

# A CASE STUDY OF DIVERSITY IN NORTH CAROLINA ARCHITECTURE PROGRAMS

by

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## ABSTRACT

ISALIAH L. ROBERTS. A Case Study of Diversity in North Carolina Architecture Programs.  
(Under the direction of DR. TERESA SCHEID)

The enrollment rate of black students in architecture has remained stagnant for the last decade and decreased over the past two and a half decades. In 2020, of the 26,977 total students enrolled in accredited structural architecture programs, only 5 percent identified as black. For accredited landscape architecture programs in 2020, of the 5,613 total students enrolled, only 3 percent identified as black. To explore this issue, a case study was used to provide an understanding of racial disparities in enrollment trends for black students in North Carolina undergraduate and graduate architecture programs. Specifically, descriptive statistics were used to explore how *racial homophily*, a bond influenced by shared racial identity, corresponds to black student enrollment trends in architecture programs for North Carolina State University (NC State) compared to North Carolina Agricultural and Technical State University (NC A&T). Additionally, a content analysis was used to assess the role of *diversity initiatives* – any effort by an organization to facilitate recruitment, inclusion, or participation of underrepresented groups in their program – for black student enrollment trends in architecture programs for NC State compared to NC A&T. Overall, results suggested *racial homophily* had greater influence over black student enrollment than the implementation of *diversity initiatives* in North Carolina architecture programs.

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## LIST OF ABBREVIATIONS

BEDA	Bachelor of Environmental Design in Architecture
B.S. LDAR	Bachelor of Science in Landscape Architecture
BlackLAN	Black Landscape Architects Network
DEI	Diversity, Equity and Inclusion
HBCU	Historically Black College and University
LAAB	Landscape Architectural Accreditation Board
M. Arch	Master of Architecture
MLA	Master of Landscape Architecture
NAAB	National Architectural Accrediting Board
NAMLA	National Association of Minority Landscape Architects
NOMAS	National Organization of Minority Architects
NC A&T	North Carolina Agricultural and Technical State University
NC State	North Carolina State University
PWI	Predominantly White Institution
STEM	Science, Technology, Engineering, and Math
UNC Charlotte	University of North Carolina at Charlotte
UNC Greensboro	University of North Carolina at Greensboro

## INTRODUCTION

The call for more research on the lack of racial diversity in professional education programs has resurged in recent years (Jenkins et al. 2021). The intention of this study is to contribute to that overall body of knowledge, by addressing a discipline considerably neglected in sociological research: architecture. For instance, there is more literature and research on diversity concerns for medical education programs than accredited architecture programs and this study will contribute to the diversity discussion by filling this gap. There is a clear need to address the lack of diversity and disparities minorities experience within high-status jobs and professional education programs in the United States (Jenkins et al. 2021). Many institutions and programs are still white-dominated, with this trend tending to be exaggerated most in professional and STEM fields (Jenkins et al. 2021).

In a recent study, Grace (2018) found that whites continue to dominate professional medical programs. In 2018, Midwest University's medical program reported an undergraduate cohort sample of: 67 percent female, 70 percent white, around 11 percent Asian American, 9 percent black, 7 percent Hispanic, and 3 percent American Indian, Alaska Native, or non-Hispanic multiracial (Grace). Apart from the fact that most of the cohort was female rather than male, similar demographic patterns persist in many other professional programs in the United States. Since 2009, medical programs in the United States have increased in diversity (Lett et al. 2019). However, Jenkins et al. (2021) state that more sociological research is needed to address the marginalization of many students of color for top medical programs. I argue the same is necessary for architecture programs as a professional discipline.

The purpose of this study is to extend an understanding of racial disparities in professional programs by exploring the role of *diversity initiatives* on enrollment trends for black



students in undergraduate and graduate architecture programs. Underrepresented racialized minorities make up around 17 percent of all licensed architects as reported in 2021 (The American Institute of Architects). Of that 17 percent, black architects make up around 2 percent of those licensed to practice (The American Institute of Architects 2021). A closer look at enrollment patterns by race for architecture education programs presents some interesting trends worth further investigation.

## BACKGROUND AND SIGNIFICANCE

When addressing architecture schools, it is important to recognize the impact accrediting boards, the National Architectural Accrediting Board (NAAB) and the Landscape Architectural Accreditation Board (LAAB), have on the development of diversity and inclusion efforts for a program. The NAAB's approach to establishing standards for a program is circumstantial to the institution, its unique context, and its surrounding geographic area. Per the NAAB's encouragement, a program creates its own institutionally based mission in response to its own unique societal needs and resources regionally available. Similarly, programs accredited by the LAAB may also determine their own objectives and goals. However, the LAAB's approach to accreditation has slight differences compared to that of the NAAB. Standards for accreditation by the NAAB are more focused on sustaining structural architecture while the LAAB includes more core values related to protecting the natural ecosystem and non-human inhabited environments in addition to the built environment. Considering institutions have different racial make-ups, it is possible an architecture program has its own specific culture organized around the dominant group. This can translate to programs operating according to a different set of unique informal standards — meaning a Historically Black College and University (HBCU) may operate or have different program-specific standards than a Predominantly White Institution (PWI).

Outside the development of the institutionally-specific mission based on their unique context, other important conditions for an architecture program seeking NAAB accreditation include an evaluation of how well their program meets the Program Criteria and Student Criteria. The Program Criteria evaluates curricular and extracurricular offerings of the program while the Student Criteria evaluates the learning objectives and assessment of students in the program. The

LAAB has a similar condition to the NAAB's Program Criteria and Student Criteria requirement — a self-evaluation report — that serves the function of ensuring the program meets its mission, goals, and objectives for program participants. An examination of each program's development and specific criteria could translate to a more nuanced understanding of how a PWI might approach *diversity initiatives* compared to an HBCU. As another condition for both NAAB and LAAB accreditation, the program must describe its resources including but not limited to: its structure/governance, physical resources, financial resources, and information resources. The final condition for both accrediting boards requires the program to be transparent with students, faculty, and the public regarding its accreditation activities/information. This transparency includes *diversity initiatives* this study will explore for both a PWI and an HBCU to better understand its role on black student enrollment rates.

Although architecture programs have gradually become more diverse over the years, enrollment trends over this past decade still feature primarily white students. In landscape architecture, involving both built and natural environments, programs are typically female-dominated. Meanwhile, programs in structural architecture, focusing exclusively on buildings and physically manufactured structures, are typically male-dominated. A report by prominent female architect Kathryn Anthony explains that by “the mid-1990s, African-American architecture students comprised only about 6 [percent] of the architectural student body. . . [and] by 1999 that figure had risen to only 7 [percent]” (2002:260). Since then, the overall rate has decreased for black enrollment in accredited architecture programs before reaching stagnation over the past decade according to NAAB annual reports. That trend has been consistent in landscape architecture programs for at least seven years as presented in LAAB annual reports.

In 2009, of the 25,707 total students enrolled in accredited structural architecture programs, only 5 percent (1,383 students) identified as black (The National Architectural Accrediting Board). In 2020, there were 26,977 total students enrolled in accredited structural architecture programs with again only 5 percent (1,482 students) who identified as black (The National Architectural Accrediting Board). For accredited landscape architecture programs in 2013, black student enrollment made up roughly 3 percent of the total student population — 172 students of the 5,923 total students enrolled (The Landscape Architectural Accreditation Board 2013). Then again in 2020, of the 5,613 total students enrolled in landscape architecture programs, only 3 percent (188 students) identified as black (The Landscape Architectural Accreditation Board).

Despite black student enrollment trends in accredited architecture programs, black students do display an overall interest in the discipline as represented by their enrollment in preprofessional, non-accredited architecture programs. In 2009, of the 17,491 total students enrolled in preprofessional architecture programs, 7 percent (1,228 students) identified as black — which increased to 10 percent or 1,537 students of the 15,760 total students enrolled in 2020 (The National Architectural Accrediting Board 2009; The National Architectural Accrediting Board 2020). Those figures demonstrate that over the past decade black students gained higher interest in enrolling in architecture programs at least for preprofessional programs. While there is some variation in each state's requirements to practice architecture, for most, a preprofessional program often serves as a precursor to the additional accredited year or two of study qualifying one to take the Architect Registration Examination that ultimately leads to a professional license. The difference between black student enrollment in preprofessional, non-accredited programs and accredited architecture programs is an important issue a portion of this study will explore.

While black student enrollment remains low, other historically underrepresented minority groups have found an increased opportunity for enrollment in accredited architecture programs. For example, the percentage of Hispanics enrolled in accredited structural architecture programs has steadily increased from 14 percent in 2009 — 3,514 students of the 25,707 total students enrolled — to 18 percent by 2020 — 4,815 students of the 26,977 total students enrolled (The National Architectural Accrediting Board 2009; The National Architectural Accrediting Board 2020). Hispanics also have increased enrollment in accredited landscape architecture programs from 8 percent in 2013, 500 students of the 5,923 total students enrolled, to 14 percent by 2020, 1,006 students of the 5,613 total students enrolled (The Landscape Architectural Accreditation Board 2013; The Landscape Architectural Accreditation Board 2020). Increased enrollment rates in structural architecture programs are observed in other minority groups as well such as nonresidential/international students which have shown a substantial rise over the years from 6 percent in 2009 — 1,652 students of the 25,707 total students enrolled — to 18 percent by 2020 — 4,791 students of the 26,977 total students enrolled (The National Architectural Accrediting Board 2009; The National Architectural Accrediting Board 2020). Nonresidential/international students have also displayed an increase in enrollment in accredited landscape architecture programs from 13 percent in 2013, 795 students of the 5,902 total students enrolled, to 20 percent by 2020 — 1,118 students of the 5,613 total students enrolled (The Landscape Architectural Accreditation Board 2013; The Landscape Architectural Accreditation Board 2020). However, it should be considered that the LAAB notes inaccurate reporting to explain the discrepancy for domestic versus international total student enrollment in 2013.

With diversity highlighted as a key value or condition for any accredited architecture program in the nation (The National Architectural Accrediting Board 2020; The Landscape

Architectural Accreditation Board 2020), it is peculiar that rates of black enrollment are consistently lower despite enrollment becoming more diverse overall. I will explore the broader implication of this lack of representation for black students in architecture education in this study. This analysis aims to provide a better understanding of the racial trends of enrollment in architecture programs for North Carolina as well as address general issues regarding the lack of diversity in architectural education across the United States.

## RACIAL HOMOPHILY AND DIVERSITY INITIATIVES

A key aspect of a student that may influence their program selection in higher education is having similar qualities or characteristics to most of the school's current population. That concept relates to the research of sociologists that examine medical education, which often highlights the importance of students utilizing social networks to successfully navigate their programs. McPherson, Smith-Lovin, and Cook (2001) are sociologists widely known for their contribution to explaining the *homophily* principle which describes how individuals choose to connect/bond with one another based on some shared similarity between themselves — this could be anything from a shared status characteristics to shared values. In the case of this study, *racial homophily* (Shrum, Cheek and Hunter 1988), a bond influenced by shared racial status, could be useful to explain what motivates black students to enroll at one school over another. Following the theory of *racial homophily*, one might expect a HBCU to attract more black students to their school of architecture than a PWI. *Racial homophily* could also mean a higher enrollment rate of black students for programs with an already diverse faculty and staff. Furthermore, *racial homophily* could also explain this quote from notable black architect Kendall A. Nicholson:

Of the 139 NAAB accredited schools of architecture, 7 are HBCUs. . . [and] [t]hose 7 schools – Florida A&M University, Hampton University, Howard University, Morgan State University, Prairie View A&M University, Tuskegee University, and the University of the District of Columbia – makeup 5 percent of the NAAB accredited schools but enroll 32 percent of the total Black student population in accredited and preprofessional programs. Said differently, 1 out of every 3 Black architecture students attends an HBCU. (Nicholson 2020:1)

Lower black student enrollment in accredited architecture programs compared to preprofessional architecture programs impedes on the diversity of licensed architects. I argue a similar scenario occurs if a lack of *racial homophily* in accredited architecture programs discourages black students from enrolling in architecture programs at predominantly white institutions.

Meanwhile, a common way organizations and education programs attempt to increase their diversity are through *diversity initiatives*. For this study, *diversity initiatives* refer to any effort by an organization to facilitate recruitment, inclusion, or participation of underrepresented groups in their program. Examples of *diversity initiatives* in education programs include: having minority student organizations, providing grants/scholarships, and implementing targeted recruitment strategies for students of underrepresented groups. Successful *diversity initiatives* in the context of this study should, at most, correlate to increased enrollment of black students in architecture education programs or, at least, contribute to an increased interest in architecture overall for college-bound black students.

To gain a better understanding of *racial homophily*, *diversity initiatives*, and black student enrollment trends in architecture programs, this research will address the following research objectives:

RO1: How does *racial homophily* affect black student enrollment trends in architecture programs?

RO2: What role do *diversity initiatives* play for black student enrollment trends in architecture programs?



## METHODS

### *Case Study*

The most effective method to observe enrollment trends as mentioned in the objectives is a case study. A case study, an empirical research approach used to provide greater in-depth understanding of complex real-life issues (Yin 1994), allows student enrollment trends by group to be observed within the study's context of architecture programs in North Carolina.

Specifically, this case study focuses on two architecture schools in North Carolina since the state has a unique racial composition compared to the rest of the nation. North Carolina, for well over 50 years, represents one of several southern states with a majority share of the black population in the United States (Azimeraw 2014). For example, the 2020 U.S. census reports black residents made up 13 percent of the total nation's population while North Carolina's black population was 22 percent that same year (U.S. Bureau of the Census). Given the state's above national average black population, one may expect the state to have more opportunities to enroll black students than the annual average currently reported.

Moreover, as can be seen in **Table 1**, North Carolina is home to several different types of architecture programs which creates an interesting opportunity to explore where the majority of black students that do have an interest in architecture choose to enroll. North Carolina State University (NC State) has a pre-professional Bachelor of Environmental Design in Architecture (BEDA) program with an extra one-year, NAAB-approved, Bachelor of Architecture program. Additionally, NC State has two, two-year Master's programs: one for landscape architecture (MLA), accredited by the LAAB, and one for structural architecture (M. Arch), accredited by the NAAB. The University of North Carolina at Charlotte (UNC Charlotte) has an undergraduate pre-professional Bachelor of Arts in Architecture program also with two additional options after

completion: an extra one-year, NAAB-approved, Bachelor of Architecture program or a two-year, also NAAB-approved, Master of Architecture (M. Arch) program. North Carolina Agricultural and Technical State University (NC A&T) has a Bachelor of Science in Landscape Architecture (B.S. LDAR) program, approved by the LAAB. Lastly, the University of North Carolina at Greensboro (UNC Greensboro) has a Bachelor of Fine Arts in Interior Architecture program, approved by the Council for Interior Design Accreditation.

**Table 1. School Comparison**

<b>School Name</b>	<b>School Type &amp; Setting</b>	<b>Architecture Programs Offered</b>
North Carolina A&T State University	4-year; public; large city	Bachelor of Science in Landscape Architecture
North Carolina State University	4-year; public; large city	Bachelor of Environmental Design in Architecture, Bachelor of Architecture, Master of Architecture, Master of Landscape Architecture, Graduate Architecture Certificates
University of North Carolina at Charlotte	4-year; public; large city	Bachelor of Arts in Architecture, Bachelor of Architecture, Master of Architecture, Master of Architecture/Master of Urban Design, Master of Architecture/Computer Science or Information Technology
University of North Carolina at Greensboro	4-year; public; large city	Bachelor of Fine Arts in Interior Architecture
Wake Technical Community College	2-year; public; large suburb	Architectural CAD Certificate, Landscape Design Certificate, Associate of Applied Science in Architectural Technology

While there are some clear differences between all these programs, a narrowed focus comparing North Carolina State University with North Carolina Agricultural and Technical State University is most useful to help explain where some black students interested in landscape architecture choose to enroll. To help identify the greatest difference in architecture programs in

terms of diversity for North Carolina, focusing on NC A&T, the only Historically Black College and University (HBCU) in the state to offer an architecture program, is imperative. The reason for selecting NC State is due to the fact that of all the predominantly white institutions in North Carolina with an architecture program, NC State has the least diversity overall. In 2020, NC State's overall student population featured a white population of 63 percent and a black population of 6 percent (North Carolina State University 2022). That same year, UNC Charlotte had a white population of 54 percent and a black population of 16 percent (The University of North Carolina at Charlotte 2022). Also in 2020, UNC Greensboro had a white population of 47 percent and a black population of 28 percent (Data USA 2022). While UNC Greensboro, UNC Charlotte, and NC State are all predominantly white institutions, NC State's student population reflects the most contrast to NC A&T's student population as an HBCU.

The second reason for selecting the two schools, NC State and NC A&T, is to remain consistent with the type of architecture programs compared. Both institutions are the only two in the state with environmental or landscape architecture programs. NC State has its BEDA and MLA program while NC A&T has its B.S. LDAR program. By comparing those specific architecture programs at both institutions, it may be possible to observe whether a relationship exists between each program's racial composition, the *diversity initiatives* present within each program, and their respective enrollment trends.

### *Analysis*

In order to address the research objectives, descriptive statistics were first collected for NC State and NC A&T. This information included: enrollment size; racial demographics for the institution, college and architecture program(s); gender demographics for the institution, college and architecture program(s); and student-faculty ratio. Thereafter, a thematic content analysis, a

method of analyzing qualitative data identifying repeated themes or patterns (Braun and Clarke 2006), was performed using public institutional documents and supporting landscape architecture documents for each institution. Evaluation reports for the outcome of some *diversity inclusion* strategies enacted by each institution's landscape architecture programs were also included. Altogether, the information drawn from both processes was retrieved from the following sources: NAAB annual reports, LAAB annual reports, university factbooks, demographic data dashboards, NC State's LAR Public Information Policy report, self-evaluation reports, and each institution's program website. All mentions of key words such as *diversity*, *initiatives* and *inclusion* were first identified. For instance, NC State's 2020 LAAB report mentioned "diversity" 89 times in the document. Major themes from excerpts relevant to the study's research questions were gathered as it pertained specifically to enacted *diversity initiatives* by each program. This information was then coded by the following themes: program characteristics, program admission requirements, program accreditation standards, recruitment opportunities and student organizations. The textual information gathered was then restated and reported in a manner that directly addressed the study's research objectives.

The descriptive statistics addresses the first research objective regarding how *racial homophily* between students and faculty might affect enrollment for each program in observance. The racial composition of NC State's preprofessional architecture program was compared to their accredited architecture program to identify whether differences in student enrollment by race exist. Meanwhile, content analysis addresses the second research objective regarding the role of *diversity initiatives* on black student enrollment trends for each program in observance. The results generated from the content analysis are qualitative with clear descriptions of how *diversity initiatives* were developed and practiced. The presence and descriptions of *diversity*

*initiatives* were then compared between both institutions' landscape architecture programs to better understand their role on black student enrollment trends.

## RESULTS

### *Enrollment Trends*

#### *Institution enrollment.*

The findings from descriptive statistics illustrate key differences between both institutions and their respective programs crucial to the analysis of their enrollment patterns. The first finding is that overall, NC State consistently has a relatively large student enrollment population. In the past decade, NC State reported the following for its enrollment:

**Table 2. NC State Enrollment (By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2021</b>	62.3%	6.4%	*49.4%	*50.6%	37,556
<b>2020</b>	63.2%	6.4%	48.7%	51.3%	36,472
<b>2019</b>	61.1%	6.1%	47.6%	52.4%	36,762
<b>2018</b>	61.1%	5.7%	46.7%	53.3%	36,033
<b>2017</b>	62.2%	5.8%	45.7%	54.3%	34,988
<b>2016</b>	64.8%	6.0%	45.0%	55.0%	34,314
<b>2015</b>	66.4%	6.3%	44.8%	55.2%	34,015
<b>2014</b>	67.4%	6.5%	44.3%	55.7%	33,989
<b>2013</b>	69.3%	6.8%	44.4%	55.6%	34,009
<b>2012</b>	69.9%	7.3%	44.2%	55.8%	34,340

*\*All data was from Fall Census Headcount Enrollment except the year 2021 which was from the Spring Census*

NC State's overall enrollment trend reveal the institution is majority white and male. For instance, in 2021 the institution reported white students made up around 62 percent of the enrollment population while black students made up roughly 6 percent. Moreover, the institution's enrollment rates by gender are relatively equal compared to the clear difference observed between black and white student enrollment. NC State has maintained male student enrollment slightly above 50 percent, close to 51 percent in 2021, and female student enrollment slightly below 50 percent, about 49 percent in 2021. Meanwhile, in the past decade NC A&T reported the following for its total enrollment:

**Table 3. NC A&T Enrollment (By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2021</b>	5.5%	80.0%	60.8%	39.2%	13,322
<b>2020</b>	5.9%	79.4%	59.6%	40.4%	12,753
<b>2019</b>	6.0%	78.5%	58.1%	41.9%	12,556
<b>2018</b>	6.6%	77.9%	57.0%	43.0%	12,142
<b>2017</b>	6.8%	77.8%	56.5%	43.5%	11,877
<b>2016</b>	6.5%	77.7%	55.6%	44.4%	11,177
<b>2015</b>	*	*	*	*	10,852
<b>2014</b>	*	*	*	*	10,725
<b>2013</b>	*	*	*	*	10,561
<b>2012</b>	*	*	*	*	10,636

*\*2012-2015 Race and Gender not included due to inconsistency between Factbook Headcount and Common Datasets*

The first notable find is that NC A&T's total student enrollment population is substantially smaller than NC State. In 2021, NC A&T reported 13,322 total students enrolled compared to 37,556 for NC State. Furthermore, the overall enrollment trend for NC A&T reveals the institution is predominantly black and female. In 2021, NC A&T reported 80 percent of students enrolled who identified as black while around 5 percent identified as white. Similar to NC State, there was less disparity in enrollment rates by gender for NC A&T than what is shown for black and white student enrollment. In 2021, NC A&T reported about 60 percent of students enrolled who identified as female while nearly 39 percent identified as male. Despite the fact that both institutions are growing, NC State maintains a student enrollment population more than twice or even as much as three times as large as NC A&T's student enrollment population over the past decade. This occurrence adds much-needed context to the racial and gender breakdown of each institution over the years. The two institutions display completely opposite trends of enrollment by race and gender as shown in **Table 2** and **Table 3**. Lastly, taking the overall enrollment size of each institution into account means NC State has a much larger white student population overall than NC A&T has for its black student population. For instance, the 80

percent black student enrollment ( $\approx 10,657$  students) for NC A&T in 2021 is less than half the size of the nearly 62 percent white student enrollment ( $\approx 23,284$  students) reported by NC State also in 2021.

*College enrollment.*

The next set of data presented is for the specific college each architecture program is housed in. For NC State, both the preprofessional BEDA and accredited MLA programs are housed in the College of Design. In the past decade, NC State's College of Design revealed the following enrollment trend:

**Table 4. NC State College of Design Enrollment (By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2021</b>	*59.8%	*8.6%	*65.2%	*34.8%	838
<b>2020</b>	60.3%	8.8%	64.6%	35.4%	861
<b>2019</b>	58.0%	7.6%	65.2%	34.8%	874
<b>2018</b>	57.3%	6.5%	62.7%	37.2%	841
<b>2017</b>	58.8%	7.1%	61.9%	38.0%	806
<b>2016</b>	63.2%	7.1%	62.1%	37.9%	791
<b>2015</b>	64.3%	6.5%	62.1%	37.9%	788
<b>2014</b>	64.9%	6.5%	59.3%	40.7%	827
<b>2013</b>	66.4%	5.9%	58.2%	41.8%	854
<b>2012</b>	69.8%	6.0%	56.7%	43.3%	847

*\*All enrollment data is from Fall Census Headcount Enrollment except the year 2021 which is from the Spring Census*

Compared to the institutions' overall trend, the College of Design features higher female versus male enrollment over the last 10 years. The College of Design is primarily white but the black enrollment rate has been marginally (about 1%) but consistently higher compared to the institutions' overall rate since at least 2015.

For NC A&T, the B.S. LDAR program is housed in the College of Agriculture and Environmental Sciences. The college's enrollment trend over the last half decade is as follows:



**Table 5. NC A&T College of Agriculture & Environmental Sciences Enrollment  
(By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2021</b>	11.9%	75.6%	74.5%	25.5%	1,024
<b>2020</b>	14.1%	72.6%	75.6%	24.4%	1,031
<b>2019</b>	14.9%	71.3%	75.0%	25.0%	1,053
<b>2018</b>	15.3%	71.1%	77.0%	23.0%	1,093
<b>2017</b>	15.9%	71.9%	75.3%	24.7%	1,080

*\*Enrollment data from 2012-16 was not available*

Similar to the institutions' overall enrollment trend, NC A&T's College of Agriculture & Environmental Sciences is majority black and female. Both colleges show greater female versus male enrollment. However, the racial trend for each college still matches that of their respective institution overall. Altogether, the total enrollment size between those two colleges for the past decade are relatively closer compared to the total institution student enrollment of each institution.

*Program enrollment.*

Since NC State's school of architecture has yet to produce its NAAB annual report for 2021, the portion regarding enrollment patterns for the preprofessional BEDA program will begin with 2020 and include the previous eight years. During that period, NC State's preprofessional BEDA program featured the following for enrollment:

**Table 6. NC State BEDA Enrollment (By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2020</b>	63.9%	8.3%	49.3%	50.7%	861
<b>2019</b>	66.7%	5.6%	66.7%	33.3%	874
<b>2018</b>	70.8%	10.0%	62.5%	37.5%	841
<b>2017</b>	64.1%	9.9%	61.1%	38.9%	806
<b>2016</b>	65.6%	7.2%	58.4%	41.6%	791
<b>2015</b>	*	*	*	*	788
<b>2014</b>	66.4%	8.9%	50.7%	49.3%	827
<b>2013</b>	67.2%	8.8%	51.8%	48.2%	854
<b>2012</b>	*	*	*	*	847

*\*Enrollment Data from 2012 and 2015 was not available for race and gender*

In 2020, of the 144 total students enrolled in the BEDA program, around 64 percent (92 students) identified as white while 8 percent (12 students) identified as black. In 2019, of the 18 total students enrolled, about 67 percent (12 students) identified as white while close to 6 percent (1 student) identified as black. Lastly, of the 120 total students enrolled in 2018, roughly 71 percent (85 students) identified as white while 10 percent (12 students) identified as black. Consistently, NC State's BEDA program up until 2020, has maintained predominantly white female enrollment; this does not match the overall enrollment trend for the institution but does correspond with the College of Design enrollment trend.

Meanwhile, NC State's MLA program displayed the following enrollment trend over the past decade:

**Table 7. NC State MLA Enrollment (By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2021</b>	66.7%	3.2%	76.2%	23.8%	63
<b>2020</b>	63.4%	2.8%	71.8%	28.2%	71
<b>2019</b>	56.9%	1.5%	72.3%	27.7%	65
<b>2018</b>	52.7%	0.0%	56.4%	43.6%	55
<b>2017</b>	49.2%	1.7%	54.2%	45.8%	59
<b>2016</b>	42.6%	0.0%	51.9%	48.1%	54
<b>2015</b>	37.7%	3.8%	58.5%	41.5%	62
<b>2014</b>	47.6%	5.2%	53.4%	46.6%	58
<b>2013</b>	55.1%	3.2%	54.0%	46.0%	63
<b>2012</b>	60.9%	4.1%	51.0%	49.0%	49

*\*2012-14 data is from LAR Public Information Policy*

*\*\*2015 data from Fall Census Headcount Enrollment*

*\*\*\*2016-20 data is from NCSU MLA Track III Curriculum Proposed 5.11.21*

*\*\*\*\*2021 data from the Spring Census Headcount Enrollment*

In 2021, of the 63 total students enrolled, about 67 percent (42 students) identified as white while around 3 percent (2 students) identified as black. In 2020, of the 71 total students enrolled, 63 percent (45 students) identified as white while about 3 percent (2 students) identified as black. In 2019, of the 65 total students enrolled, roughly 57 percent (37 students) identified as white while close to 2 percent (1 student) identified as black. Then of the 55 total students enrolled in 2018, nearly 53 percent (29 students) identified as white while no students identified as black. The enrollment trend of NC State's MLA program, like the BEDA program, matches the College of Design's predominantly white female enrollment pattern but not the overall institution which consists mainly of white males.

Finally, NC A&T's undergraduate landscape program, B.S. LDAR, displayed the following demographic trends over the past six years:

**Table 8. NC A&T B.S. LDAR Enrollment (By Race and Gender)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2021</b>	11.9%	69.8%	39.5%	60.5%	43
<b>2020</b>	8.7%	73.9%	43.5%	56.5%	46
<b>2019</b>	8.7%	78.3%	32.6%	67.4%	46
<b>2018</b>	8.5%	83.0%	34.0%	66.0%	47
<b>2017</b>	15.9%	79.5%	31.8%	68.2%	44
<b>2016</b>	9.8%	80.5%	31.7%	68.3%	41

*\*Enrollment data from 2012-16 was not available*

The data represented above reveals NC A&T's landscape architecture program is consistently dominated by black males. This trend within the program does not match the college its housed in or the institution overall. Furthermore, this enrollment trend by race is opposite of NC State's demographic pattern for both architecture programs which reported primarily white students as the dominant group enrolled.

*Faculty demographic and student-faculty ratios.*

Last results include department faculty demographics and program student-faculty ratios (estimates are provided for data unreported by the institution). For NC State, its architecture programs are housed in the school of architecture department. The faculty demographic breakdown of NC State's school of architecture is as follows:

**Table 9. NC State School of Architecture Full-time Faculty (By Race)**

<b>Year</b>	<b>White</b>	<b>Black</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>2020</b>	80.0%	0.0%	40.0%	60.0%	15
<b>2019</b>	78.6%	0.0%	35.7%	64.3%	14
<b>2018</b>	66.7%	6.7%	33.3%	66.7%	15
<b>2017</b>	68.8%	6.3%	31.3%	68.8%	16
<b>2016</b>	70.6%	5.9%	35.3%	64.7%	17
<b>2015</b>	75.0%	6.3%	43.8%	56.3%	16
<b>2014</b>	80.0%	0.0%	40.0%	60.0%	15
<b>2013</b>	76.9%	0.0%	38.5%	61.5%	11
<b>2012</b>	78.6%	0.0%	42.9%	57.1%	14

The trend above shows the faculty for NC State's school of architecture consists primarily of white males, a pattern that matches the racial but not gender enrollment trend of students enrolled at the institution. The faculty trend also does match both student racial and gender enrollment patterns of the overall College of Design but not the gender enrollment pattern of the individual architecture programs themselves. As for NC State's MLA program in 2021, the student-faculty ratio was reported around 15 to 1 (North Carolina State University 2021). In 2020, NC State's BEDA program had an estimated student-faculty ratio of 57 to 1 based on the student enrolled (861 students) and faculty size (15 full-time faculty).

Meanwhile, NC A&T's landscape architecture program is housed in the Natural Resources and Environmental Design department. In 2017, the Natural Resources and Environmental Design department reported a faculty breakdown that was 25 percent black and 5 percent white (North Carolina Agricultural and Technical State University 2022b). Based on that breakdown and the 19 full-time teaching faculty currently listed on the department website, the department potentially had an estimate of 4 full-time black faculty members and no full-time white faculty members in 2020. Furthermore, based on the current 19 full-time teaching faculty and the 43 students enrolled in the B.S. LDAR program in 2021, the estimated student-faculty ratio was potentially smaller at roughly 2 to 1 in 2021. Overall, these estimates reveal faculty members of NC A&T's landscape architecture program were primarily black while NC State's BEDA and MLA program faculty members were primarily white.

### *Program Characteristics*

#### *Admission requirements and accreditation standards.*

This portion of findings are thematic from the content analysis. First findings reveal several differences in the admission process between architecture programs at both institutions.

For NC State, the admission requirements for the BEDA program include: a common or coalition application, a digital portfolio, and an essay submission. If a student's application successfully passes those requirements, they are then invited to the Design Connection event for a department interview. Upon approval following the interview, a student is then accepted into the program and may enroll accordingly. For students seeking admission into the MLA program, they must provide these requirements: \$75 (or \$85 for international students) for the application fee, a personal statement submission, a portfolio submission, previous unofficial transcripts, a resume, 3 letters of recommendation, a residency statement (U.S. citizens only), and sufficient scores for both the GRE and TOEFL.

As for NC A&T, admission into the B.S. LDAR program is less demanding compared to NC State's BEDA program and especially NC State's MLA program. Admission into NC A&T's landscape architecture program is based on the general admission requirements of the university: 4 units of English, 4 units of Math, 3 units of Natural Sciences, 2 units of Social Science and 2 units of the same foreign language. Moreover, unlike for NC State's programs, NC A&T's architecture program does not require a portfolio or essay for prospective students.

In addition to the admission requirements, part of the thematic content analysis focused on the accreditation standards for both landscape architecture programs at each institution. The findings from that procedure revealed no differences or deviations from the Accrediting Board conditions. Both landscape architecture programs had a program administrator, featured the sufficient number of required full-time equivalent faculty staff, provided necessary fees and complied with the agreement to fully disclosure program progress.

*MLA funding and recruitment opportunities.*

The next findings describe specific *diversity initiatives* implemented by NC State's MLA program as well as a program self-evaluation. Overall, NC State's landscape architecture program reports more *diversity initiatives* for black students than NC A&T's landscape architecture program. For instance, between 2020 and 2021, NC State's MLA program had two diversity graduate awards offered specifically to Black and Indigenous People of Color: one for \$2,000 annually and one for \$1,000 annually. Considering the MLA program had \$26,530 in total available funding for 2021, \$3,000 of that amounts to roughly 11 percent offered exclusively to black students.

One notable effort to recruit a diverse student body by NC State's MLA program includes advertising attempts of their program to HBCUs in the Southeast. Specifically, the MLA program has attempted to build relationships with NC A&T's B.S. LDAR program as well as participating in the National Organization of Minority Architects (NOMAS) Conference. Furthermore, NC State's 2021 LAAB Self-Evaluation Report describes a "Student Recruitment Initiative" which attempts to increase diversity of the program. This initiative garnered \$16,000 from multiple grants to advertise the landscape architecture program directly to HBCUs. Additionally, the initiative invited a diverse array of students to the campus to introduce the prospective students to the department. Overall, the report reveals that 12 candidates participated in the initiative over a three-year period yielding three students who actually joined the program; that amounts to a 25 percent success rate for recruiting.

The lack of funding opportunities compared to other universities was noted as one the key contributing factors to students opting not to enroll in the program. At least three times in the 2021 LAAB Self-Evaluation Report, NC State's MLA program mentions that the lack funding opportunities available impedes on their ability to recruit black students into their program

compared to competing programs. NC State's MLA program maintains that they miss out on opportunities to recruit a diverse student body to programs such as Harvard's Graduate School of Design. NC State's MLA program notes competing programs have the ability to fully fund the attendance for diverse students while their program does not.

*NC State student organizations and program representation.*

Outside of MLA funding for recruiting a diverse student body, NC State has three student organizations dedicated to underrepresented minorities: the National Organization of Minority Architects (NOMAS), the National Association of Minority Landscape Architects (NAMLA), and the Black Landscape Architects Network (BlackLAN). Moreover, NC State's College of Design curated a news page for their webpage titled "Design Identities" that features highlights of minority student work as well as student-interviews from minority high-achievers. The page lists four black students, two current students and two alumni, from their various architecture programs; two of these students participated in NC State's MLA program.

*MLA diversity self-evaluation.*

Despite the initiatives previously listed, NC State's MLA program acknowledges on many occasions that their student body is not very racially or ethnically diverse. That program detail is noted as a main weakness of the program. Another weakness reported by the MLA program is that the "graduate-only status is one of our greatest obstacles to diversity. The lack of a robust undergraduate 'feeder' program eliminates our ability to recruit directly from high schools" (North Carolina State University 2021:240). As for faculty diversity in NC State's MLA program, the most recent self-evaluation report notes their "faculty is relatively diverse as compared with competing MLA programs" (North Carolina State University 2021:13). The final finding from NC State's MLA program recognizes the committee responsible for implementing



the program's *diversity initiatives*. NC State's MLA program established a Diversity, Equity and Inclusion (DEI) committee which "proposes and executes initiatives related to recruitment of diverse students, faculty and curriculum development related to DEI" (North Carolina State University 2021:33). The DEI committee is one of four parties involved with the development of initiatives as well as long-term and short-term changes to the program curriculum; the other three parties include the department head, the director of the graduate program, and the curriculum committee.

*B.S. LDAR funding and recruitment opportunities.*

As mentioned earlier, NC A&T's landscape architecture program does not appear to implement many *diversity initiatives*. While searching documents and the program webpage, there were no scholarships or funding opportunities offered specifically to underrepresented minorities in landscape architecture. The scholarships available to students in NC A&T's architecture were often also made available for several other majors at the university such as art, dance, theatre, as well as urban and regional planning. The last mention of available funding for landscape architecture students at the university was \$9,000 from the Kate Neal Kinley Memorial Fellowship offered in 2018. Since then, the fellowship award has no longer been offered at the university.

*NC A&T student organizations and program representation.*

NC A&T's landscape architecture program does not have any student organizations exclusively for underrepresented minorities in the discipline. In the analysis, there was no record of groups such as NOMAS, NAMLA, or BlackLAN ever having been established at the institution. However, despite having no NOMAS organization itself, NC A&T has had some involvement with the organization by hosting the event for the first North Carolina National

Organization of Minority Architects executive board meeting and Project Pipeline Committee meeting held in 2019. Instead of having minority driven organizations, the university does have a couple organizations such as the American Institute of Architecture Students and the Architectural Engineering Institute. Considering the institution and architecture programs themselves are already predominantly made up of black and other typically underrepresented minorities in higher-education, these organizations also likely consist of mainly students of color. It seems the HBCU status of the institution alone may make it unnecessary to offer student organizations or clubs exclusively to students of color; simply having organizations or clubs available in general at the institution gives students of color representation in the discipline.

*B.S. LDAR diversity self-evaluation.*

From this analysis, it is likely other factors besides funding opportunities or student organizations lead to higher enrollment of black students for NC A&T's landscape architecture program over NC State's BEDA program or MLA program following graduation. The idea of *racial homophily* among other different attributes between both institutions' may be the key to understanding what leads to higher enrollment of black students in NC A&T's B.S. LDAR program.

## DISCUSSION

*Key Findings***Table 10. Architecture Program Differences**

NC State	NC A&T
<ul style="list-style-type: none"> <li>• Larger enrollment size</li> <li>• Mostly white female student enrollment</li> <li>• Mostly white faculty</li> <li>• Has <i>diversity initiatives</i> and minority student organizations</li> <li>• Has program specific admission requirements (does require portfolio)</li> </ul>	<ul style="list-style-type: none"> <li>• Smaller enrollment size</li> <li>• Mostly black male student enrollment</li> <li>• Mostly black faculty</li> <li>• No recent <i>diversity initiatives</i> or minority student organizations</li> <li>• No program specific admission requirements (does not require portfolio)</li> </ul>

This study examined issues related to *racial homophily* and *diversity initiatives* for North Carolina architecture programs. Specifically, this study explored how *racial homophily* affects black student enrollment trends in North Carolina architecture programs. Additionally, this study assessed the role of *diversity initiatives* for black student enrollment trends in North Carolina architecture programs. In regards to race, the enrollment pattern of all three programs observed correspond with the pattern observed overall for each respective institution. NC State's BEDA and MLA programs featured predominantly white student enrollment over the past decade while NC A&T's B.S. LDAR program featured primarily black student enrollment. NC State's MLA program acknowledges on multiple occasions that their student body is not very racially or ethnically diverse. Another key difference between enrollment for the programs at each institution pertains to their gender demographics. NC State's BEDA and MLA program maintained majority female student enrollment while NC A&T's B.S. LDAR program displayed mostly male student enrollment.

Essentially, the enrollment pattern between these programs are direct opposites in terms of race and gender with NC State's programs predominantly featuring white females while NC A&T's architecture programs primarily featuring black males. Additionally, NC A&T's B.S.

LDAR program consistently had a significantly smaller enrollment size than both NC State's BEDA and MLA programs. Furthermore, the racial breakdown for faculty of each department that houses the programs also match their overall institutional enrollment patterns. NC State's School of Architecture showcased majority white full-time teaching faculty while NC A&T's Natural Resources and Environmental Design department featured mostly black full-time teaching faculty. All three observed programs displayed significant *racial homophily* both for student and faculty participation. Despite the B.S. LDAR program at NC A&T reporting no recent *diversity initiatives* in the past four years, the program maintained higher black student enrollment than NC State's MLA program. In the case of NC State's MLA program, white *racial homophily*, the lack of funding opportunities, and no "feeder" undergraduate program are the main contributors that hinder increased black student enrollment. This comparison suggests *racial homophily* has greater influence over black student enrollment than the implementation of *diversity initiatives*.

### *Limitations*

In this study, the main limitations were inconsistent or unreported headcounts and unavailable program documents such as NC A&T's LAAB self-evaluations. Additionally, some headcounts were protected and only available to student or faculty members of the institution. When this occurred, estimates of faculty demographics and student-faculty ratios were produced based on limited institutional data that was provided. In 2013, the LAAB annual report acknowledged a discrepancy for total international student enrollment. For NC A&T's institution enrollment, race and gender headcounts were not included from 2012 to 2015 due to inconsistency between the Factbook headcount and common data sets. Enrollment data was also unavailable for: NC A&T's College of Agriculture & Environmental Sciences between 2012 and

2016; NC A&T's B.S. LDAR program between 2012 and 2015; race and gender for NC State's BEDA program in 2012 and 2015. Lastly, NC State's enrollment headcount in 2021 for the institution, College of Design and MLA program was retrieved from the Spring semester versus the Fall semester in all previous years. Outside of the information gaps in collected data, another limitation of this study is the exclusive focus on North Carolina architecture programs. Because North Carolina has a larger black population than other regions of the nation, the enrollment patterns observed in this case study are not generalizable outside of the state.

### *Implications/Recommendations*

The enrollment trend of black students in architecture is important for a few reasons. If black architects make up around 2 percent of those licensed to practice (The American Institute of Architects 2021; American Society of Landscape Architects 2022), it is unlikely they are responsible for the development of most black communities. The lack of black representation in architecture is one example of how black community members have been historically denied the opportunity to achieve independence or upward mobility in the United States. Not only do black community members have less financial freedom compared to other groups in the nation, this study suggests they have little control over the design of their built environment. Black communities are essentially at the mercy of designers, urban planners, politicians, and other city officials that may not have their concerns in mind. Without the direct influence of black professionals, black communities have no other option than to trust their interests and livelihood is important to those with authority over them. However, historic practices of gentrification and urban renewal projects certainly demonstrate the livelihood of black communities is often not a priority.

While increased black representation in architecture does not necessarily mean black communities will achieve autonomy, examples of successfully established Black Wall Streets suggest this is a strong possibility given there are more black students enrolled in higher education programs than previous generations. For black community members to progress and gain increased upward mobility, they must be included in opportunities to facilitate growth in their communities. With the results of this study suggesting *racial homophily* has a greater influence on black student enrollment in architecture than *diversity initiatives*, perhaps the focus should be to develop accredited architecture programs at more HBCU's than the 7 out of 139 currently in existence. *Diversity initiatives* alone are not enough to shift the overall declining enrollment rate of black students in accredited architecture programs.

Following this study, there are more than a few directions future researchers can take to gain better understanding for the full picture of enrollment trends in architecture. First suggestion is that researchers expand the methods of this study to include the graduation rates and Architect Registration Examination results for black students in architecture. Such a study would create greater understanding for the drop off rate between black students enrolled in architecture and those who go further to obtain a license to practice. Furthermore, a great question for such a study is what jobs do black architecture students typically get following graduation? Another suggestion for future research is another case study between two architecture schools where the racial make-up of student enrollment is less extreme than the comparison between the PWI and HBCU observed in this study. Finally, future research can explore how a HBCU acts like an institutional level diversity initiative to integrate architectural education. Implications of this study suggest that HBCU's operate as a large diversity initiative rather than an institution that simply applies smaller diversity and inclusion practices into specific programs.

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