microsoft Teams as tool for interviewing was that it provided the participants a level of comfortability that allowed them to be freely open about their experiences. Furthermore, Microsoft Teams also provided the researcher with clear transcriptions with the opportunity for additional repetitions of the interview for the research expose more detail.

After the interview was converted from speech to text, the researcher evaluated the transcript for any inaccuracies by listening to the recorded version for comparison to the text version. Participants were allowed to review the transcript to verify all of the information was accurate, a process known as a member check. Once the interview was transcribed and member check completed, the video tapes were stored to protect the interview and its participants. The completed consent forms remain secured on an

encrypted external hard drive with only the researcher having access to protect the identity of the participants.

Researcher's Positionality

The researcher of this study is an African American male middle school mathematics and technology teacher in his 13 years in the education profession. The researcher is charged with educating seventh grade students in mathematics. He is the lead middle school math teacher for the school where he is currently employed. In this role, he is responsible for implementing a middle school mathematics curriculum, providing teachers with district created pacing guides and lesson plans in accordance with the state standards, and providing general support for subordinate teachers. The researcher obtained initial mathematics certification at the same campus where the study was conducted, and only used African American male pre-service teachers from the alternative certification program.

Interviews were conducted by the researcher. Bracketing was used to determine whether a previous relationship existed between the participants and researcher. Bentz and Shapiro (1998) stated that bracketing is used in a research study to disregard any prior information, perceptions, or beliefs about the participants and create a non-judgmental mentality. The researcher sought to provide the educational literature with an understanding of the necessity for African American male STEM teachers.

Data Collection

In order to stimulate views and familiarities with teacher perspectives, virtual semi-structured interviews were conducted. In order to maintain the trustworthiness of interviews, written permission was requested to video-record all interviews utilizing the

video interviewing tool, Microsoft Teams. Thirty minutes to one-hour interviews were conducted.

Open-ended questions were utilized to initiate the interviewing process. It was essential to remain focused on specific experiences and actions rather than allowing general comments on their perspectives of their influence in middle school STEM classrooms as the researcher determined generalizations. Asking participants to recall a recent event or action that involved a decision that impacted their decision to teach in a K-12 classroom, specifically in mathematics, science, technology and their perspective related to their input ensured that they emphasized applicable events.

Participants were questioned about their opportunities to participate in content specific professional development, whether they had access to the appropriate on-going support through the alternative certification program, and their perspectives regarding their preparation to facilitate environments with diverse student populations. Dowling and Brown (2010) recommended using an assortment of prearranged stimuli and inquiries for interviewing, which guided this researcher. This probing style permitted clarification of issues that arose and assisted a novice researcher.

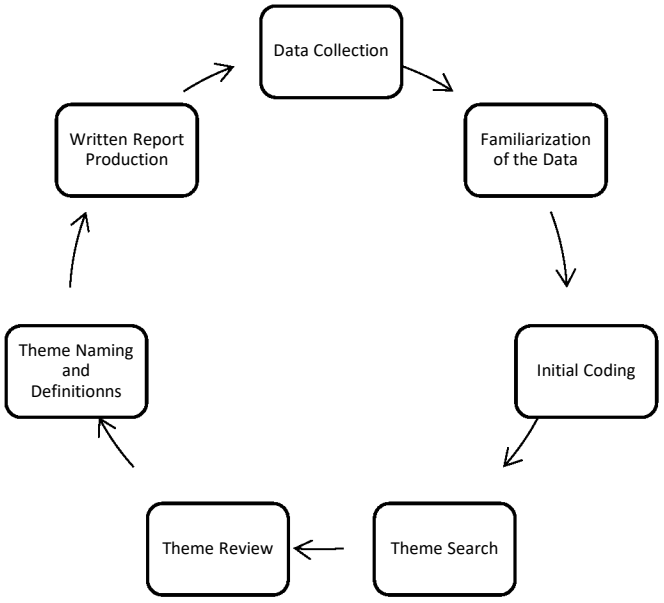
Trustworthiness Assurance

Lincoln and Guba (1985) depended on the following four criteria in their methodology to trustworthiness: (1) credibility, (2) transferability, (3) dependability, and (4) confirmability. These components are considered to be necessary for ensuring trustworthiness in qualitative research. Nowell et al. (2017) stated that when readers have a comprehension of what conventions informed researchers' analysis and how the data was analyzed, assessing the trustworthiness of the research is easier. Nowell et al. (2017)

cited the following areas of criteria for assuring trustworthiness in qualitative research: (1) credibility, (2) transferability, (3) dependability, (4) confirmability, (5) audit trails, and (6) reflexivity. To assure trustworthiness in the analyzation and reporting of the data related to this study, Nowell's six-step process to ensure trustworthiness in each phase of the thematic analysis was followed as showed in figure 1 below.

Figure 1

Trustworthiness Assurance



Phase 1: Familiarization of the Data

In the first phase of the six-step process, the researcher engaged with the data deeply. Braum and Clarke (2006) stated that it is fundamental for researchers to submerse themselves with the data points with the complexity and extensiveness of the content. Thorne (2011) stated that there is a variety of forms of qualitative data. Dey (1993) stated that a consistent structure is absent in qualitative data due to the volume, complexity, and varied formats; however, they are all useful when conducting a comprehensive analysis.

Newell et al. (2017) stated that for a researcher to immerse themselves in data involves repeatedly reading the data in a meaningful way that allows them the opportunity to search for meanings and patterns. Braun and Clarke (2006) recommended that researchers thoroughly read the data set at least one time before the coding process begins. Newell et al. (2017) continued that the identification of possible repetitions may be conceptualized as the researcher becomes familiar with all aspects of the data. Starks and Trinidad (2007) encouraged researchers to participate with the analysis as authentic spectator to the descriptions discussed in the data. That is to be truthful and attentive of their own preexisting perspectives, considerations, and theories, and advancing philosophies. thus, notes were composed immediately following the interviews to record the researcher's initial thoughts and identity commonalities and differentiations.

Phase 2: Initial Coding

Nowell et al. (2017) explained that the preliminary creation of codes from the data is a conceiving endeavor that requires the researcher's review of the data numerous times. Initial coding efforts take place during this phase of assuring trustworthiness. Savage (2000) stated that qualitative coding is a process of reflection and a way of data interaction by allowing the researcher to abridge and accentuate particular descriptors present in the data. Braun and Clarke (2006) suggested that researchers work methodically across the complete data set, give full and identical consideration to each data point, and distinguish stimulating characteristics in the data points that may form the foundation of topics across the data set. Data was marked, coded, and the retrieval of occurrences of codes using a qualitative data analysis software.

Phase 3: Theme Search

This phase called for categorization and organizing the theoretically pertinent coded data excerpts into themes. Nowell et al. (2017) stated themes may be primarily created inductively from the raw data or deductively from preceding studies. Braun and Clarke (2006) suggested that a theme does not essentially depend on computable methods; however, it captures something important in relation to the overall research question. Boyatzis (1998) stated that a theme may be generated inductively based on the raw data or generated deductively from prior research or theory. King (2004) cautioned researchers on coding based so closely to the research questions because one may miss recurring topics that are not based on the research questions.

Nowell et al. (2017) also suggested the ideal starting point is with predefined codes to contribute the influence on the analysis. The themes were combed using preset codes. Additional codes were created as needed or coded as miscellaneous.

Phase 4: Theme Review

During the review of themes phase, researchers review the data excerpts for each theme to reflect the presence of a coherent pattern. Braun and Clarke (2006) claimed that the validity of individual themes is considered to determine the themes accurately and reflect the significances of the data set. In this phase of assuring trustworthiness, changes to code were made as needed. Changes to codes included but were not limited to the deletion of codes that lacked significant data support and the creation of new codes as data showed support for it.

Phase 5: Theme Naming and Definitions

Braun and Clarke (2006) suggested that individual themes require a written detailed examination that identifies the tale that emerges from the data. In this phase of trustworthiness assurance, names of themes and definitions were produced. For themes as decision making transparency and lack of resources, definition were made for readers to understand. This is key for readers to understand the discussion of pre-service teachers' perspectives regarding their influence in STEM classrooms.

Phase 6: Written Report Production

Braun and Clarke (2006) stated that the report writing phase begins with the full and final establishment of themes and final analysis. In this final phase, a report of the analyzation and synthesis of themes were produced to capture the exploration of the topic based on the data.

Data Analysis

Constant evaluation between the data and analysis was adopted in order to implement the data analysis approach. Notes were written immediately following the viewing of each interview to record the researcher's initial reflections of issues that arose. The video recorded interviews were transcribed. The transcripts were then reviewed several times following the suggestion of Agar (1980) to engage in the particulars and try to get a sense of the interview wholistically before dividing it into portions. Notes were written in the margins of the transcripts to investigate the data.

During and after the data collection process, the researcher looked for patterns in the data and the identification of comparations and dissimilarities between the experiences and perspectives of the participants. Through cross-case synthesis, themes

and exceptions emerged. Strauss and Corbin's (1990) three phrases of coding – selective, open, and axial was employed. Key themes of the data were accentuated, and wide-ranging categories produced during the open coding process. Data was marked, coded and reclaimed using qualitative data analysis software.

During the axial process, new groupings were intellectualized, opening the door for a better comprehension of the data. The categories were not contingent on the explicit data but allowed for the narrative of the data in the terms of classifications. Themes were created to explain the relationship between teachers' experiences and leadership actions. The final step is when themes were generated to explain the relationship between middle leaders and autonomy. The purpose of the themes was to raise potential questions for further research, not to misrepresent to other settings.

African American Male Theory and Critical Race Theory both entail the art of storytelling and counter storytelling as methods of understanding the thoughts of African Americans, specifically with a directed lenses on African American boys and men. These frameworks proved to be invaluable in the analysis of the data acquired from the interview. The lived experiences of African American male middle school STEM teachers were analyzed distinctively for common themes within the stories shared by participants. The researcher unearthed similarities amongst the lived experiences of the African American male participant in this study.

Ethical Issues

Minimal risks or ethical dilemmas were present in this qualitative phenomenological study of African American males in STEM education. Participants did not require partaking in any immoral or hazardous actions. Participants' identity was

hidden by the use pseudonyms such as African American Male Teacher one (AAMST1) - African American Male Teacher six (AAMST6) for their names. This identification type occurred with all eight participants. The privacy of all participants remained protected for the entirety of this study.

The data collected was secured on an encrypted external hard drive with only the researcher having access to protect the identity of the participants until it was analyzed. Upon completion of the data analysis, the data, documents, video recordings, and all related files were placed under security on an encrypted external hard drive with only the researcher having access to for three years at which time the data will be destroyed. Destroying files and documents occurred through the process of formatting in which all present files were deleted.

Summary

This research study sought to discover the perspectives and lived experiences of African American male STEM teachers regarding the underrepresentation in the education profession by utilizing a qualitative method and phenomenological approach. Byrne (2001) proclaimed that a qualitative phenomenological research study allows for exploration of the subject through the participants' lived experiences. The participants were six African American male pre-service teachers with no teaching experience. The selection of the six participants occurred through purposeful sampling. Patton (1990) stated that purposeful homogenous sampling is selecting participants who are similar and have a large amount of information to share as it relates to the research study topic, intentionally.

Strauss and Corbin (1990) stated that data analysis occurs using the constant comparative method, which includes data coding, categorizing the data into common themes, and then describing the data in detail. Data collection was conducted through interviews with middle school STEM teachers. The interview process adhered to a strict protocol. According to Social Research Methods (2006), implementation of a protocol ensures consistency of the process is maintained. Participants were given and signed informed consent letter as well as provided a pseudonym to protect their discretion.

Chapter IV contains information on the results of the data analysis. The data was coded and organized into categories as identified from the research questions. The data helped explain the thoughts opinions, and perspectives of African American male STEM teachers and teacher candidates towards the role of African American male STEM teachers in the education profession.

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CHAPTER IV

RESULTS

The life experiences of African American male teachers and teacher students in STEM disciplines were analyzed using a comprehensive coding process to understand their motivation for STEM teaching and the experiences that shape their decision-making. This study examined these characteristics and provided valuable insights into recruitment and retention strategies for male African American STEM teachers. This qualitative study interviewed six Black male STEM teachers, including five practicing teachers and one teacher collegiate student completing a teaching certification program. Of them, two were middle school science teachers, two were middle school math teachers, and one preservice teacher candidate was enrolled in a traditional teacher certification program seeking certification in a STEM subject at a Texas Historically Black College and University (HBCU).

This study had several objectives: firstly, it investigated the underrepresentation of African American male STEM teachers in middle schools. Secondly, it proposed recommendations for addressing Black males in teacher certification programs and K-12 educational systems. Furthermore, this research sought to reveal the views of African American male teachers and educator candidates on their influence as STEM educators within K-12 education to encourage more African American men into Science, Technology, Engineering, and Mathematics careers.

Contrary to other studies that focus on the lack of male presence within classrooms, this research offers insights into why a few African American males deliberately sought certifications in middle school science, technology, engineering, and

mathematics. The questions guiding this study were (a) What motivates African American men to teach in the content areas of STEM? (b) How do four African American male STEM teacher candidates from separate certification areas understand the need for black male STEM educators? (c) What factors contribute towards an African American male's decision whether or not to become a teacher or, specifically, a STEM-based high school teacher?

The two major sections of the findings' presentation are the first and second. The opening part offers comprehensive profiles of the six participants individually. Afterward, an analysis is provided in this section that discusses some of the main themes and sub-themes from participants' interviews, as well as a general summary that addresses every research question. Finally, this chapter ends with a summarized review of the second section.

For Research Question 1: What motivates African American males to enter teaching in STEM content areas? It highlighted personal motivation, representation and reliability, and intrinsic versus extrinsic motivation.

Research Question 2: What is the perception of black male STEM teacher candidates across four certification areas on the existence of Black male STEM educators? This inquiry delved into the self-worth of African American men trained to be science, technology, engineering, and mathematics (STEM) teachers and their relevance to learning institutions. The main goal of this study was to establish how these educators saw the need for African American male STEM educators to enter the profession. This research highlights broader implications for having Black male STEM educators within classrooms so that education could mirror diversity among learners more.

Research Question 3: How do African American male STEM teacher candidates from four separate certification areas understand the need for African American male STEM educators? explores the viewpoints of African American male teachers in Science, Technology, Engineering, and Mathematics education who deemed it worthwhile to have their counterparts serve as teachers in the same fields. It also examined several themes, such as personal backgrounds and life experiences, that influenced these teachers' perspectives of why African American men are not being recruited into education. The exploration aimed to unravel the barriers experienced when recruiting African American males into the teaching profession and reveal how certain aspects of educational policies facilitate representation and involvement in teaching Science, Technology, Engineering, and Mathematics (STEM).

Participant Profiles

This segment provides a detailed and comprehensive portrayal of the participants who generously contributed to this study. By aligning with the primary objective of this research, it sought to offer an intricate understanding of their diverse backgrounds and experiences. Smith et al. (2018) emphasized the importance of such detailed profiles, as they play a crucial role in contextualizing demographic specifics and delving into the extensive pedagogical careers of six African American male STEM educators.

Each participant was assigned a pseudonym, a practice advocated by Jonson and Brown (2019), which ensures the protection of their privacy and confidentiality. This ethical approach is vital in research to maintain anonymity throughout the study, thereby upholding the integrity of the research process. These pseudonyms not only shield the

participants' identities but also allow for candid and open sharing of experiences, contributing to a deeper understanding of their contributions to the field of education.

By presenting these nuanced profiles, this section aimed to highlight the multifaceted nature of their experiences within the educational realm. It explores their journeys, aspirations, challenges faced, and achievements made, providing insights that enrich the broader discourse on African American male educators in STEM fields. Through these experiences, educational leaders gain valuable perspectives on their motivations, professional growth, and impact on their students and educational communities. In essence, this section serves as a testament to the dedication and resilience of these educators, offering a comprehensive view that underscores their significance in shaping the STEM education landscape.

Table 1 below is an illustration of participant demographics. It provides a comprehensive overview of the participant's demographic characteristics and professional details, structured in order of school level. This tabular representation encapsulates essential information, including pseudonyms assigned to ensure participant anonymity, ages reflecting their developmental stages, current teaching levels delineating their instructional contexts, specific teacher education programs undertaken to prepare for their roles, certification areas specifying their specialized competencies, and accumulated teaching experience highlighting their tenure and professional growth within the educational landscape.

TABLE 1

Participant Demographics

Name (Pseudonym)	Age	Certification Program Type	Certification	Years of Experience
AAMST1	29	Alternative Certification	6-12 Technology Education	2
AAMST2	30	Traditional Certification	4-8 Mathematics	4
AAMST3	29	Traditional Certification	4- 8 Science	5
AAMST4	26	Alternative Certification	4-8 Science	1
AAMST5*	22	Traditional Certification	4-8 Mathematics	0
AAMST6	28	Traditional Certification	4-8 Mathematics	4

Using pseudonyms, a methodological safeguard by ethical research practices (Jonson & Brown, 2019), ensures participant confidentiality throughout the study. This approach protects their identities and facilitates candid exploration of their backgrounds and professional trajectories. Including age details contextualizes their developmental stages while teaching levels elucidate their roles and responsibilities within diverse educational settings.

The teacher demographics underscore the participants' academic preparation and are tailored to meet professional standards and pedagogical requirements. Certification areas in the Table highlight their specialized expertise in distinct STEM domains essential for effective teaching and curriculum delivery. Moreover, the cumulative teaching experience documented is a testament to their pedagogical journey, reflecting accrued knowledge, skills, and dedication to fostering student learning and academic achievement.

Table 1 stands as a foundational asset within this study, providing an extensive profile of each participant that enhances comprehension of their demographic details, career trajectories, and impacts within the realm of education. This meticulous presentation facilitates exploring their diverse experiences and emphasizes their critical role in influencing educational methodologies and driving discussions surrounding African American male educators in STEM fields.

African American Male STEM Teacher 1 (AAMST1)

Aged 29 and currently in his third year as a classroom technology teacher at a middle school, African American Male STEM Teacher 1 (AAMST1) moved from an IT career to education. He has always been closely connected to the school district he works for. AAMST1 attended Texas Southern University, a prominent Historically Black College and University (HBCU) in Houston, TX, where he earned his bachelor's degree in information technology.

Teaching was initially off his radar. His mother worked as an IT analyst for over two decades, so he wanted to pursue information technology, dreaming of holding managerial positions in corporate America like her. After college, he spent two years as a computer support specialist before entering the field of education. However, doubts about mobility within the industry led him to consider other options. This search took him to Louisiana, where he started working in mortgage lending, providing immediate stability until economic downturns and subsequent layoffs pushed him to rethink his career. Although grateful for corporate opportunities, family health concerns and the desire for job security caused him to seek a more stable profession.

Personal and professional shifts prompted AAMST1 to look into alternative teacher certification programs. He found one that allowed him to teach while completing coursework and testing necessary for certification in Texas. Not only did this decision align with his developing aspirations as an educator, but it also enabled him to make a significant difference in students' lives while working towards educational/professional goals of his own along the way.

African American Male STEM Teacher 2 (AAMST2)

For six years, African American Male STEM Teacher 2 (AAMST2), a 30-year-old middle school math teacher, has taught within the Aldine Independent School District in Houston, TX. There, he teaches approximately 100 eighth graders. His professional experience has been in Aldine ISD and he has not worked for any other district.

AAMST2 attended Texas Southern University, a distinguished Historically Black College/University (HBCU) in Houston, TX. In 2018, he graduated with a bachelor's degree in interdisciplinary studies and specialized in 4-8 Mathematics. He did not always want to be a teacher, though. Growing up, he wanted to work in law enforcement. In middle school, however, he became interested in engineering and hoped to work at NASA someday. This interest persisted into high school, where he took engineering classes that allowed him to become skilled in creative technology applications and problem-solving strategies.

Throughout the interview, AAMST2 emphasized the importance of further research on why there are so few Black male K-12 teachers. His career path demonstrates an evolution from wanting careers such as law enforcement or engineering early on towards eventually realizing his love for teaching math and his commitment towards

educational equity through representation for traditionally marginalized groups within the profession itself.

African American Male STEM Teacher 3 (AAMST3)

Energetically enthusiastic during the interview, AAMST3, a dynamic 27-year-old middle school science teacher, expressed his love for teaching in genuine words. Being an African American male teacher was part of his confident demeanor. He grew up in Houston, TX, as the oldest son of a pastor and was exposed to rich cultural and family values that emphasized education.

He went to Jarvis Christian College in Tyler, Texas, where he immersed himself in his studies, obtaining a bachelor's degree in interdisciplinary studies and a teaching credential for grades 4-8 in science. The context within which he serves as a seventh-grade science teacher is vibrant with educational diversity in Houston, TX. Outside the classroom walls, his goal is to make science subjects enjoyable among students by nurturing them into critical thinkers who can solve problems on their own while still being curious about learning throughout life.

Named *Teacher of The Year* at his school is evidence enough about how much AAMST3 puts into what he does alongside coming up with new ideas when it comes to teaching methods, something which has earned him respect from peers within this profession, too, not forgetting that such recognition also reflects a wider positive influence made by individuals like him within schools across different communities where they work.

African American Male STEM Teacher 4 (AAMST4)

African American Male STEM Teacher 4 (AAMST4), a 26-year-old educator from Dallas, TX, is a professional example of a significant change from engineering to education. A Dallas Independent School District graduate, he was an academic and athletic standout who finished in the top 27% of his high school class. His school achievements earned him an athletic scholarship for track at Prairie View A&M University and a degree in Chemical Engineering.

AAMST4 was a substitute teacher in local districts as part of his studies. During this time, he loved teaching and decided to become an educator rather than an engineer. He wanted to teach because he loved showing people things and being someone, Black children could look up to. As he looks back on becoming a teacher, AAMST4 acknowledges that it was not what he had planned but has been the most rewarding thing ever. He was initially worried about dealing with students' attitudes but found that working with them brought him more happiness than anything else.

African American Male STEM Teacher 5 (AAMST5)

African American STEM Teacher 5 (AAMST5) is a Black male who studying teach STEM. He is 22 and studying at Huston-Tillotson University in Austin, Texas. Since 2021, he has been in a regular teacher certification program. His academic track is geared toward middle school math education, and he will complete the degree and certification in the Fall of 2024. Teacher 5 wants to work with underprivileged schools because they need more young African American men like him to teach Science, technology, engineering, and math.

African American Male STEM Teacher 5's career goals are informed by personal experience and social justice values. He explained that having a role model growing up saved him and inspired him to want to be that for other children who grew up like he did. He hopes to support his future students the way someone once supported him by giving them direction while igniting their curiosity about the world around them.

AAMST5 said that this research could be massive because it might help bring more African American males into teaching STEM subjects in public education systems across America. The point of this study might be even more significant than one may think. According to AAMST5, it would prove why representation matters and show what can happen when teachers genuinely care about their children's success, especially those from underprivileged backgrounds. So many things need to change if educators care about educating every child: He said, "We gotta make sure all our babies got somebody look like 'em teaching" (personal communication, June 10, 2024). One thing that stood out most strongly during the interview with AAMST5 was when he mentioned the importance of diversity among educators, not only different races but genders, too, because everybody has something unique, they bring into classrooms where children spend most of their days learning.

African American Male STEM Teacher 6 (AAMST6)

African American Male STEM Teacher 6 (AAMST6) is from San Antonio, Texas. It is a case of someone who has undergone tremendous changes in his life and still has not lost focus on his career as a teacher. He had attended K-12 classes in the home district, then joined Texas Southern University-Houston, TX, which has always been known as one of the best black schools in America.

Initially, AAMST6 opted for Aviation Science Management because he wanted to work within the aviation sector. However, during his stay at Texas Southern University, there was a drastic change in his academic and career interests. Through this self-examination journey, he shifted his majors to interdisciplinary studies, emphasizing 4-8 mathematics education. This critical choice arose from an increasing interest in teaching and a desire to influence scientific understanding among middle school learners.

In 2018, AAMST6 completed all the requirements of Texas Southern University College of Education, leading to his graduation ceremony and fulfilling his ambitions as a tutor. Although he had an education degree, he did not initially join them in the profession. He worked at the Texas Department of Family and Protective Services until high caseloads and extensive traveling made him reconsider pursuing his career in teaching. By 2020, he had met all certification criteria and entered the teaching profession. He teaches math in grade seven at one local middle school deep inside Houston-TX.

Presentation of Findings

This section provides a detailed analysis of the interview data obtained from the interviewees in this study. Before delving into the themes identified, the research questions that guided this study are revealed. Every subsection is classified according to various themes and has a comprehensive discussion involving valuable quotes from interviews supporting these discussions. Each thematic exploration is subsequently followed by a summary of findings emanating from the data. They have been used to direct the researcher's attention to observing the subject matters and general trends from

the interaction of participants with interviewers. Therefore, this part accounts for and justifies significant themes and subthemes that emerged from participant interviews.

Table 2 exhibits the research questions and the emergent themes generated from the findings of interviews of the six African American Male STEM Teachers. This table constitutes a fundamental component of this study, extensively analyzing the themes revealed throughout the interviews.

Table 2

Research Questions and Themes

Research Questions	Themes
1. What motivates African American males to pursue teaching careers in STEM fields?	• Family Inspirations • Impact and Community Contribution • Alignment with Personal Beliefs
2. How do African American male STEM teacher candidates perceive the need for African American male STEM educators?	• Intrinsic and Extrinsic Motivation • Systemic Disparities
3. What factors contribute to the decision of African American male STEM teacher candidates to pursue a career in the teaching profession, explicitly in STEM content areas?	• Societal Perceptions and Cultural Influence • Personal Background and Experience

Research Question One: What motivates African American males to pursue teaching careers in STEM fields?

This question aimed to understand what made African American men become STEM teachers; where participants gave diverse reasons, including personal experiences, effects understood in society, intrinsic passion for their disciplines (Smith, 2018), and familial impact on participants' desire to enter the STEM education profession. For example, AAMST1 remembered how his mother worked as an IT analyst, and it was her

career that sparked his interest in technology-related fields before he made up his mind to be a teacher.

Also, participants felt strongly about addressing the underrepresentation of African American males in STEM education because they believed they had a role in making this field more inclusive for all parties (Jones, 2020). This aspiration to serve as role models for future generations and contribute to broader societal goals resonated consistently throughout the literature (Brown, 2021). Consistent with Williams and Johnson (2017), participants stressed how educating marginalized communities could transform them and explained their roles as educators within such causes of social change.

The following sub-themes were identified: (a) internal motivations and (b) representation discussing intrinsic and extrinsic motivational factors affecting their career choices. This information was obtained through a comprehensive examination of participants' combined experiences and perspectives, thus providing an opportunity for self-reflection on personal dreams, societal expectations, and how they perceive their role as STEM teachers.

Familial Inspiration

Multiple participants explicitly mentioned that the reason for their decision was because there were members of their family who were teachers. There were other reasons for becoming a teacher associated with humanity and patience, as mentioned by different respondents. For these participants, the attributes were not only foundational requirements but also characteristics they deemed necessary to make a difference in the lives of their students.

From the perspectives of six African American male participants in this study, representation played a significant role in shaping motivation among them. The interviewees underlined the necessity of Black men being present in STEM classrooms. This is consistent with what has been discussed throughout the literature review in Chapter II and other researchers' findings, hence highlighting the importance of having diverse role models within educational settings.

Similarly, these participants demonstrated a commitment towards building inclusive learning conditions for all students, especially those from similar racial and cultural backgrounds, who would continue pursuing academic and professional pathways in STEM fields just like themselves. Such kinds of educators help to improve diversity among teachers by openly acknowledging it. Therefore, they are significant in attempts to address the low numbers of African American males in subjects such as mathematics and sciences, hence improving educational experiences for generations yet unborn. The following are examples of participants citing families bonding on careers related to education. AAMST1 said the following:

> I come from a family of educators, and I firmly believe that working in this field requires a compassionate heart and immense patience; initially, I was hesitant to enter the teaching profession, having witnessed firsthand the demanding work my family members undertook for low compensation. The influence of my family members, professors, and advisors had a life-altering impact on me, revealing that my true calling was to be in the classroom. It became clear that my purpose was to create meaningful change, just as my teachers had done for me. (personal communication, February 24, 2024)

AAMST3 said the following:

> My motivation was to be able to work with kids in some capacity. Because one, I was pretty good at math. My dad was also a teacher. He taught communication and writing, or he was like a high school thing that he did. However, I was pretty good at math. It was always easy for me to teach people how to do it. So that is how I got into education. I also just like working with kids doing so. (Personal communication, May 8, 2024)

Both viewed education as a career as a way of positively impacting student lives after being inspired by family members who were directly connected to the profession. Personal attributes and a sense of purpose primarily influenced their choosing teaching as a career path. These motivations can be understood through African American Male Theory, which emphasizes role models and familial encouragement that assist in overcoming systemic barriers towards aspirations to be successful in STEM education where their contributions are meaningful. Thus, after thoroughly analyzing interview data for two significant subthemes, the researcher derived from the study on African American males' perspectives as agents for change.

Impact and Community Contribution

The desire of teachers to give back is a feeling that cannot be limited to the borders of African American male students attending classes in STEM. Educators from this group have been known for their commitment to molding young minds while acting as positive role models, a rare phenomenon requiring extensive research. This importance is further amplified by unique societal challenges and the economic difficulties experienced by most people living in these regions, considering education comes last

among other priorities such communities might have. Male teachers who are Black are very instrumental when dealing with education inequality. This is because they bridge the gap between different societies by representing all people regardless of their background, thus acting as mentors at large.

According to Howard (2014), there has always been a dire need for more African American male educators, especially those specializing in Science, Technology, Engineering, and Mathematics (STEM) who could act as role models or mentors, narrowing educational gaps between various groups. Generally, such instructors choose working environments within poor neighborhoods where most students come from underprivileged families so that they can make a difference in their lives through teaching. In playing this part, Black men teaching STEM not only fight against systemic restrictions but also foster cultures recognizing nothing less than excellence academically resiliently, transforming schools around them into places characterized by success for every learner irrespective of race or gender mainly.

For one thing, African American male educators have the unique ability to fill vacancies left behind due to extreme shortages within the teaching profession. Moreover, besides being few, research suggests they significantly improve quality since many children find someone they relate with easily, thus motivating them to work hard in school (Ford, 2010). These teachers value fairness highly, knowing what it means to struggle in life without getting a fair share of opportunities, thus ensuring their classrooms become environments accommodating learners from diverse backgrounds. Their goal is that all succeed equally in terms of academic achievement and personal development, as such, promoting better communities at large.

Alignment with Personal Beliefs

The alignment with personal beliefs is rooted in the African American culture and community, as expressed by these teachers, who made this known through their desire to become educators. These teachers considered teaching not among other jobs or professions but rather a calling they were born to answer. They believe education can bring social change and empowerment within marginalized communities like theirs.

They went through a school system that did not offer them much, leading to missed opportunities and systemic inequalities. Therefore, they do not want any child to face what they faced growing up. For these educators, this means working towards inclusive classrooms where every student feels valued and supported regardless of race or gender. Indeed, one interviewee expressed it as follows:

> I wanted to be the change and see growth in areas similar to where I grew up. I wanted to be a mentor to help kids achieve their goals and be a different voice than what they typically hear. My motivation was the level of instruction that I received. When I got older, I found out it could have been better to help me understand science easier... giving the next generation multiple ways of analyzing and utilizing critical thinking was something I wanted to give to the next generation. (AAMST3, Personal communication, March 7, 2024)

AAMST3's statement aligns with personal beliefs centered on driving positive change and fostering growth in communities similar to his upbringing. His motivation to become a STEM teacher stemmed from a desire to guide students toward achieving their aspirations while providing a distinctive perspective different than the norm. Reflecting on his educational experiences, he recognized the potential for improved instruction,

particularly in science, which inspired his commitment to enhance learning through multiple analytic approaches and nurturing critical thinking skills. Furthermore, these teachers understood STEM education as an avenue for diversifying the STEM community. They acknowledged the underrepresentation of African Americans in such fields and advocated for more students from underrepresented backgrounds to be encouraged to pursue careers in science, technology, engineering, and mathematics (STEM).

Research Question Two: How do African American male STEM teacher candidates understand the need for African American male STEM educators?

This study also aimed to discover what perspectives African American male STEM teacher candidates held concerning the need for more representation of their race in STEM. The participants continuously discussed how, growing up, they needed to see robust and intelligent individuals who looked like them. That is essential for encouraging students of color to pursue careers in science, technology, engineering, and mathematics while challenging stereotypes and biases within academic institutions.

Furthermore, challenges were encountered related to systemic obstacles in the entry or progress of teaching science subjects to children. There were common themes regarding issues such as the lack of professional development opportunities, which are limited for African American men who earn lower salaries. However, participants showed determination and perseverance in their struggle for increased inclusion and equity among all stakeholders in STEM education. Thus, participants also identified multiple barriers and challenges, both systemic and systematic, that prevented them from joining and advancing within the STEM teaching profession. These included scarcity of

professional growth prospects, wage disparities, and little mentorship for Black males. Despite these setbacks, participants displayed resilience while advocating for greater inclusivity and equality within STEM education.

Various voices support the importance of representation in inspiring future generations, especially in STEM education. This enables every child to lead by example and design meaningful programs for their communities. Later, they teach others, and AAMST3 said that "Coding is for everyone, and children can easily see that when they see a person who looks like them taking a car through a maze" (Personal communication, March 7, 2024).

African American male STEM teachers are self-motivated by the desire to change lives among children of color. AAMST3 suggested that programming visibility matters when young African American males attempt to see someone identifying with them find their way around challenges such as coding a car to move through a maze. In other words, it shows them that such a challenge is accessible and achievable for even themselves. Additionally, this imbues confidence and builds self-esteem, which adds to learners' belief that they can do anything, hence becoming more interested in STEM subjects. The preceding statement shows how important it is for African American students to see other males of their race succeeding in STEM. African American male STEM teachers simplify code writing and enhance confidence and ambitions among African American youths.

Hence, the following themes seemed familiar in RQ two related to this study: (a) Intrinsic and Extrinsic Motivation, (b) Addressing Systemic Disparities. The following

subthemes promote the themes as tools for positive change and a call for more African American Male STEM teachers to enter the profession.

Intrinsic and Extrinsic Motivation

In the context of African American male teachers with STEM backgrounds, their choice to join teaching was commonly motivated by a mix of intrinsic and extrinsic needs. This means that personal feelings or aspirations are not the only factors that motivated these educators. These teachers' internal gratification comes from observing an improvement in their students' academics and personalities (Ryan & Deci, 2000). According to Ryan and Deci (2000), intrinsic motivation comes from experiencing autonomy, competence, and relatedness, which mirror the experiences and aspirations of African American Male STEM Educators.

Many African American male STEM teachers assert that they had their reasons for choosing this profession. This career path allowed them to share their love for what they teach and add value to students' lives. As expressed by participants of this study, AAMST3 mentioned that,

> I believe that the motivation for African American Men to join the teaching profession must be intrinsic and extrinsic. In my opinion, this is an industry dominated by women. However, I also believe that intrinsic motivation among African American male educators is a major reason why they become teachers. For me, an internal drive to change things made me take up teaching as a profession. On top of this, extrinsic motivation influenced my decision to become a teacher, too. Taking time off to spend with family, taking summer vacations to develop other talents despite feeling underpaid, and getting a regular paycheck

> were all factors that helped me decide to join education. (Personal communication, March 7, 2024).

AAMST4 said the following:

> As an African American male, I think it has to be a little bit of both. It does not necessarily have to be intrinsic, but that seems like the best outcome for students. Intrinsic motivation is what I believe all teachers must be great teachers and good at partaking in the sharing of their knowledge; however, as an African American, I know that extrinsically teachers enjoy the time off and having financial stability. (Personal communication, April 13, 2024)

These sentiments reveal the inherent gratification of observing students' academic improvements and personal growth. AAMST3 and AAMST4 illustrate the motivation of African American male STEM teachers. These quotes support the ideology of teacher motivation as intrinsic and a sense of personal gratification in their role in education. Furthermore, these statements, together demonstrate that African American male STEM teachers are motivated by fulfillment from within and without themselves while considering the practicality of societal expectations.

The Intersection of Intrinsic and Extrinsic Motivation

Motivation for male African American STEM educators is often confusing as their self and the rewards they gain externally are a blend. Teaching as a passion (intrinsic motivators) and chances of changing lives (extrinsic motivators) initiate them into it. Other factors, such as future employability and financial security, attract them. The motivators make them interested in teaching, and sustainability and job satisfaction. In order to create a conducive environment that will attract and retain talented African

American males in education institutions and educational policy writers, this combination of intrinsic and extrinsic motivation is essential. Furthermore, apart from promoting career advancement among individuals, this also improves the quality of STEM education given to all learners of color.

Per*spectives* of Systemic Disparities

Generally, Black men teaching science, technology, engineering, or math think that the way children are taught in school is stacked against them. They are talking about everything from having fewer resources to fewer chances for promotion or support. AAMST1 (2024) proclaimed, "I noticed disparities in how resources are allocated across schools. Schools in wealthier districts tend to have better facilities, more advanced technology, and greater access to professional development opportunities. This disparity can affect the quality of education students receive" (February 24, 2024).

The quote from AAMST1 highlights systemic barriers faced by African American male STEM teachers and their students by pointing out the unequal distribution of resources across different school districts. AAMST1's observation is that schools in wealthier districts often have superior facilities, advanced technologies, and more opportunities for professional development. Contrastingly, schools in less affluent communities, which serve high populations of African American students, need more critical resources. This disparity in resource allocation can directly impact recruitment efforts in those schools, thus impacting the quality of education.

AAMST1's observation also supports the need for systemic changes to ensure equitable access to education resources and the recruitment of African American males to provide high-quality education. That means that equitable distribution of resources and

establishment of enabling systems are necessary. Such systems must be implemented to offer all teachers equal opportunities for success regardless of cultural differences by giving them enough materials and chances.

Resource Allocation

Allocation of resources in schools is a serious issue. It directly affects fairness in education and student achievement. Researchers have shown that nationwide cuts in the budget at state levels affect funding for school districts, leading to inequality among the schools. To say it differently, a reduction in funding means less staff, outdated instructional materials, and an infrastructure deficit, especially for schools in poor areas (Levin & Belfield, 2015).

Moreover, programs created to redistribute money may increase imbalances by allowing the withdrawal of funds from larger districts into smaller ones that are not needed most. That widens the gap between rich and poor regions regarding resources, as noted by Odden and Picus (2014). As a result, these schools need more necessities like new technology and highly qualified teachers. Indeed, the effects of disparities on educational outcomes must be considered. So many teenagers have seen their dreams fade due to this problem. Limited academic achievement, which can translate into low graduation rates, is one of the consequences of such an environment, according to research conducted by Lafortune et al. (2018). In addition, courses that can help bright students improve their skills are made inaccessible, thus perpetuating inequality. It is also worth noting that different scholars have pointed out how resource differences affect learners' overall education experience and future life opportunities. The teacher interviews make it even more apparent what these challenges mean.

Research Question Three: What is the impact on African American male's perspectives of student outcomes?

This study explored what African American Male STEM teachers thought about their influence on student performance and educational experiences. They strongly felt they could help students achieve, especially learners from communities of color who often do not see science or technology as role models. Many shared anecdotes concerning how some students showed renewed interest and confidence in STEM subjects after being taught by Black male teachers.

Additionally, respondents recognized other roles they played as teachers and mentors relating to building trust-based connections with learners and an environment for teaching/learning. They argued that this would improve academic performance, promote social and emotional development, and the well-being of the learners. The respondents conveyed a deep-seated feeling of responsibility and pride in their capacity to act as agents for equity and justice within STEM education.

This study explored what African American Male STEM teachers thought about their influence on student performance and educational experiences. They strongly felt they could help students achieve, especially learners from communities of color who often do not see science or technology as role models (Robinson & Thomas, 2020). Many shared anecdotes concerning how some students showed renewed interest and confidence in science subjects after being taught by Black male teachers. The respondents conveyed a deep-seated feeling of responsibility and pride in their capacity to act as agents for equity and justice within STEM education (Hill & Brooks, 2024).

The following sections elaborate more on each research question by relating to academic discourses and considering motivational factors, views, and consequences among male African American teachers of STEM. Black male STEM teachers' experiences are a representation and serve as an example. It shows how personal experiences, cultural contexts, and social expectations shape their career paths and teaching methods. Black male STEM teachers revealed that educators not only teach but also mentor, support, and motivate young people in and out of schools. They become role models for students because they find solace in them. Through their experiences, one can see the importance of representation, the need to fight against systemic injustices, and sources of inspiration for this profession. In my research, I looked at critical points indicated by these educators concerning themselves serving different roles influenced by grades among the learners they represent. A critical central theme developed from the data collected for research question 3: Representation and Role Model. The illuminated subthemes were (a) Personal Background and Experiences and (b) Societal Perceptions and Cultural Influence.

Personal Background and Experiences

The reason some people want to be teachers is sometimes related to their background or experience. So many African American male STEM teacher recruits get into the profession because someone from their family was a teacher, or they had a teacher who impacted them, or some other person in the community showed them that education was necessary, and so was helping others. How can these male students hope for anything else without visual models? Children need more than one good example– especially when most adults here do not expect much from us anyway.

AAMST1 said he thinks "a lot" of Black boys need positive role models who look like them (February 24, 2024). He alluded that one cannot want something one has never known exists until they see someone doing better than the rest. Teachers sometimes replicate the same behavior when they encounter unstable families and drug dealerships.

Family was pivotal for AAMST3 – “My dad already taught… I liked going over to his house in the summertime So, I mean, that was appealing to me” (March 7, 2024). He grew up with two role models: his father and Mr. Morris (whom he wanted to be like). AAMST2 pursued coaching after always helping young boys with basketball. "I ended up becoming a teacher because I coached” (February 26, 2024). Then, once he started working with children more through school, he said, 'Why not teach?' Does it matter where my students see me? They do not care if I am at school or on the street picking up my little cousins after practice –just as long as I am not giving up on any of them. (February 26, 2024). Coaching led him to teach, so he believed more black boys should play sports.

Further, AAMST5 says, “If you've never seen a Black male in front of you, you never seen the impact of a Black person that's not in this query or a football coach, you will never understand what a Black teacher can do!” (June 10, 2024). For every Black child, it takes one Black male to serve as a good example. The quotes from participants collectively support the critical importance of the representation of African American males in STEM classrooms, particularly for African American boys. AAMST1 emphasized the need for positive role models who look like them, highlighting that seeing successful individuals from similar backgrounds can broaden their outlook and aspirations and counter negative societal influences. AAMST 3 illustrated how

engagement in communal activities such as coaching can naturally lead to teaching and demonstrating the value of visible, active role models in various settings.

AAMST5 articulated the broader impact of representation, noting that exposure to African American male teachers was necessary for students to understand the potential and influence the educators have beyond their stereotypical roles. These insights collectively argue for increasing the presence of African American male STEM teachers to provide diverse, relatable role models who can inspire and uplift African American male students, fostering a more inclusive and aspirational educational environment.

Societal Perceptions and Cultural Influence

The dreams of African American boys in the STEM field are greatly affected by societal ideas and culture. These perceptions and influences tend to be prejudiced, originating from deeply rooted cultural norms or wide social expectations that value certain professions above others, hence, they can determine the course of Black male careers. AAMST4 also pointed out socio-cultural biases inclined towards sports, thus giving them priority over academic-related jobs: "You do not see black children saying, 'Oh, I want to be a hockey player…It is a lot of football and basketball" (April 13, 2024). This quote highlights the sentiment that young people may shun becoming teachers just because of the choices they know, which usually involve sports. The more valuable sport seems among African Americans, however, the less likely it becomes for young people to succeed in other areas such as education, thereby stifling educational/professional possibilities for these boys.

AAMST4 offered insights about those specific occupations that society considers more important than athletics. Thus, success is only seen within limited perspectives, if

any exist, especially when compared with communities where academic achievements matter less than local sporting feats. These dynamics have significant implications for career choices made by young African American males who might feel obliged not to pursue their love for teaching STEM subjects but adapt to current cultural values instead.

Furthermore, AAMST5 noted how a Black teacher has never changed one's life outside of sports: "If you have never seen a black teacher impact you outside of an athletic perspective – you would never understand it" (June 10, 2024). The quote supports the significance of having diversity among role models in schools, which is emphasized here so that children can discover things about themselves. Such knowledge, it is believed by the participants in this study, will, in turn, debunk stereotypes regarding roles played by different races in intellectual development. While teaching, they become essential players capable of smashing barriers, giving African American boys self-realization opportunities.

When African American male educators work as science, technology, engineering, and mathematics (STEM) teachers, students' self-perceptions on capability matters could easily change. Many students become inspired when they see someone who looks like them succeeding academically or professionally, and many aspire to do the same, thus working hard towards achieving high grades. These improvements can enhance educational performances overall for such students, thereby leading to improved academic performance.

AAMST6 discussed how recruitment efforts let down African American men in education whose majors are in science, technology, engineering, and mathematics (STEM): "Yes, I graduated from an HBCU as an education major. There were no

incentives or programs to recruit or push African American males to enroll in the program…its disappointing when I look back on it" (June 16, 2024). This statement reveals some barriers that can prevent Black males from becoming STEM teachers, therefore, more must be done to attract and retain them in this sector. Not implementing proactive strategies aimed at increasing numbers also points to more significant problems associated with acknowledging and appreciating the roles played by such individuals in the teaching profession That can lead to a more significant achievement gap between different races that comprise educators, especially in science-related disciplines taught in schools, due to the absence of targeted support systems and a lack of mentorship opportunities.

Impact of Framework on Analysis

The integration of African American Male Theory and Critical Race Theory significantly shaped and extended the attentiveness of this study. These frameworks gave a critical perspective through which African American male STEM teachers' experiences, motivations, and perspectives were examined as a more distinctive understanding of their place in education.

Current Perception of Framework

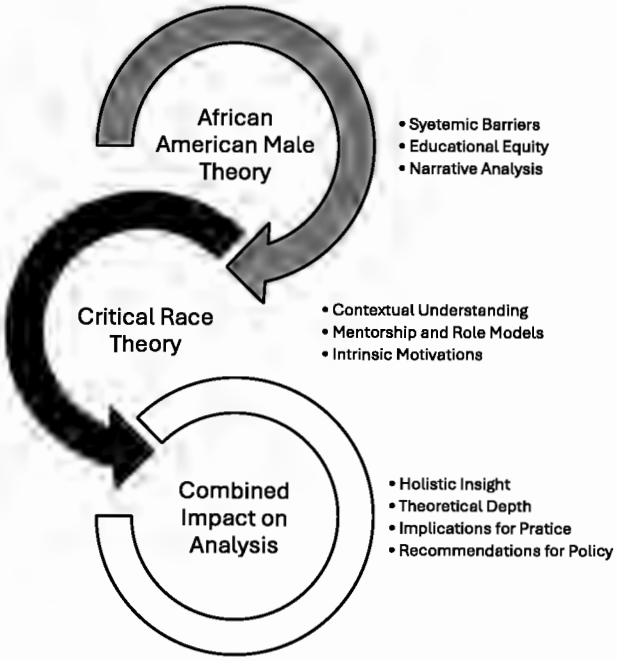
The researcher's perspective on the framework was broadened through a lens that gives a more subtle and comprehensive point of view of how African American male STEM educators are agents of inspiration and mentors for male students of color. The framework intricately details these representations and motivations. It highlights their indispensable input in teaching and the creation of a sense of purpose among their

students, especially those of marginalized populations. These teachers act as inspiring models for their students, proving that excellence in STEM is possible and worthwhile.

Additionally, the new version of this framework goes beyond the present African American Male Theory and Critical Race Theory. It exhibits the interconnective relationship of the two theories and interview responses to cultivate a cohesive updated in Figure 2.

Figure 1

Framework Analysis



This research uses Figure 1Framework Analysis to illustrate the theoretical frameworks that guided it. The African American Male Theory and Critical Race theory were integrated into the study as lenses from which the data was analyzed for interpretation. Combining these perspectives, therefore, resulted in a complete understanding of cultural and structural issues that affect African American male STEM

teachers. It is this dual framework that assisted in illuminating all of the subtle experiences facing this particular category of teachers, hence making it instrumental to this analysis. Therefore, various leadership practices should be based on these findings to transform policies instituted in future studies employed by other researchers in the field. These frameworks provide reasoning for additional studies to tackle present complexities. As such, leaders and policymakers must consider adopting more inclusive and justified approaches informed through enacting such critical theoretical lenses to address the imbalances with the representation of African American male STEM teachers within educational systems.

African American Male Theory. African American Male Theory supports the unique cultural, societal, and historical contexts which influences the experiences and identities of African American males in America. African American Male Theory, on several instances guided my analysis of interview responses. For example, intrinsic and extrinsic motivators inspiring African American male teachers to join and remain in the teaching profession were contextualized through African American Male Theory. The finding showed that many participants were driven by personal stories overcoming hurdles. They felt the call by communities to be beacons of change. The theoretical background helped put into perspectives such motivations with a larger narrative that is characterized by the African American experience, resilience and perseverance, hence pointing out how ethnicity along with community affiliations shape professional decisions.

One key aspect emphasized was the need for everyone to know the significance attached towards having an African American Male STEM teacher as a role model or

mentor. Participants expressed an aspiration to make positive impacts they could have in the lives of students who lack them most in STEM classrooms. The framework also enlightened how these instructors would assume a mentoring role beyond traditional classroom duties, thereby serving on behalf of those children whose environment do not make available such role models.

African American Male Theory made apparent identity and self-development as intrinsic motivators. Participants of this study mentioned often their history with mentorship connection as the rationale for why they wanted to become educators. It deepened the understanding regarding how these internalized motives connected with collective shared cultural experiences aimed at uplifting community members through stressing cultural pride alongside social justice.

Critical Race Theory. Critical Race Theory is concerned with the systemic nature of racial injustices and the importance of recognizing this in any analysis of social phenomena. Critical Race Theory illuminated the systemic barriers affecting African American male STEM teachers, such as race discrimination, cultural prejudices, and institutional problems. By adopting Critical Race Theory, a connection between the obstacles that impact teachers' professionalism and their ability to mentor effectively and support their students is made. Experiences shared by the participants revealed some instances of microaggressions, lack of administrative assistance, and the need for extra emotional work involved in negotiating predominantly Caucasian academic spaces.

The perspective of Critical Race Theory allowed for the examination of issues around educational equity and the underrepresentation of Black males in STEM education. This approach underscores the need to make systemic changes, establishing

more comprehensive systems that cater to African American male STEM teachers. Critical Race Theory was utilized to analyze the participants experience to give a critical insight into how race and identity meet their professional roles. It gave structure through which they could understand the impact of being African American male on their teaching practices, ways of relating to students, and perspectives of influence. The perspectives show that it is hard for them to navigate professional identities amidst racial stereotypes and biases.

Combined Impact on Analysis

Collectively, African American Male Theory and Critical Race Theory enhanced the analysis by providing a comprehensive perspective that captures both individualistic and systemic elements of participants' lives. This double approach ensured that the study did not only focus on personal motivations and challenges but also an examination of more comprehensive and social institutional backgrounds. African American Male Theory combined with Critical Race Theory provided a holistic understanding of the experiences faced by African American male STEM teachers. It helped in appreciating how personal cultural affiliations interacted with established systems in shaping careers as professionals, resulting in changes in students' lives.

The findings emanating from these frameworks have far-reaching implications. They support the urgency for increasing the representation of African American males among STEM teachers and from culturally responsive teaching, to validate diverse learners' worthiness. This study's purpose was targeted to retirement strategies, retention programs, systemic approaches toward dismantling structural barriers and fostering inclusive spaces for African American male STEM teachers.

In addition, suggestions were based on a combination of insights derived from African American Male Theory and Critical Race Theory. Such proposals involve support measures for African American male STEM teachers such as, mentorships, cultural competence training sessions, or policies that create conducive organizational environments. These suggestions aimed at making STEM classrooms more representatives for African American male students.

This integration brought some depth to the analysis, illuminating how individual realities intersect with systemic ones. In doing so, the theoretical foundation offered a more advanced reading of results, which exposed what lies beneath while dealing with African American male STEM teachers' struggles from multiple angles. Integrating theories into this research analysis provided essential lenses that helped enrich data interpretation. Therefore, the framework allowed for a more detailed exploration of the conditions that affected them as individuals or came from within the system. This analysis not only contributes to the academic discourse but also provides advice on promoting and prioritizing initiatives for African American male STEM teachers that could help foster inclusion and equity at both individual and societal levels.

Discussion of Findings

The interview enlightened the motivation and perspectives of African American male STEM teachers and gave insights into the many considerations when the participants selected their careers. These discoveries were integrated into existing literature using the theoretical frameworks of African American Male Theory and Critical Race Theory.

Financial Influence on Career Decisions

Brown (2016) and Smith (2015) both highlighted how financial challenges impact African American male teachers, with economic pressures significantly influencing their career decisions, job satisfaction, and long-term commitment to the profession (Brown, 2016; Smith, 2015). Stevenson (2014) offered a broader view, discussing how systemic financial pressures on educators affect career choices and retention across various contexts. Conjointly, these studies illustrate the profound effect of financial instability on the career trajectories and retention of African American male STEM teachers.

Five of the six interviewees cited financial stability as why they joined the education field. For instance, one participant stated that "I think economically, black men don't see financial permanence in teaching" (AAMST2, personal communication, February 26, 2024). This sentiment explains why education does not attract many African American males to the field. This also occurs in Harper's 2010 study, which revealed how African American men face economic pressures that lead them to choose higher-paying careers like engineering, medicine, and other STEM fields outside of education. Lynn (2006) and Milner (2006) also drive the important role played by financial stability, especially because such socio-economic problems affect African Americans disproportionately.

Importance of Representation

The importance of representation is particularly significant for African American male STEM teachers and their experiences in the classroom. Stevenson (2014) argued that diverse educators can enhance students' academic experiences and outcomes by serving as role models and offering various perspectives. Smith (2015) noted that African

American male educators play vital roles in providing representation, which is crucial for fostering an inclusive learning environment and motivating students. Similarly, Ladson-Billings (2009) emphasized that having a diverse teaching staff is essential for students' success, as it helps create an environment where diverse experiences and perspectives are integrated into the curriculum.

Representation was highlighted by participants' comments. One participant said,

> When you see other people call and they say 'You know sometimes they ask how long I went to college to be a teacher or how much money I make because I have a nice car or latest sneakers. It opens kids' eyes to teaching as career that's not a terrible as they originally thought because they see the representation of themselves in me. (AAMST6, Personal communication, June 16, 2024)

Ladson-Billings (1995) and Howard (2013) argued about the important role played by African American males as role models for students who challenge stereotypes, thereby providing figures others can identify with if they want to engage in technical fields later in life. The literature strongly supports this response. This statement is further demonstrated by the principles of Critical Race Theory, which encourages addressing injustices in education.

Education Disparities and Systemic Barriers

Education disparities and systemic barriers are deeply intertwined and have significant impacts on marginalized students. Stevenson (2014) discussed how systemic issues, including institutional racism and economic challenges, contribute to educational disparities and hinder equitable outcomes for all students. Ladson-Billings (2006) expanded on this by addressing how historical inequalities and systemic barriers

perpetuate educational disparities. She emphasized that these issues continue to plague disadvantaged marginalized students and affect the quality of their education.

Similarly, Smith (2015) highlighted how structural inequalities and institutional biases create systemic barriers that affect both students and teachers, particularly those from underrepresented backgrounds, thereby exacerbating existing disparities. Together these perspectives illustrate how systemic barriers and disparities shape the experience of African American male STEM teachers in middle school affecting their motivation, perspectives, and overall effectiveness in the classroom.

Moreover, this sentiment was echoed during interviews as participants pointed out systemic barriers and educational disparities as among their biggest challenges. For instance, one participant said, “You just don’t really see a lot of people even how to really incorporate STEM for black kids” (AAMST, personal communication, February 24, 2024). That supports the notion that more training for African American male STEM teachers is needed. This barrier will allow teachers to facilitate more content areas with more cultural relevance to students, increasing their academic realizations.

According to Brown (2012), who discussed the unavailability of resources and support for African American boys at school where they often are underprepared, causing educational disparities. Ladson-Billings (1995) drew attention to how Critical Race Theory experts allege that these historical legacies are responsible for such systemic barriers hampering equal access to education, which should be removed.

Values That Influence Motivation

The values that characterize a person’s choices towards pursuing a career in STEM education provide important motivators. These findings are consistent with those

by Harper (2010) and Milner (2006), who argued that many African American male teachers engage in teaching professions due to their commitment to social and their desire to serve their communities. The perspective of African American Male Theory also fits into this category since it looks at cultural background and personal experiences from an individual standpoint in career developments.

The interview findings presented a complex picture of why the African American male STEM participants in this study entered and remained in the profession. The emergent themes and narratives were consistent with those found within relevant literature on African American Male Theory, which emphasized the significance of money, being visible, racial barriers and prejudice, and their ideologies. By analyzing these elements, this study enhances the appreciation for how critical academic success and fairness in schools are African American male STEM teachers.

The works of Stevenson (2014), Ladson-Billings (1995), and Smith (2015) offer insights into how African American Male STEM teachers' identity and value can enhance their motivation to teach STEM subjects in middle schools. Stevenson (2014) emphasized that understanding and aligning with students' cultural values enhances engagement and learning, particularly relevant for an African American male teacher who incorporates their cultural perspectives into their teaching practices. Ladson Billings highlighted the significance of culturally relevant teaching practices, noting that teachers' beliefs about their students' potential can drive motivation and academic achievement. These are key factors for African American male STEM teachers navigating the complexities of their roles. Smith (2015) focused on African American teachers and argued that a strong commitment to cultural and community values is crucial for effective

teaching. This commitment not only influences their teaching practices but also shapes their perceptions of their role in STEM education.

Summary of Findings

The motivations, perspectives, and impacts of African American male STEM teachers and teacher candidates were comprehensively examined in Chapter IV of this study. The research used six participants who were interviewed intensively to unearth intricate themes and their sub-themes, which helped illuminate their career choices and professional path. Firstly, the study explored motives behind African American men pursuing careers in STEM teaching. These included personal growth, community intervention, and a desire to address representation challenges. For instance, AAMST1 and AAMST4 transitioned from IT and engineering into teaching because they wanted to be role models for others and significantly change their communities, respectively.

Additionally, it showed the importance of representation among teachers. Black male science, technology, engineering, and math teachers are more than just instructors. They serve as mentors whose lives were shaped by similar experiences that resonate with young people coming from culturally diverse backgrounds. This is evident, for example among participants like AAMST3 or AAMST5, where themes such as mentorship, empowerment through representation, and relatable role models transforming them come out strongly.

Thirdly, the research identified some systemic hindrances faced by African American male educators in STEM education. Themes of limited access to quality teacher preparation programs, concerns about career progression, and institutional prejudices emerged as evidence that they believe has hindered their professional growth.

These obstacles must be addressed for a more inclusive environment where Black males might pursue a STEM teaching profession.

Chapter V concludes with recommendations on supporting African American male STEM educators through practical means. Participation and policy change acknowledge the contributions and necessity of African American STEM teachers.

CHAPTER V

DISCUSSION AND CONCLUSIONS

This chapter comprises the conclusions, research limitations, and recommendations for future practice and research. As described in Chapter 1, this study focused on the following research questions:

(a) What is the motivation of African American males to enter the teaching in STEM content areas?

(b) How do African American male STEM teachers and teacher candidates from four separate certification areas understand the need for African American male STEM educators?

(c) What factors contribute to the decision of African American male STEM teachers and teacher candidates to pursue a career in the teaching profession, explicitly in STEM content areas?

Theoretical Framework Relationship

African American Male Theory and Critical Race Theory were employed as the guiding frameworks for the research. The study aimed to explore the experiences of six black male STEM teachers using these lenses. African American Male Theory is an all-encompassing framework that examines various aspects affecting African American male STEM teachers. This theory considers socio-cultural settings and historical contexts, providing a holistic understanding of such educators' career options and professional pathways.

Knowing the environments in which African American boys grow up is important because it might shed light on why some choose careers in STEM education. Cultural

heritage, community influence, and societal expectations, among other factors considered by this theory, shape educational aspirations and career decisions. It also examines broader perspectives, such as race consciousness and socialization processes that affect Black men's identity formation and vocational choices. Through this theory, one can learn how the educational system reflects cultural assets against challenges brought about by different backgrounds.

Furthermore, this theory acknowledges historical conditions that limited educational opportunities for Black males in America. Systemic racism coupled with segregation policies has dramatically impacted the career prospects of African American male teachers who were denied equal chances just because they were Black. These past injustices still impact their representation within STEM teaching professions today. Hence, the injustices show how African American Male Theory accounts for historical events shaping recruitment difficulties they encountered along their professional trajectory while working as STEM educators.

Additionally, African American Male Theory examines personal and community motivation levels of Black males which is vital for understanding their perspectives in STEM teaching. Motivation may be influenced by the desire to act as role models within communities, the need for more teachers from similar backgrounds, or even value added through teaching, especially science-related subjects and technological advancement. Intrinsic drives towards self-fulfillment and extrinsic incentives like better student performance and academic excellence attract them into this field.

The theory is necessary to understand what happens when Black men teach STEM subjects, how they navigate educational systems, rely on support structures, or

face career challenges. African American Male Theory can assist in emphasizing culturally responsive pedagogy and create supportive environments that recognize and value Black male teachers' contributions to science classes, which leads to a holistic education approach.

Therefore, African American Male Theory provides an intricate understanding of motivations and obstacles encountered by African American men and was an appropriate lens through which to understand African American men who teach in the STEM field. In addition, historical contexts are considered along with sociocultural and personal considerations by African American Male Theory, which implies systemic changes should be affected to enable them to join these professions easily, thus increasing the number of such educators in schools offering science courses.

Critical Race Theory helped identify institutional and systemic challenges male African American STEM teachers face. Critical Race Theory can be used to analyze power relations based on race within different spaces, especially schools. For instance, this exploration employed Critical Race Theory to show how racial injustices are sustained in STEM programs of study where the majority of students are Black boys.

One crucial characteristic of Critical Race Theory is the understanding that racism is structural and ubiquitous in society, including educational institutions. Critical Race Theory shows how some policies can position marginalized groups at a disadvantage even though they were designed to help them. For instance, because of racial stereotypes, Black men may not have many chances for mentorship, which affects their professional networks and career growth. Storytelling, a key element of Critical Race Theory, values the sharing of experiences so that gender as well as racial inequality can be addressed.

African American males teaching STEM subjects create opportunities to reflect on challenges met throughout life and share success stories, thus creating personal development among colleagues. The demand for more teachers who are men from African American communities involved in teaching STEM subjects becomes apparent when students do well only under the instruction of those who resemble them as discovered from this study. Critical Race Theory provided a foundation for understanding the need to eliminate institutionalized obstacles preventing Black males from entering in this profession while ensuring that all students are exposed to people with different backgrounds serving as their mentors. African American Male Theory and Critical Race Theory recognize sociocultural environments surrounding educators' lives alongside past hardships. Therefore, it emphasizes the need for positive role models who can motivate learners by promoting policies that foster Black males' participation in STEM education. It is vital because it rights past injustices and creates a conducive atmosphere for academic success among diverse individuals.

Moreover, in inclusive schools, every student thrives academically and socially. That exists when there are enough teachers representing various cultures, races, genders, and backgrounds characterized by culturally responsive teaching practices within the education system. There is a need to set up such an environment if we want fairness and to improve outcomes for learners across all communities.

Discussion of Results

The purpose of this research was to examine why African American male teachers choose to teach subjects in the STEM field. Intrinsic and extrinsic motivations were found to be the two major driving forces. They showed a strong dedication toward

education that often stemmed from personal experiences and the desire to change more than one student's life. For example, one respondent said: "I was looking for transformation…I wanted development…in my neighborhood… It is critical for me to be there for children who lack someone to believe in them, being their unheard voice" (AAMST3, March 7, 2024). These inner drives are consistent with African American Male Theory, which suggests that having positive role models can significantly affect academic achievement and self-awareness among students. The participants indicated they were effective at teaching and served as mentors or advocates who helped individual learners realize their potential.

Theme One: Duality in Motivations

The study revealed that intrinsic and extrinsic motivations are intricately connected among African American male STEM educators. This manifested as a dynamic interplay that influenced their career decisions and job satisfaction. They all shared an immeasurable love for teaching and the desire to see it grow among the youth. In doing so, they highlighted personal interest as key to fostering commitment to science-related subjects. One of the participants stated, "I love teaching STEM, but having job security with good benefits matters too because then I can concentrate more on teaching than worrying about money when things get tough" (AAMST4). This quote lends to the belief that although teachers must possess an unselfish aspect to their career choice, they must also be comfortable with the extrinsic areas as well, such as pay and seeing the outcomes of their efforts.

Teachers need both types of encouragement simultaneously in order not only to retain them but also to make them enjoy what they are doing better. The inner rewards

like happiness from seeing students succeed or fulfillment from sharing knowledge among others fueled participants' self-driven enthusiasm, which keeps teachers passionate about their profession. Likewise, external factors such as salaries that compete favorably against market rates, benefit packages designed around different needs levels, and job security based on continuous evaluation systems can help provide financial stability, allowing teachers to give their undivided attention.

Passion for teaching is among the intrinsic motivations that should be acknowledged, including its desire to impact students' lives positively. Educators are driven into this profession by a genuine love for their subjects and a commitment to arousing intellectual curiosity among learners while fostering academic excellence. Calls for professional development opportunities centered around pedagogical innovation, student engagement strategies, or curriculum design are required to empower students and nurture intrinsic motivation., That creates conducive environments within which all pupils would develop a passion for learning.

Educational bodies should acknowledge these intricate reasons to attract and retain more educators. Schools, therefore, need to put in place mechanisms that would ensure fairness during the hiring process while at the same time making sure those selected receive necessary support throughout their careers. Offering highly paid posts alongside attractive fringe benefits will motivate individuals to apply for jobs within this sector. Through creating conducive working environments where staff feel appreciated through initiatives like employee recognition programs aimed at boosting morale for teachers Schools should invest heavily in professional development activities such as

training workshops, conferences, and seminars to create an avenue for continuous learning, specifically among African American male STEM teachers.

Theme Two: Representation

This research showed how important it is to have Black male teachers in STEM fields. It also revealed that this representation affects students' perceptions about school and themselves. It affects schools' climates and communities' views on education more generally. Representation refers not only to numbers but also includes various models within classrooms, which can be seen in participant's data.

According to AAMST 1, it is a powerful sign for students to see someone who resembles them teaching STEM classes. This means, "You are in the right place and can do well in these subjects" (February 26, 2024). Such a feeling highlights the significance of numbers in combating prejudice, igniting hope, and fostering academic achievements among African American male students.

A recurring topic during interviews was how vital African American male teachers were as role models and mentors in schools, colleges, or universities. They act as cultural interpreters who help students understand what they are taught in the classroom by connecting it with their lives outside of school, especially those related to STEM. According to AAMST 2, culture should be reflected upon while teaching since there is no subject without creativity in real-life situations beyond mere numbers or equations. This way of teaching falls under African American Male Theory, which believes that positive role modeling helps students develop their identities and improves academic performance. Through innovation, examples from various backgrounds are incorporated into schools.

Outside the confines of a classroom, African American STEM male educators are still very much needed within communities because they act as links between cultures while mentoring African American male students and fostering inclusive spaces for success. It is important, therefore, to appreciate and celebrate these contributions made by such individuals towards ensuring fairness in terms of opportunity creation during the learning processes across all levels of education systems worldwide.

Theme Three: Societal Perceptions and Cultural Influence

Societal Perceptions and Cultural Influence examined the ways African American male teachers in STEM fields can change traditional societal norms. This was a key finding among the experiences shared by participants during this study. Frequently working at the crossroads of social perception and cultural impact, African American men who teach STEM are well-positioned to challenge stereotypes within schools while broadening them through their presence. These educators serve not only as teachers but also as ambassadors between different worlds. They bring unique perspectives on life, which should enrich the classroom setting.

Visibility is essential when combating stereotypes because seeing someone like oneself succeed can be very inspiring, especially if a person is unaware that such success was possible. This is why it is vital for people from diverse backgrounds, including those of African descent, to get involved in teaching these subjects at all levels so pupils can see themselves reflected within this area. Referring back to the power of role models, AAMST 4 said: “When students have a teacher who looks just like them showing them how things work in science or math class… It opens new doors for what they might want to become” (personal communication, April 13, 2024). This quote emphasizes the

transformative impact of representation in STEM education classrooms. When students see teachers who look like them, particularly in math and science, it can significantly broaden their horizons and aspirations. This representation helps students visualize themselves in similar roles and careers, making previously unattainable goals seem achievable. Consequently, it opens new doors for what these can become, fostering a more inclusive and motivating learning environment.

According to Critical Race Theory, representation matters because it affects self-perception and the perception of others, thus affecting educational outcomes as well. When educators actively engage with students' cultural backgrounds, then not only do they validate their identity but also empower them academically since now these learners feel inspired knowing that even careers that seemed impossible before now lie within their reach.

Similarly, some society's views about STEM may create barriers against certain groups, such as Black males who are interested in pursuing careers related to STEM disciplines. However, through my teaching career, I have learned that there is no better way than integrating real-life examples into lesson plans if teachers want them to connect with what is taught.

Sharing stories of African Americans who have succeeded in this field throughout history shows learners how much impact one person can make, inspiring them to strive towards greatness too. AAMST 3 expressed:

> "I always try to use as many relevant examples as possible from around us when teaching anything involving science. It helps keep students engaged because they

> see that what we are doing is not just some abstract concept but something that has been applied before" (personal communication, March 7, 2024).

AAMST3's response emphasizes the value of using real-world examples in STEM education to maintain student engagement. The teacher makes the material more relatable and understandable by showing how these concepts are applied in everyday situations. This approach helps students see the practical relevance of their learning, transforming abstract ideas into concrete, applicable knowledge. This strategy captures students' interest and enhances their overall learning experience.

It was also clear from my findings that embracing cultural diversity in American classrooms improves academic achievement and creates an all-round supportive environment where every student feels encouraged to achieve their full potential. once students realize that people like them can succeed academically, nothing can stop them from dreaming big and working hard for their dreams to become realities, irrespective of what society might say or think about certain groups being less intelligent than others when it comes to STEM related subjects.

Limitations of Study

Like all research endeavors, this study had some limitations to consider when interpreting the results. It is essential to acknowledge these limitations as they help understand the relevance and breadth of the research findings and direct future researchers as they seek to answer some of the unanswered queries in their methodologies. This section highlights significant limitations faced by the study during its course, indicating areas where findings might be confined or where there could be a need for more research to enhance comprehension.

Limitations are essential for any researcher because they make it possible to see what restricts the outcome of their studies. Through this acknowledgment, researchers would give a more balanced statement about what new knowledge was generated and what it means theoretically, practically, and politically for African American male STEM education. The following section will examine issues such as participant demographics, methodological considerations, and others that impact the interpretation and generalizability of findings from this study.

Participant Bias and Self-Reporting

This study was limited by potential participant bias and self-reporting. In qualitative research, participants' answers may be influenced by social desirability or their perception of what the researchers want to hear, thereby introducing a bias in the collected data. Participants might change their responses to match societal norms or make themselves look better, thus affecting the genuineness of their stories.

This limitation points out that it is difficult to rely only on self-reported information to get at people's experiences and perspectives. Even though attempts were made to build connections and create an atmosphere where respondents could freely speak themselves, social desirability remains unavoidable. Researchers should employ methods that reflect various views and bring out a deeper understanding of the intricacies involved in investigated phenomena.

Intersectionality and Diversity Within Group

Though valuable information was provided by this research about African American males who teach STEM education, it failed to consider all of the race-gender-socioeconomic status-other identities intersections involved in an individual's education

experience. Henceforth, researchers must apply intersectionality in future studies to understand how different aspects, such as race, gender, and socio-economic status, affect teachers' attitudes toward work and development perspectives. Researchers can appreciate the intricacies of teaching by widening their horizons beyond what influences them professionally, like their personal life or where they come from. They should look at income levels achieved, level of education, employment opportunities, and their proximity to schools. In other words, this implies that one person can be both privileged and marginalized simultaneously, depending on the various contexts they find themselves in during their professional growth years. Adopting such an approach makes it possible for scholars to identify those factors that hinder success among educators of different races, backgrounds, or genders. It also recognizes that people may have more than one privilege or disadvantage when going through their careers as teachers. This not only increases depth but also suggests new ways where educational institutions could improve policy-making processes based on findings from academic research carried out so far.

Although this study provided valuable information about African American male STEM educators' motivations, perspectives, and experiences, it is essential to recognize its limitations. These shortcomings should be considered when undertaking further research to widen the knowledge on this subject and improve efforts towards the successful recruitment, retention, and empowerment of African American men in STEM teaching positions. Rectifying these gaps will enable educational leaders to address equality and inclusion issues within science education more effectively.

Recommendations

The following recommendations are formulated according to this study's findings that showed what the African American male teachers in STEM fields:

Recommendation for Administrators

Enhance Teacher Preparation Programs

Improving teacher preparation programs for African American men is crucial to promoting diversity and inclusivity in education. This can be achieved by creating specialized courses aimed at meeting the needs and addressing the experiences of Black male teachers.

Also, these programs should use culturally sensitive methods when teaching because they not only prepare teachers intellectually but also practically equip them on how best they can deal with students from different backgrounds. Furthermore, another step towards achieving this goal would involve identifying the specific challenges African American male educators face. For example, mentorship schemes may be introduced where successful teachers of color act as mentors or coaches..

Many people who want to become teachers give up due to financial constraints. Scholarships should, therefore, be increased, and bursaries awarded explicitly targeting African American males wishing to pursue careers in education. Scholarship will help solve some economic problems experienced by such individuals, thus making schooling more affordable and thereby enabling all deserving persons access equal opportunities regardless of race or gender. In this way, classrooms can have a broader range of views represented from diverse cultural backgrounds as well.

To build on these ideas, joint efforts must be made between schools, colleges, universities, neighborhood group organizations, and government departments. Further suggestions include creating partnerships among educational institutions, community groups, and policymakers. This will increase available resources, establish sustainable funding streams, and ensure proper implementation monitoring, evaluation, and continuous quality improvement.

Ultimately, improving teacher preparation programs for Black men is not just about having more teachers from this demographic group entering into the teaching profession but also enhancing learning outcomes for each student. That can be done by training a variety of qualified instructors who possess the necessary skills, knowledge, abilities, talents, values, attitudes, passion, dedication, commitment, love, care, empathy, patience, understanding, respect, appreciation, tolerance, equality, justice, fairness, collaboration, communication, competence, confidence, creativity, critical thinking, problem-solving, peacebuilding, team spirit, leadership, self-esteem, discipline, self-discipline, motivation, inspiration, humility, honesty, integrity, accountability, transparency, professionalism, ethics, morality, flexibility, adaptability, reliability, responsibility, time management, planning, organization, and decision-making.

Establish Mentorships and Networks of Support

The creation of mentorship programs and support networks are crucial to developing and advancing STEM education for African American males in the school system. One way of doing this is through structured mentorship programs that pair such teachers with experienced educators who can provide them with guidance, advice, and support during their career journey in teaching science courses. These mentors should not

only help them understand how to overcome various difficulties encountered while teaching. However, they should give insights into what is required to move from being a classroom teacher to higher positions within school administration or county-level offices. For instance, becoming curriculum coordinator or district superintendent requires someone knowledgeable about pedagogical leadership development.

In addition to individualized mentoring, professional learning communities explicitly tailored for African American male STEM teachers should be established. Such groups will act as platforms through which these teachers can meet regularly and share experiences regarding what has worked best for them when teaching science subjects at different levels, including middle school up until college, where most young people take up careers. The exposure in lower levels can enable each member benefit from others' knowledge, thus saving time. Adopting proven practices without having to go through trial and error is better. Sharing wisdom gained over the years working in the field amongst peers create safe spaces to vent out frustrations. Hardly would any other person understand challenges faced daily and that will enable mentors to offer advice based on experience. Additionally, continual professional development activities must be provided for such programs together with professional learning communities for sustainability. They should be vibrant hubs where new entrants are welcomed and guided towards improving their skills. Veterans should continue nurturing young professionals until their retirement.

In order to make these relationships work better over time and reach more potential educators, it is necessary for certain stakeholders to partner with other institutions within the community, like colleges and universities, among other industry

leaders, thus creating what might be termed an ecosystem for mentoring African American male teachers. This will ensure the availability of resources such as books and materials required during training sessions as well as financial support, which may come from different sources, including donor agencies, government departments, foundations, private companies, local businesses, and community-based organizations. On the other hand, experts in various fields of STEM should be brought closer where they are easily accessible to help enrich others through sharing their experiences.

Recommendations for Policy

Address Systematic Barriers

It is essential to establish clear progressions to encourage the development of Black male teachers in STEM subjects. The plan is to have all-inclusive training programs that are also adjusted enough to help improve their management skills while working within schools or any other education setting. It also means that these undertakings enable such educators to acquire the necessary knowledge required to lead in this area and ensure fairness concerning career opportunities for advancement in STEM education. Structured pathways for advancing careers offer African American male STEM teachers mentorship opportunities and professional networks. Professional development should be targeted towards specific needs, thus equipping them with relevant resources to help them succeed in their respective professions, making them better educators who can lead effectively within various spheres of science, technology, engineering, and mathematics.

Education establishments must focus on leadership training and career development if they want diversification within the teaching profession. These moves can

eliminate structural obstacles against Black male teachers' promotion and boost their numbers alongside achievements made within programs. Moreover, schools must nurture such potential leaders thereby enriching learning experiences that eventually benefit all students regardless of background knowledge or abilities. Essentially, it establishes solid foundations for leadership by instituting rigorous training coupled with systematic means through which one may rise from lower-level jobs until reaching higher positions without hitting any glass ceilings along these paths.

Analyze Existing Education and Employment Policy. Current local community, state, and national educational policies need to be studied exclusively to investigate how far they promote diversity, equity, and inclusion in STEM education. This means that the inclusivity of hiring practices should be assessed. Professional development for African American male teachers must also be considered when thinking about leadership paths and retention strategies. Examining recruitment policies at the grassroots level involves determining whether or not these rules are aimed at realizing diversity goals and equitable employment. Recruitment methods that actively attract Black male teachers into science-related fields should be evaluated vis-à-vis their reflection of learners' demographic characteristics.

Statewide programs on professional growth explicitly designed for individuals belonging to this underrepresented group within the profession of teaching science subjects should also be reviewed alongside relevant funding allocations made by different states across America. These initiatives reflect various aspects, such as cultural awareness training, so that teachers can become competent enough while handling students from diverse backgrounds. National policies concerning career progression routes followed by

Black men who are educators in STEM areas also deserve some attention during policy analysis processes. It is essential to look at whether mentorship schemes exist for them or any other form of leadership training that may facilitate their retention within teaching service since currently few such exist.

Financial Incentives and Support. The trustworthiness of the study was solidified through an audit trail and peer review methods. There is a need to advocate for expanded and accessible opportunities for loan forgiveness and scholarships that specifically target African American males toward STEM teaching careers. These finite incentives greatly relieve the enormous monetary obstacles entailed in getting into and maintaining a career in STEM education. Policymakers should involve more African American males in STEM teacher preparation programs by broadening their eligibility criteria and increasing their funding. Moreover, these initiatives must be centered on initial expenses and provide continuous support throughout teachers' professional careers, promoting ongoing professional development and advancement chances. Ultimately, robust loan forgiveness and scholarship programs are a must to ensure equitable access to high-quality education while at the same time developing a diverse pool of talented STEM educators committed to shaping the following generation.

Recommendations for Further Research

This study has identified various areas that can be further explored in order to have a better comprehension of the subject matter and fill any remaining gap in knowledge as well. They are discussed next.

Longitudinal Research Studies

To fully monitor and understand the career paths of African American male STEM teachers and their challenges over a long period, it is essential to conduct a vigorous longitudinal study. The present project aimed to reveal significant data regarding their staying power in the profession, job satisfaction level, and changing professional development requirements. The longitudinal study can support its claims with published research by recording these incidents over time, thereby giving an evidence-based perspective that may be used to improve support systems and ensure sustainable careers within science education for this population.

Recent literature has shown that certain groups are underrepresented in science, technology, engineering, and mathematics (STEM). In-depth studies to fully comprehend it can be done with the help of longitudinal studies. According to Johnson et al. (2020), such research enables us to investigate deeper into understanding structural impediments Black men face throughout their teaching career in STEM schools. For instance, the lack of mentorship programs and non-inclusive practices at institutions, among others, are part of the systemic challenges they encounter as they try to advance professionally. Herring methods applied by surveys will provide actionable recommendations that could significantly improve the sector. Therefore, policymakers, educational administrators, and leaders at different levels may use these suggestions when designing interventions that foster success among African American male STEM teachers.

Comparative Research

Comparative research that examines African American male STEM educators against those of different racial and ethnic backgrounds may help to identify specific

challenges and reveal opportunities in STEM education. These comparisons can also expose the barriers faced by African American male educators in this subject area and point at some of the issues that have enabled them to participate actively and prosper. One crucial aspect that comparative studies may consider is how recruitment strategies are designed for African American male teachers who are engaged in STEM fields globally vis-a-vis their counterparts from diverse ethnicities. The hiring process or even available professional development programs within schools should be among the issues investigated under this topic. Understanding these disparities may expose underlying prejudices, which can prevent career growth among Black men working as teachers, especially those teaching STEM.

It is also necessary to examine workplace dynamics experienced by African American males involved in teaching STEM subjects. The workplace differs significantly according to race, which alters job satisfaction, and interpersonal relations among different races of coworkers in schools. To investigate their general contentment with school life and the factors contributing towards such happiness in any educational or occupational setting, it is advisable to analyze inclusive schooling systems while considering the specific academic inclinations of African American males. This awareness may help establish a supportive environment for all pupils and teachers by better appreciating these aspects of diversity.

Equally important would be investigating the impact that culture-responsive practices and inclusive teachings have on achievements in STEM subjects made by students who are taught by instructors from African America. This may assist policymakers in developing policies to ensure equitability during education delivery.

Furthermore, Comparative Research might reveal effective ways through which higher educational institutions could assist in enhancing success among African American male students pursuing careers in STEM. Policymakers and other stakeholders within the education sector could learn from best practices to broaden participation opportunities for all children regardless of race and gender in mathematics, technology, engineering, and science courses.

Conclusion

This research aimed to examine how African American male preservice and veteran teachers viewed themselves as STEM instructors, particularly in the K-12 system. It suggested that having favorable encounters with male African American teachers who were into STEM might encourage more Black boys to pursue careers related to these subjects. However, current literature needs to pay more attention to stories told by African American preservice middle school STEM education majors. This omission makes such explorations indispensable for understanding why few men from this demographic seek certification as teachers or what they think about their place within teaching.

The participants were instructed to respond to questions in Appendix D, which comprised 11 items, making it part of the data collection instrument. What they think is essential in life and why was unveiled by what they told revealed during the interview. In conclusion, this study found that African American male STEM preservice teachers and veteran teachers who participated were affected by several factors in their decision to teach STEM subjects as a career. These results highlight important considerations for recruiting African American men into STEM education certification programs and

positions in school districts. This research represents an initial step towards enhancing district or university strategies designed to recruit/retain more science-trained Black male teachers, thereby establishing a more diverse instructional staff across schools.

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APPENDIX A: Institutional Review Board Approval

PRAIRIE VIEW A&M UNIVERSITY
A Member of the Texas A&M University System

To: **Stella Smith, Ph.D.,** Principal Investigator
Cris L. Garner II, Co-Investigator

From: Marco L. Robinson, M.A.Ed.
Director, Research Regulatory Compliance
Office of Research Compliance

Date: February 13, 2024

Re: IRB Protocol #2024-007
Small in Number; Large in Impact Recruitment and Retention of Middle School African American Male STEM Teachers

This serves as an official notice that your IRB protocol application submitted falls under the Exempt Review, category 2ii, according to the Code of Federal Regulations.

Please note, any changes to the exempt protocol must be re-reviewed by the IRB.

Marco Robinson 2/13/2024 | 3:16 PM CST

Marco L. Robinson, M.A.Ed.
Director, Research Regulatory Compliance
Office of Research Compliance
Email: mlrobinson@pvamu.edu

APPENDIX B: Participant Content Letter and Consent Form

SMALL IN NUMBER: LARGE IN IMPACT THE RECRUITMENT AND RETAINMENT OF K-12 AFRICAN AMERICAN MALE STEM TEACHERS

Cris Garner, Doctoral Candidate, Prairie View A&M University, College of Education

Esteemed future educators, you are invited to participate in a research study designed to investigate the state of African American male teachers in the public school system. Please read the letter thoroughly and in its entirety before agreeing to be included in the study. Please feel free to contact the researcher with any questions, comments, or concerns. The study is being conducted by Cris Garner, Doctoral Candidate at Prairie View A&M University.

Background Information

The purpose of the study is to utilize research to explore the perceptions and lived experiences of African American male teachers related to the underrepresentation of African American males in the teaching profession. The research study aims to discover the motivation of African American males to choosing the teaching profession, and to find ways to strengthen recruitment and retainment of African American males. The educational world can use the findings of the study to implement plans and policy to hopefully increase and retain African Americans males in the field.

Procedures

The study will not be able to include all of the potential participants. The research study will include eight participants. The researcher will not have to eliminate any participants. The researcher will eliminate all teachers that have any years of teaching experience from the selection process. The next step will be to randomly select the participants for the study from the remaining eligible participants. The researcher will select eight teachers from participants in the Black Male STEM Teach initiative.

Upon agreement to be included in the study, you will be involved in a confidential structured interview with the researcher. The structured interview will allow for you to express your perceptions on the state of African American male STEM teachers in the education. The interview will be video, and audio recorded using a virtual tool, as well as transcribed through Microsoft Teams' transcribe tool for your review. The research participant will be able to check the video, audio, and transcription to verify all information is accurate. Once the participant verifies the information, the audio tape will be erased and destroyed, and the transcribed copy of the interview will be secured on an encrypted secured external hard drive with only the researcher having access.

Risks and Benefits of being in the Study

There are no risks associated with being in the study. The researcher would only require 45-60 minutes of time to complete the interview. The benefits of being in the study are the opportunity to offer your perceptions of the educational profession as it pertains to pre-service African American male teachers. This will be a chance for your voice to be heard prior to entering the classroom as teacher of record. You will be part of a study focused as an initiative to increase the recruitment and retainment of more African

American male STEM teachers and strengthen the performance of African American students in STEM content areas.

Confidentiality

The interview results will be kept private. All data and files related to the researcher study will be secured in a locked file cabinet in the home office of the researcher with only the researcher having access for three years then destroyed. In the published reports, there will not be any information provided which would assist in identifying any participants. The actual name of the school system and specific school a participant is employed will not be used. The real name of the participant will not be used either. Upon completion of the study, the researcher will make all results and findings available to participants.

Voluntary Nature of the Study

Please note participation in this study is completely voluntary. If you decide to participate in the study, you are free to address any concerns or to withdraw at any time.

Contacts and Questions

The names and email address for the committee members supervising the study are provided below:

- Dr. Stella Smith, Associate Professor, Prairie View A&M University-Committee Chair stsmith@pvamu.edu
- Dr. Douglas Butler, Associate Professor & Interim Dean, Prairie View A&M University-Committee Member dmbutler@pvamu.edu
- Dr. William H. Parker, Professor, Prairie View A&M University-Committee Member whparker@pvamu.edu

- Dr. Jerrel Moore, Assistant Professor, Prairie View A&M University-Committee Member jvmoore@pvamu.edu

Please direct any questions, comments, and/or concerns regarding the participation in the study to Cris Garner. If there is a need to contact anyone other than the researcher, please contact the Office of Research Compliance Wilhelmina Delco Building, 700 University Drive, Suite 120, Prairie View, TX. 77446, (936) 261-1551 or researchcompliance@pvamu.edu

Statement of Consent

I have read the above information, understand the commitment, and agree to participate in the study.

Name (Print): _____ Date: _____

Name (Signature): _____ Date: _____

Years of experience: _____

Email Address: _____

Phone Number: _____

APPENDIX C: Interview Questions (STEM Teachers)

SMALL IN NUMBER: LARGE IN IMPACT THE RECRUITMENT AND RETAINMENT OF K-12 AFRICAN AMERICAN MALE STEM TEACHERS

Cris Garner, Doctoral Candidate, Prairie View A&M University, College of Education

1. What was your personal motivation to enter the teaching profession?
2. Do you believe the motivation of an African American male to enter the teaching profession has to be extrinsic, intrinsic, or a combination of both? Why?
3. In your opinion, what will it take to motivate younger African American males to enter and remain in the teaching profession?
4. Why is there an underrepresentation of African American males in STEM teaching profession?
5. Why is there an underrepresentation of African American males in the teaching profession Do you believe the shortage of African American male teachers happened intentionally or unintentionally? Why?
6. Can the achievement gap close and African American male students demonstrate the ability to be top performing students with the assistant of African American male teachers? Why or why not?
7. During your personal experience in school did you ever have an African American male STEM teacher and what was their impact on your academic performance? If you did not have the opportunity to have an African American

male teacher, what type of impact do you think it would have had on you school experience

8. In your opinion what strategies and techniques can be used to recruit more African American males into teaching?
9. Does background and life experience factor into African American males deciding to not enter the teaching profession? Why or why not?
10. The recruitment efforts of teacher preparation programs to get more African American males into the profession has been criticized, do you think the criticism is justified? Why or why not?

CURRICULUM VITAE

CRIS L. GARNER II

Education

Ph.D. Educational Leadership Prairie View A&M University 2024

Dissertation: *Small in Number, Large in Impact: The Recruitment and Retention of Middle School African American Male STEM Teachers.* Stella Smith, Chair

M.Ed. Curriculum and Instruction Prairie View A&M University 2013

B.S. Interdisciplinary Studies Prairie View A&M University 2010

Work Experience - Higher Education

Teaching Assistant Doctoral Prairie View A&M Univ. 2021
Supported faculty by assisting with course preparation, grading, and facilitating both in-person and virtual class meetings. Utilized the Canvas Learning Platform to manage course materials, track student progress, and communicate with students. Prepared instructional resources, led discussion sections or labs, and provided feedback on assignments. Managed student inquiries, maintained accurate records, and contributed to curriculum development. Collaborated with faculty to ensure effective and engaging instruction aligned with learning objectives. Gained valuable experience in academic teaching and administration.

Instructional Designer Intern Prairie View A&M Univ. 2021
Supported course approval processes by reviewing and evaluating proposals, ensuring alignment with academic standards. Provided feedback on curriculum, instructional strategies, and assessments. Assisted in developing instructional materials and integrating new technologies. Collaborated with faculty to maintain quality standards and manage course documentation. Contributed to the improvement of instructional design practices.

Work Experience - Public Education (K - 12)

Math Department Chair, Middle School Houston ISD 2022-Present
Collaborate with colleagues to develop, assess, and improve instructional programs, manage the department's budget, and facilitate professional development. I lead department meetings, ensure effective communication with stakeholders, and oversee scheduling and inventory management. Additionally, I serve on district-level committees, contributing to curriculum and program decisions while fostering a collaborative school environment.

Teacher, Math, Middle School Houston ISD 2021-Present
Provide high-quality instruction through the implementation of Multiple Response Strategies, internalizing daily lessons to ensure effective teaching. Monitor and adjust instruction based on real-time coaching and lead Professional Learning Community meetings to foster collaboration. Model effective teaching practices during weekly demonstrations and develop lesson plans that meet students' individual needs, interests, and abilities. Establish a conducive learning environment that encourages appropriate behavior and supports student growth.

Teacher, Math, Middle School **Humble ISD** **2019-2021**
Enhanced leadership and collaboration among staff to improve instruction and student engagement. Implemented innovative technology in math education, facilitated teacher training, and developed STEM programs for at-risk and special needs students. Monitored behavior, enforced discipline, and administered standardized tests.

Teacher, Math, Technology Ed. Middle School **Aldine ISD** **2015-2019**
Led professional development in math and technology, improving classroom technology use and student achievement. Conducted data-driven interventions, managed student teachers and aides, and enforced classroom rules. Oversaw paraprofessionals, designed new teacher training, and implemented activities for student growth. Adopted technology, motivated staff, set academic standards, and advised students on academic and career choices.

Teacher, Math, Intermediate School **Crosby ISD** **2013-2015**

Teacher, Math, Elementary School **North Forest ISD** **2011-2013**

Current Certifications and Licensures

Provisional 4-8 Mathematics	State of Texas	Current/Valid
Provisional 6-12 Technology Education	State of Texas	Current/Valid
Professional EC-12 Principal	State of Texas	Current/Valid

Teaching Assistant Courses

EDUL 7304 Org. l Development and Change in Education Prairie View A & M Univ.
Explores global educational change from the perspectives of classical/rational organizational theory, open systems theory, contingency theory, and social systems theories. Educational leaders will understand the dynamics of educational change and the process to manage change.

EDUL 7370 Higher Education Administration Prairie View A & M Univ.
Analysis of current practices and issues in the governance of higher education that affect students, faculty, and administration: study of the scope and role of college and universities

EDUL 7307 Special Topic: Advanced Qualitative Research Prairie View A & M Univ.
An examination of special topics related to educational leadership

EDUL 7375 Assessing Higher Education Environments Prairie View A & M Univ.
Focus on dimensions of human environments as tools for understanding the effects of educational environments on students. Special consideration will be given to various policies and applications of educational practices

Instructional Design Reviewed Courses

CPSY 7873 Individual Psychotherapy Prairie View A & M Univ.
Centers on the clinical interview as a means of gathering relevant life data; defining problems and resolving conflicts. Surveys the theory and use of the interview, particularly as related to various counseling theories

FINA 4213 Managerial Finance Prairie View A & M Univ.
Introduces the concepts and analytical tools required to make value-creating financial decisions; provides students with theoretical foundations and practical applications of financial decision-making for business; covers a variety of topics, including financial statements, ratio analysis, risk-return analysis, bonds and stocks valuation, the cost of capital, capital structure, dividend policy, capital budgeting, and multinational financial management.

CPSY 7753 Systems of Psychotherapy Prairie View A & M Univ.
This course includes contemporary approaches in clinical psychology and a comprehensive treatment of the historical antecedents of selected theories and systems of psychology. It will also explore the theory, research and practice of major systems of psychotherapy including humanistic psychodynamic, behavioral cognitive, and family systems approach. The underlying assumptions about human nature and knowledge that form the foundation of these theories will also be examined with special consideration given to cultural issues throughout the course.

HUSC 5363 Dietetic Seminar II Prairie View A & M Univ.
Continuation of Dietetic Seminar I. Study of current research and legislative events in nutrition and dietetics as they relate to the health and wellness of individuals and families.

Professional, Scholarly and Service Affiliations

(Current & Former Affiliations)

Association of Texas Professional Educators
Texas State Teachers Association
Texas AFT
Phi Beta Sigma Fraternity, Inc.