

**Stage 1: Topic, Question, Data**

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## **Background**

Despite Black women achieving higher education degrees at consistently high rates over the last decade, there is significant geographic variation in educational attainment across the United States. (National Center for Education Statistics) Black girls in some regions face substantial barriers to K-12 education, like over-disciplining, underrepresentation in advanced courses, and limited access to gifted programs. Findings by the National Center for Education Statistics show that Black women earned 68% of associate's degrees, 66% of bachelor's degrees, 71% of master's degrees, and 65% of doctorate degrees awarded to Black students between 2009 and 2010. However, achieving these milestones requires a strong K-12 foundation, which remains unequal across regions.

### **Research Question:**

What geographic regions in the United States do Black female students excel the most? What factors affect these outcomes?

### **Justification:**

With rising barriers affecting black student enrollment in higher education, research providing where black educational outcomes are better is necessary and insightful in removing societal barriers and advancing the growth within the black community. This question is critical because disparities in K-12 education impact the long-term success of Black girls and vary across regions. However, inequities at the K-12 level, such as disproportionate disciplinary actions and limited access to advanced academic programs, are significant challenges to their academic trajectories. Understanding these geographic disparities can provide insight into addressing systemic inequities and foster equitable educational environments for Black girls across the country. Additionally, addressing these disparities contributes to a better understanding of how geographic, racial, and gender shape educational experiences.

### **Literature Review:**

With the recent affirmative action ban, preventing universities from considering race in admissions, there is an active attack on black students and educational attainment for marginalized communities. (Hartocollis, 2024) While there is additional research that documents the systemic biases Black girls face, such as the "adultification" of Black girls in education, leading to disproportionate disciplinary actions, little research has focused on the geographic effect of this stigma and the effect of black female students entering higher education. (Anderson, 2024) Studies have identified where Black Americans and Black women thrive based on economic factors, including the racial and gender wealth gap. However, there remains a gap in research on intersectionality within the education system, particularly in understanding where Black female students succeed academically in the U.S. Addressing this gap is critical to ensuring more Black women enter higher education and leadership roles. By answering where Black girls succeed educationally, we can reveal certain barriers preventing success, inspiring policymakers to develop targeted education policies that protect and support marginalized communities in these regions.

## **Data**

### **Ideal Data:**

The ideal dataset for this research would include information on academic performance, disciplinary records, teacher demographics, school resources, and program participation. This data should be disaggregated by race, gender, socioeconomic status, and geographic region. Taking into account all of these factors would allow the analysis to accurately measure black female students' academic excellence.

### **Dataset for Analysis:**

The U.S. Department of Education's Civil Rights Data Collection (CRDC) is a strong database with many datasets suitable for regionally analyzing where black girls excel educationally. The CRDC provides national-level data on enrollment, discipline, and participation in advanced academic programs, all disaggregated by race, gender, and state. The CRDC is a required data collection process that all public, charter, alternative, and special education institutions receiving federal financial assistance from the U.S. Department of Education must legally complete. (U.S. Department of Education) These datasets also provide detailed data by county as well.

I intend to combine and analyze three datasets from the CRDC to capture the regional academic success of high school Black female students: The Gifted and Talented Programs dataset, which examines enrollment in gifted and talented programs by race; Advanced Placement (AP) Exam Participation and Performance dataset, which measures AP exam participation and performance by race and gender; and the ACT Test (ACT) dataset, which tracks test-taking trends across race and gender, providing insight into college readiness.

There are limitations to this data, in terms of accurately capturing the success of specific student demographics. Since it spans all education levels from elementary to high school, it does not include graduation rates disaggregated by race and gender, a crucial factor in measuring educational success and the likelihood of pursuing higher education. To strengthen my analysis, I will incorporate an additional dataset that includes graduation rates. Another limitation is deciphering which indicators to analyze to measure educational efficiency. While the dataset includes the racial and gender breakdown of Advanced Placement exam participation, gifted programs, and ACT testing, other critical measures of student excellence are not included. Additionally, this dataset also does not provide any socioeconomic data pertaining to the funding of these schools, which should be considered to provide context for this analysis. Some school districts may underreport or don't have allocated resources to provide these programs to their students.

## References

- Anderson, M. D. (2024, August 13). *How Black Girls Are Harmed in Schools*. Education Writers Association. Retrieved February 2, 2025, from <https://ewa.org/data-research-tips/how-black-girls-are-harmed-in-schools>
- Hartocollis, A. (2024, December 16). *Black Student Enrollment at Harvard Law Drops by More Than Half*. The New York Times. Retrieved February 2, 2025, from <https://www.nytimes.com/2024/12/16/us/harvard-law-black-students-enrollment-decline.html>
- National Center for Education Statistics. (n.d.). *Fast Facts: Degrees conferred by race/ethnicity and sex (72)*. National Center for Education Statistics. Retrieved February 2, 2025, from <https://nces.ed.gov/fastfacts/display.asp?id=72>
- U.S. Department of Education. (n.d.). *Civil Rights Data Collection Office for Civil Rights*. Civil Rights Data | U.S. Retrieved February 2, 2025, from <https://civilrightsdata.ed.gov/>