

Opening Doors for Undergraduates

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Abstract

Open Doors Emerging Scholars Program (OD), initiated in 2021, is a collaborative effort involving Norfolk State University (NSU), Virginia State University (VSU), and the University of Virginia (UVA). It aims to support underrepresented students of color from NSU and VSU by preparing them for graduate research degrees. The program involves a month-long immersive experience where selected students live at UVA, engage with doctoral students and faculty mentors, and learn essential skills for graduate school, such as writing a literature review. The program's objectives include increasing access to graduate education, fostering a diverse pipeline of future leaders and scholars, and addressing historical underrepresentation in graduate research fields. Despite the initial virtual format due to COVID-19, the program has offered a fully in-person experience since 2024, providing extensive support, including workshops on personal statements, standardized test preparation, and the graduate application process. Since its inception in 2001, the program has supported 48 students across various fields. The collaboration leverages the strengths and resources of NSU, VSU, and UVA to provide students with valuable academic and personal experiences, aiming to create a more diverse and equitable academic landscape. The program's historical context highlights the persistent underrepresentation of students of color in graduate research, rooted in systemic barriers and inequalities. HBCUs like NSU and VSU play a crucial role in providing opportunities for African American students but often face challenges such as limited funding and resources. The Open Doors Program addresses these issues by offering students access to UVA's advanced research facilities and faculty, aiming to break the cycle of underrepresentation. The program also tackles racial disparities in advanced degree attainment and provides a legally defensible pathway for increasing diversity on campus, amidst debates on race-based admissions policies. Through comprehensive assessments, the program has shown positive impacts on students' research skills, academic self-efficacy, and understanding of interdisciplinary approaches. Open Doors represents a strategic effort to rectify historical injustices and create equitable pathways for minority students to pursue graduate research degrees. It serves as a

valuable recruitment pipeline for UVA and other graduate schools, fostering diversity and enhancing the intellectual vibrancy of the academic community.

1. Introduction

An annual, month-long collaboration has been established between three Virginia institutions: Norfolk State University (NSU), Virginia State University (VSU), and the University of Virginia (UVA). The purpose annually is to help prepare six underrepresented students of color from both NSU and VSU for the Open Doors (OD) Emerging Scholars Program during their undergraduate studies. Launched in 2021 during COVID-19 as an all-virtual program, Open Doors addresses the underrepresentation of students of color in graduate research degrees. The month-long immersive experience equips HBCU juniors and seniors from VSU and NSU with the insights, skills, and confidence essential for successful graduate school endeavors. For three weeks, NSU and VSU undergraduates reside at UVA with doctoral students and faculty mentors, to cultivate connections and learn how to write a literature review. They complete and present their literature review from home, during week four. In addition to learning how to prepare a literature review, the key aims of Open Doors are to increase access to graduate education for high-potential students facing financial barriers and to foster a more diverse graduate school pipeline of future leaders and scholars. This is especially important in fields where underrepresented groups have historically had limited participation.

Through a competitive application process, Open Doors provides a funding package to cover fees, and living expenses at the University of Virginia for selected VSU and NSU undergrads. Recognizing the importance of graduate school preparation, the Open Doors Program dedicates a significant portion of its curriculum to equipping students with the necessary skills and knowledge to navigate the graduate school application process successfully. This includes workshops on writing personal statements, preparing for standardized tests, and understanding the unique requirements and expectations of graduate programs.

At least partially virtual in the past due to COVID-19, during the summer of 2024 and beyond Open

Doors Emerging Scholars will be fully face-to-face on the grounds of UVA. The month-long program includes a multi-faceted approach. Dedicated NSU, VSU, and UVA faculty work closely with third and fourth-year undergraduate enrollees to guide areas of study, research seminars, instruction, mentorship, and conversations to explore how students' interests could find expression in scholarly research and strong college application materials. Emerging Scholars participate in writing clinics, pen a personal statement, complete UVA tours, participate in networking events, learn how to apply for graduate school admission, and ultimately write a literature review which they professionally present. By harnessing their collective expertise through this collaboration, NSU, VSU, and UVA hope to increase the pipeline of underrepresented minority students who are well-prepared to be competitive applicants and future scholars, particularly at UVA. Open Doors strives to holistically prepare emerging scholars from diverse backgrounds to thrive and become impactful leaders in their respective disciplines and sectors. Since its inception in 2021, the Open Doors Emerging Scholars Program has supported 48 students from underrepresented groups across various fields including STEM, business, public policy, and the humanities.

With about 4,500 students each, NSU and the land-grant institution VSU, are Historically Black Universities with long traditions of providing higher education opportunities to African American students. One of the nation's premier public universities, UVA is a flagship research university with more than 25,000 students. Through this innovative partnership, the three institutions aim to leverage their combined strengths and resources to give talented students from underrepresented backgrounds a stronger foundation to successfully apply and gain admission to the competitive Open Doors Program, and ultimately to graduate school. Combining rigorous academics, world-class faculty, and leading research as one of the nation's oldest universities, UVA is dedicated to advancing knowledge and producing leaders for Virginia, the nation, and the world. As stated on its website, "In 1819, Thomas Jefferson founded the University of Virginia and inaugurated a bold experiment – a public university designed to advance human knowledge, educate leaders, and cultivate an informed citizenry" [1]. Encouraged by the Dean of Education, Open Doors has become an important part of UVA's efforts to promote diversity and inclusion and has enabled students from NSU and VSU to gain valuable academic and personal experiences that may have otherwise been inaccessible to them. The ongoing collaboration between these institutions reflects their shared commitment to expanding educational opportunities and fostering a more diverse and equitable academic landscape.

2. Background and Historical Context

The need to address the underrepresentation of students of color in graduate research degrees is a pressing issue that has garnered increasing attention in recent years. Despite efforts to promote diversity and inclusion in higher education, significant disparities persist, particularly among students from HBCUs [2], [3]. This under-representation is rooted in a complex history of systemic barriers and inequalities that have hindered access and success for students of color in advanced academic pursuits [4]. The underrepresentation of students of color in graduate research degrees is a multifaceted challenge that has far-reaching implications for the academic community and society as a whole [25]. Posselt espouses that a diverse and inclusive academic environment is essential for fostering innovation, promoting varied perspectives, addressing complex societal challenges [5], and personal achievement. The lack of representation in graduate research programs perpetuates the cycle of underrepresentation, limiting the diversity of voices and perspectives that shape the future of research and academia [6].

One of the primary factors contributing to this underrepresentation is the systemic barriers and inequalities deeply rooted in the educational system. Historically, students of color have faced numerous obstacles, including limited access to resources, inadequate academic preparation, socioeconomic challenges [5] financial constraints, as well as language and cultural challenges. These barriers often compound and create a cycle of disadvantage that hinders the pursuit of advanced degrees [19], [7], particularly in research-intensive fields.

Furthermore, the underrepresentation of minority students in graduate research degrees is particularly pronounced in fields such as science, technology, engineering, and mathematics [8], [9], [10]. This disparity not only limits the diversity of perspectives in these critical domains but also perpetuates the lack of role models and mentors for aspiring minority students [11]. Consequently, the underrepresentation in STEM fields has far-reaching implications for scientific advancement, technological innovation, and the ability to address complex global challenges effectively [17].

Historically HBCUs have played a vital role in providing educational opportunities for African American students and fostering academic excellence. However, these institutions often face significant challenges in securing resources and support to effectively address the underrepresentation gap [12] [13]. Limited funding, infrastructure, and access to hands-on research opportunities can hinder the ability of HBCUs to adequately prepare and support students for successful transitions to graduate research programs. It should be noted that through several

grant opportunities, the National Science Foundation is dedicated to increasing the involvement of minority students in STEM fields [10].

Addressing the underrepresentation of minority students in graduate research degrees is not only a matter of equity and social justice but also a strategic imperative for the advancement of knowledge and the promotion of a diverse and inclusive academic community. According to Griffin and NSF [10], by cultivating a diverse pool of scholars and researchers, institutions can foster a vibrant exchange of ideas, promote innovative thinking, and better address the complex challenges facing society (2020). Sustained commitment, resource allocation, and policy reforms are crucial to dismantling systemic barriers and creating equitable pathways for minority students to pursue graduate research degrees. One of the key advantages of the HBCU collaboration through the Open Doors Program is the creation of pathways for students to access premier research experiences at UVA. By participating in the program, students from NSU and VSU gain exposure to cutting-edge research facilities, renowned faculty members, and state-of-the-art resources that may not be readily available at their home institutions.

2.1. Racial Disparities

Despite efforts to increase access over recent decades, stark racial disparities persist in enrollment and completion rates for advanced degrees like master's and doctoral programs across the United States. These inequities represent a significant loss of talent and potential contributions from underrepresented minority groups.

At the master's degree level, data from the National Center for Education Statistics show large racial gaps compared to White students. For the 2019-2020 academic year, Black students earned just 13% of master's degrees while comprising 14% of the U.S. population. Hispanic/Latino students earned 11% of master's degrees despite making up 18% of the population [15].

The disparities are even more pronounced at the doctoral level. In 2020, Black students earned only 8% of research doctorates awarded by U.S. universities, while Hispanic/Latino students received just 7% [14]. This underrepresentation cuts across fields from STEM disciplines to the humanities and social sciences [15]. These gaps reflect systemic racism and barriers that disproportionately impact underrepresented minority students along the entire pathway to an advanced degree. Factors such as underfunded K-12 education, lack of access to rigorous college preparatory curricula, financial constraints, insufficient mentorship, and racial stereotypes all decrease the likelihood of enrolling and persisting through graduate programs [14].

Even among those who do make it to the doctoral level, underrepresented minority students face significant challenges in degree completion compared to their White counterparts. A multi-institution study found 10-year completion rates of only 34% for Black doctoral students and 41% for Hispanic/Latino doctoral students, compared to 55% for White doctoral students [12]. Researchers point to issues like racial discrimination, lack of mentorship, social isolation, and financial hardship as contributing factors. Closing these long-standing racial gaps in advanced degree attainment is not only a matter of equity and social justice but critical for cultivating a diverse talent pool equipped to be leaders and innovators in an increasingly multicultural society.

2.2. Legal Challenges

The Open Doors Program represents a strategic approach to addressing legal challenges and concerns surrounding diversification in higher education. In recent years, there have been ongoing debates and legal battles regarding the use of race-based admissions policies at universities. By establishing partnerships and collaborative programs with HBCUs, institutions like UVA can demonstrate their commitment to promoting diversity and fostering an inclusive environment without relying solely on race-based admissions criteria. The Open Doors Program provides a legally defensible pathway for increasing diversity on campus while leveraging the strengths and resources of partner institutions.

2.3. Open Doors Emerging Scholars Program

The Open Doors Emerging Scholars Program was created by faculty at the University of Virginia, specifically Drs. Jim Wyckoff and Sara Rimm-Kaufman. The purpose is to directly address long-standing systemic barriers and inequalities that have prevented equal access to higher education for certain groups in the United States. According to scholars, historically, the privilege of pursuing advanced degrees has been restricted along racial, ethnic, and socioeconomic lines through a combination of legal, financial, and societal obstacles.

Before the 1960s, racial segregation policies and practices explicitly barred Black Americans from attending many colleges and universities across large swaths of the country. The 1896 Plessy v. Ferguson Supreme Court decision upholding the questionable 'separate but equal' doctrine cemented legal racial segregation, leading to the establishment of HBCUs as one of the only options for African Americans to obtain higher education during the Jim Crow era [18], [19].

Even after segregation was outlawed, systemic inequalities in areas such as school funding, academic preparation, and access to advanced coursework

created by decades of discriminatory policies made the playing field immensely uneven [20], [21], [22]. The impacts of this injustice have had profound, multi-generational effects in limiting college opportunities [23].

Financial barriers have also historically prevented large segments of the population from pursuing graduate studies, especially students from low-income backgrounds, communities of color, and other underrepresented groups. In many cases, the rising costs of tuition, fees, and living expenses have made graduate school an untenable option in the absence of adequate financial aid [16].

Inequities persisted despite the gradual opening of access over the latter 20th century. By the early 2000s, data clearly showed severe underrepresentation of Black, Hispanic/Latinx, Native American, and low-income students, especially in pursuit of master's and doctoral degrees across many fields [1], [14]. Not to mention the fact that reports show an increase in mental health issues suffered by college students in general [2], [24].

The Open Doors Emerging Scholars Program represents an intentional effort to start rectifying these historical injustices by proactively creating pathways and support systems to empower the next generation of diverse scholars and leaders.

2.4. Recruitment Pipeline

Open Doors serves as a valuable recruitment pipeline for graduate schools, including UVA, enabling them to identify and attract talented students from underrepresented backgrounds. Students from NSU and VSU have the opportunity to experience the academic environment at UVA firsthand, interact with faculty members and students, and gain a deeper understanding of the university's graduate programs and research opportunities. This immersive experience can play a crucial role in shaping the undergraduates' academic and career aspirations, potentially leading them to pursue graduate studies at UVA or beyond. By fostering these connections early on, UVA can effectively recruit and retain a diverse pool of highly qualified students for its graduate programs, enhancing the overall diversity and intellectual vibrancy of its academic community.

Moreover, the Open Doors Program can serve as a valuable recruitment tool for UVA's faculty and research initiatives. By collaborating with HBCU faculty members and exposing students to cutting-edge research, UVA can potentially attract talented researchers and scholars from these institutions, further strengthening its academic and research capabilities.

Overall, the strategic advantages of HBCU collaboration through the Open Doors Program extend beyond the immediate benefits for participating students. It represents a proactive

approach to addressing broader challenges in higher education, fostering diversity and inclusion, and strengthening the intellectual and research capacities of all institutions involved.

3. Research Component and Evaluation

Open Doors has had a thoughtful impact on undergraduate student participants, as evidenced by various assessments and preliminary data collected since its inception in 2021. It is important to note that data collected during the first three years may be unreliable due to the different meeting modes: all online in year one; one week face-to-face in year two; and three weeks face-to-face in years three and four. Also, the research instruments used during the first years were just a bit different from one another. Due to the inconsistencies of data collection settings during the first three years, only the narrative is presented below.

During the first three years, Open Doors administrators implemented comprehensive, but different, assessments to evaluate the changes in students' perspectives, knowledge, and research skills before and after their participation. Beginning in year four (2024), the research instruments have been finalized and will stay the same. Although wording differed somewhat, all assessments included pre- and post-program surveys, focus groups, and interviews.

Preliminary data collected from the 2021-2023 assessments have consistently shown positive changes in students' views and understanding of research processes, academic disciplines, and graduate study opportunities. Most students reported feeling more confident in their ability to conduct research via a literature review, analyze data, and communicate their findings effectively.

The Open Doors Program has helped broaden students' perspectives on different academic fields and potential career paths. Through exposure to diverse research areas and interactions with faculty members and mentors, students have gained a deeper appreciation for interdisciplinary approaches and the importance of collaboration in academic pursuits. Both qualitative and quantitative data were collected to measure the improvements experienced by participating students.

Qualitative data gathered through focus groups and open-ended survey questions has provided valuable insights into the transformative experiences of students. Many participants have shared stories of personal growth, increased motivation for academic pursuits, and a newfound sense of belonging in the broader academic community.

Quantitative data, obtained through pre- and post-program assessments, has demonstrated measurable improvements in areas such as research skills, knowledge of graduate school admissions processes, and academic self-efficacy. Statistical analyses have

shown significant positive changes in students' scores on various metrics, indicating the program's effectiveness in enhancing their academic preparedness and confidence.

Perhaps the most powerful evidence of the Open Doors Program's impact comes from the testimonials of students themselves. Many participants have shared their experiences through written reflections, video interviews, or public presentations, expressing their gratitude and highlighting the profound impact the program has had on their personal and academic journeys.

4. Conclusion

Ending its fourth year during 2024, the Open Doors Emerging Scholars Program is a collaborative summer initiative between Norfolk State University, Virginia State University, and host, the University of Virginia. This unique program aims to address the underrepresentation of students of color in graduate research degrees. Through a month-long immersive experience at UVA, the program equips HBCU juniors and seniors with the skills, knowledge, and confidence essential for writing a literature review and for successful graduate school endeavors. Participants receive guidance from faculty and graduate school mentors, participate in research seminars, writing clinics, networking events, and ultimately produce a professional presentation of their literature review. Preliminary data and student testimonials indicate positive changes in students' research skills, knowledge, and academic self-efficacy, as well as a deepened appreciation for interdisciplinary approaches and the importance of diversity in academia.

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