
EQUITY AND ACCESS IN GIFTED EDUCATION: AN EXAMINATION WITHIN NORTH CAROLINA

Kristen R. Stephens, Ph.D.

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INTRODUCTION

The disproportionality between the representation of white students and students of color in gifted education programs is both persistent and pervasive. Attempts over the years to remedy the issue have done little to narrow this disparity.

Some have proposed eliminating gifted education programs due to inequitable representation among students of color. For example, in New York City, a diversity advisory panel appointed by Mayor Bill de Blasio called for the elimination of gifted programs as a step towards more equitable education opportunities for all (Shapiro, 2019). However, the eradication of gifted programs within public schools will only further widen the opportunity gap. Parents with economic, social, and cultural capital will seek specialized—often fee-based—enrichment programs outside of school for their children, and students without such resources will have limited-to-no access to such programs unless they exist within their schools.

Disproportional representation in gifted programs may also present a civil rights issue for North Carolina schools. In *Leandro v. the State of North Carolina* (1997), the NC Supreme Court affirmed the state's responsibility to provide a sound, basic education to all students. Over 20 years later, the state is still struggling to meet this responsibility. In 2018, Judge W. David Lee ordered that an independent, non-partisan consultant compile a report detailing the most critical actions the state needs to take to ensure constitutional compliance with the mandates of the Leandro decision. The resulting report, *Sound Basic Education for All: An Action Plan* for North Carolina (WestEd, Learning Policy Institute, & Friday Institute for Educational Innovation at North Carolina State University, 2019), acknowledged that ... "students in low-poverty schools are provided access to gifted programs at nearly five times the rate of students in high-poverty schools" (p. 100). This finding is compounded by the fact that research suggests participation in gifted education programs results in beneficial outcomes for students—such as better positioning them for completion of a four-year college degree and higher paying jobs (Lubinski, Webb, Morelock, & Benbow, 2001). Thus, disproportional enrollment by race and income in gifted programs can deprive underrepresented groups of gifted students access to these future outcomes.

Inequity in gifted programs suggests that we are "missing" a large percentage of students whose potential may remain untapped and whose contributions may never be realized. If this "missing" talent can be harnessed, the rate of innovation in our country could nearly quadruple (Bell, Chetty, Jaravel, Petkova, & Van Reenen, 2019).

This brief will aim to equip policymakers with tools to convey the severity of disproportionality in gifted education programs in North Carolina and provide recommendations for dismantling the equity and access barriers that exist.

GIFTED EDUCATION POLICY IN NORTH CAROLINA

In order to begin remedying disproportionality in North Carolina's gifted programs, it is necessary to understand North Carolina's gifted education policy.

Definition

North Carolina has a partially-funded state mandate for identifying and providing appropriate educational programming to academically and/or intellectually gifted students (see NC General Statute, Chapter 115C, Article 9B). While there are many recognized categories of giftedness (creatively gifted, leadership gifted, artistically gifted), NC statute only recognizes students

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TYPES OF GIFTEDNESS RECOGNIZED IN NORTH CAROLINA

ACADEMICALLY GIFTED	INTELLECTUALLY GIFTED	ACADEMICALLY AND INTELLECTUALLY GIFTED
Students who demonstrate high levels of achievement in specific academic areas (e.g., math, reading, or both).	Students who exhibit a high aptitude (i.e., potential for advanced achievement) but do not demonstrate advanced academic achievement.	Students who demonstrate both high levels of achievement and high aptitude.

who are academically gifted (AG), intellectually gifted (IG), and academically and intellectually gifted (AIG). NC's definition of giftedness states that, "...academically or intellectually gifted students **perform** or **show the potential to perform** at substantially high levels of accomplishment when compared with others of their age, experience, or environment" (Article 9B).

Identification

Methods for identifying academically gifted versus intellectually gifted students vary. Academically gifted students are typically identified using state-normed assessments of achievement, nationally-normed achievement tests, benchmark assessments, grades in language arts and mathematics, teacher recommendations, and/or portfolios of academic work. Intellectually gifted students are identified through scores obtained on aptitude tests. Whereas **achievement tests measure a student's knowledge in a particular area at a**

specific point in time, aptitude tests measure a student's propensity for success and predict future potential.

Each Local Education Agency (LEA) establishes their own policies and practices regarding how gifted students will be identified and served within their respective schools. While the state does not prescribe specific criteria/requirements for the identification of gifted students, general standards and practices that LEAs should consider in the development of their identification policies and processes in gifted education are offered within the North Carolina AIG Program Standards (NC State Board of Education, 2018). Approved by the NC State Board of Education in 2009 and revised in 2018, these performance standards support the development of high quality, effective gifted programs and serve as a means for the state to monitor local gifted program implementation.

COMMONLY USED ASSESSMENT INSTRUMENTS FOR IDENTIFICATION

ACADEMICALLY GIFTED	INTELLECTUALLY GIFTED
<ul style="list-style-type: none"> Beginning of Grade/End-of-Grade or Course Assessments Woodcock Johnson Terra Nova Otis-Lennon School Abilities Test Iowa Tests of Basic Skills mCLASS DIEBELS Case 21 	<ul style="list-style-type: none"> Naglieri Non-Verbal Abilities Test (NNAT) Cognitive Abilities Tests (CogAT) Wechsler Intelligence Scale for Children (WISC) Stanford-Binet Intelligence Test

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Since each LEA determines their own identification criteria for gifted program eligibility and selects the measurement instruments to be used in the identification process, there is variance across the state in how gifted students are identified. For example, one LEA might set academically gifted eligibility at the 85th percentile on a nationally-normed assessment of achievement, while another LEA requires a score at the 95th percentile on the same or similar instruments.

In order to address issues of disproportionality and potentially capture those students who may be overlooked or excluded from consideration because they do not meet established identification criteria, some LEAs in NC offer multiple pathways in which students can qualify for gifted education programs. For example, in lieu of meeting a required percentile rank on an achievement test, LEAs may accept a compilation of student work (i.e., a portfolio) as evidence of advanced achievement.

Local Policies and Practices

Every three years, each LEA in North Carolina revises their local plans which detail how gifted students will be identified and served within their schools. These plans address the practices outlined within the North Carolina AIG Program Standards (NC State Board of Education, 2018) and are approved by local boards of education prior to submission to the North Carolina Department of Public Instruction (NCDPI) and the State Board of Education (SBE). While NCDPI and SBE do not grant formal approval of an LEA's plan, they are able to offer comments on the plan.

Each local plan follows a standard template in which LEAs convey how they implement the recommended practices across all six AIG Program Standards (see Appendix A).

Funding

NC has a flat grant funding model for gifted education. Funding is based on a formula and is derived from four percent of the Average Daily Membership (ADM) of the LEA at \$1,340.97 per pupil. This is a partially-funded mandate, as the majority of school systems in the state have far more than

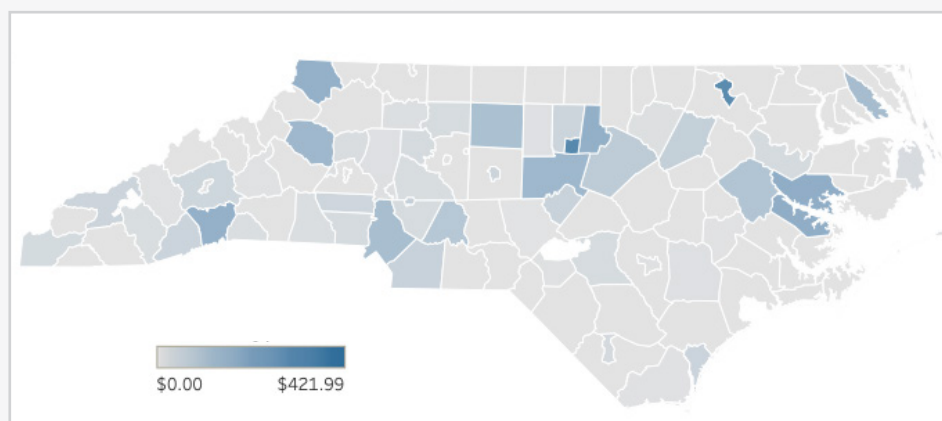
four percent of their student body identified as gifted. In fact, 97 percent of LEAs in NC identify more than four percent of students as gifted with an average identification rate of 11 percent across the state.

There are some inherent issues with flat grant funding models that could be exacerbating disproportionality in some LEAs. For example, flat grant funding models provide insufficient aid to districts with small student populations and fail to equalize capacity across districts with varying fiscal resources. Furthermore, flat grant models tend to promote regressive distribution of aid in which higher levels of aid are provided to LEAs with fewer students in poverty (Baker & Friedman-Nimz, 2004).

North Carolina's flat grant model could be suppressing identification efforts in some districts. For example, well-resourced districts are more likely to contribute additional local funding on top of funding received from the state, better positioning them to expand their identification practices to address disproportionality (e.g., conducting universal screening of all students at a particular grade level). Less-resourced districts that contribute little to no local funding and rely solely on state funds may be incentivized to initiate identification practices that will ensure their percentage of identified gifted students hovers close to the 4 percent ADM funding cap (i.e., setting more stringent eligibility criteria).

Figure 1 depicts what each district's funding per gifted student would calculate to be based on local contributions alone.

FIGURE 1 | LOCAL FUNDING PER AIG STUDENT



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THE DISPROPORTIONALITY PROBLEM IN GIFTED EDUCATION

Using NC AIG Child Count Data from 2018-19ⁱ and the North Carolina Public School's Statistical Profile dataset (Membership by Race and Sex; <http://apps.schools.nc.gov/ords/f?p=145:1>), a Relative Difference in Composition Index (RDCI) was calculated for each LEA by racial/ethnic subgroup (See Figure 2). A group is considered well-represented with a RDCI of 21 or above (See Appendix B). These calculations show that Black students are underrepresented in gifted programs in 84 percent of LEAs, and Hispanic students are underrepresented in 77 percent of LEAs (See Figure 3).

FIGURE 2 | DISPROPORTIONALITY IN AIG PARTICIPATION IN NORTH CAROLINA BY SUBGROUP, 2018-19

RDCI Calculation by Race/Ethnicity

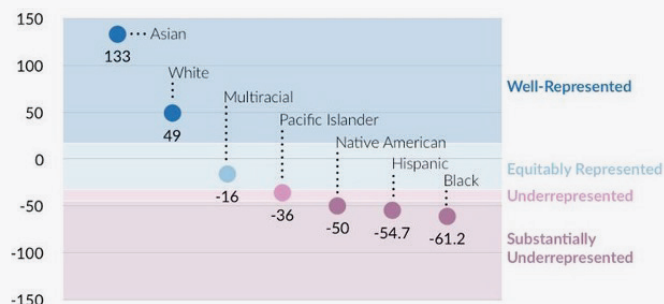
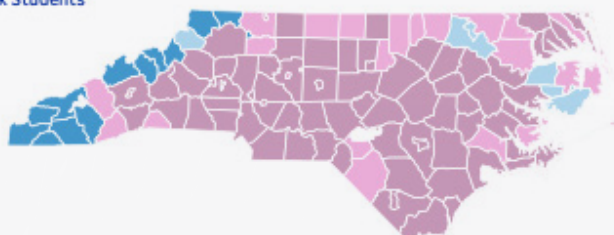


FIGURE 3 | ACADEMICALLY & INTELLECTUALLY GIFTED (AIG) REPRESENTATION

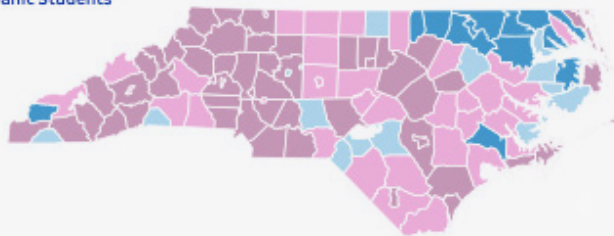
How representative are AIG programs in districts across North Carolina? The following maps illustrate the balance (or imbalance) of participation in the programs for Black, Hispanic, and white students.

Substantially Underrepresented | **Underrepresented**
Equitably Represented | **Well Represented**

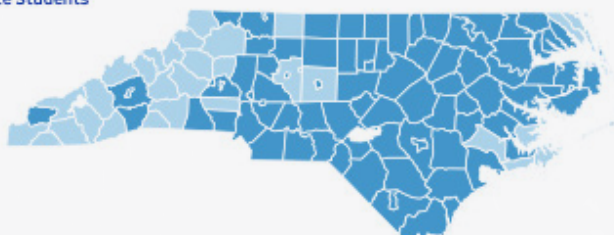
Black Students



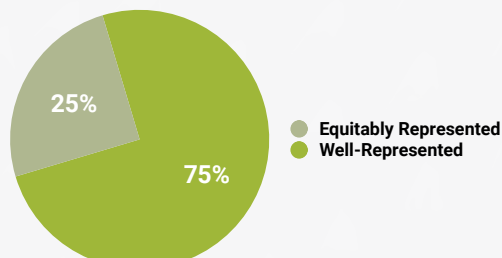
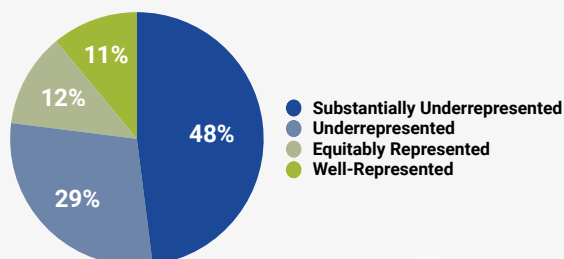
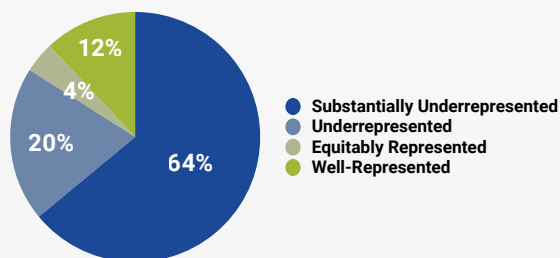
Hispanic Students



White Students



PERCENT OF LEAS WHOSE RDCI FALLS WITHIN DEFINED RANGES



i. LEAs with fewer than five students in a subgroup are reported at >5 in NCDPI's child count data. In such cases, in order to calculate the RDCI, any total reported as <5 was converted to a value of 4 to provide a "best case scenario" in representation.

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North Carolina's underrepresentation of Black and Hispanic students in gifted programs exceeds the national average (Office for Civil Rights, 2015; see Table 1).

TABLE 1 | UNDERREPRESENTATION BY SUBGROUP IN NC COMPARED TO NATION

SUBGROUP	NC	US
	Underrepresented by as much as...	
Black	57%	45%
Hispanic	46%	30%

EQUITY AND ACCESS BARRIERS IN GIFTED EDUCATION

To provide additional context to the RDCIs, each LEA's local plan was examined for equity practices and equity inhibitors—specifically each LEA's response to NC AIG Program Standards One (identification) and Six (Program Accountability). In order to adequately address Standard One, LEAs must have an identification process that a) articulates methods for screening and referral, b) establishes identification criteria, c) responds to the LEA's demographics/ underrepresented populations, d) is implemented with consistency across the LEA, e) is clearly communicated/disseminated to stakeholders, and f) documents the AIG identification process and resulting decisions for each student. For a portion of Standard Six, LEAs must explain how the representation of students from underrepresented groups will be monitored.

TABLE 2 | PROMISING PRACTICES AND POTENTIAL INHIBITORS TO EQUITY IN IDENTIFICATION

EQUITY IN IDENTIFICATION		
PROMISING EQUITY PRACTICES		POTENTIAL EQUITY INHIBITORS
<ul style="list-style-type: none"> Uses local norms for determining score eligibility Uses group-specific norms for determining score eligibility Uses sub-test/partial composite scores in determining eligibility Conducts universal screening at one or two grade levels Uses non-verbal assessments Allows testing accommodations for English Language Learners and students with disabilities Offers alternative identification pathways Offers nurturing programs for non-identified gifted students who exhibit potential 	<ul style="list-style-type: none"> Considers non-traditional assessments in decision-making process (i.e., portfolios, anecdotes) Reviews state assessment scores annually to form a "pool" of students that may benefit from gifted education programs Conducts outreach to community members and leaders of underrepresented populations Allows for the use of alternate achievement or aptitude tests that best suit the student Accepts gifted designations for students transferring in from other states/districts Involves EC and ESL teachers in the identification process Offers early identification for K-2 students 	<ul style="list-style-type: none"> Offers a single pathway for identification Relies on testing for all identification pathways Does not accept gifted designations from students transferring in from other districts/ states Does not have a process for identifying gifted students at the middle and high school level Relies predominantly on teacher referrals, no universal screening Does not provide testing in other languages

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While LEAs appear to be articulating many promising, evidence-based equity practices in their local plans, the composition of the LEAs' gifted programs does not match their efforts in increasing the underrepresentation of certain groups in gifted programs. This could be the result of any of the following:

- 01. Misalignment of intent and implementation.** The identification process, as outlined in the LEA's local AIG plan may not completely align with the process that is actually being implemented within the district or may be implemented inconsistently across schools within the LEA. Additionally, there are no strong accountability measures in place to ensure the plan is actually implemented with fidelity. Each LEA receives their designated state funding for gifted education regardless of implementation of their plan and NCDPI does not have authority to implement accountability measures or sanctions.
- 02. Time.** It is likely too early to see results from the implemented equity practices. The disproportionality problem will take time to resolve. Local AIG plans for the 2016-2019 cycle were used for this analysis along with the most recent AIG Child Count data (2018-2019), so the 2019-2022 plans were not in effect for the AIG Child Count data period. An examination of AIG Child Count data from 2016-2019 reveals that disproportionality in gifted programs is showing little to no improvement and has even slightly widened for Black students while white and Asian students continue to be well-represented.
- 03. Intensity.** The evidence-based equity practices being implemented are not intensive enough to address such substantial disproportionality in gifted programs. Broader, systemic interventions are needed. Additional research is needed to examine the effect of potential equity practices: use of local norms (see Peters, Rambo-Hernandez, Makel, Matthews, & Plucker, 2019), universal screening (see Card & Guiliano, 2016), remedies for reducing teacher bias in referrals (see Elhoweris, Mutua, Alsheikh, & Holloway, 2005), and the allowance for non-traditional measures for identification among others (see Hodges, Tay, Maeda, & Gentry, 2018).

TOWARD EQUITY: CONSIDERATIONS MOVING FORWARD

The complexity of the disproportionality problem in gifted education will require a targeted and sustained effort that extends beyond the walls of public schools, as there are certainly systemic economic and social issues compounding the problem that can't be tackled by schools alone. Reversing trends in disproportional access to gifted education programs is possible with the will to support systemic changes, but transparency as to the extent and severity of the problem is an important first step, as it raises public awareness of the issue and holds all of us accountable.

As policymakers consider opportunities to increase equity of access for academically and intellectually gifted programs, they may wish to consider the following recommendations:

Let data guide decision-making | In order to better target necessary interventions to achieve equitable access, it is critical to determine the extent of disproportionality for each demographic subgroup at each school within the LEA. In addition to calculating the RDCI, it is also helpful to calculate the Equity Index (EI) for each subgroup to ascertain the extent to which a school must progress to reach proportionality for each subgroup. The EI informs school leaders as to what the representation of a certain subgroup should be in gifted programs within their respective schools.

Make disproportionality data transparent and accessible to the public | While AIG Child Count Data is publicly available on the NCDPI website, the extent of disproportionality is not readily apparent unless additional calculations are conducted. In order to remedy this issue, LEAs should be required to include demographic data with RDCI and EIs calculated within their local AIG plan submitted to NCDPI. Additionally, NCDPI's AIG Child Count statewide overview should include a depiction of RDCI by subgroup.

Monitor the effect of promising equity practices | As states and districts work to more equitably identify gifted students, it will be important to determine which efforts, programs, and initiatives are having the desired impact on ameliorating disproportionality in gifted programs.

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APPENDIX A

NC AIG Program Standards (State Board of Education Policy ACIG-000 – June 2018)

- **Standard 1 - Student Identification:** The LEA clearly articulates the AIG student identification process.
- **Standard 2 – Comprehensive Programming with a Total School Community:** The LEA employs a variety of programs and services across all grade levels.
- **Standard 3- Differentiated Curriculum and Instruction:** The LEA provides challenging, rigorous, and relevant curriculum and instruction.
- **Standard 4 – Personnel and Professional Development:** The LEA recruits and retains highly qualified professionals and provides professional development concerning the needs of gifted learners.
- **Standard 5 – Partnerships:** The LEA ensures participation of stakeholders in the planning and implementation of the AIG program.
- **Standard 6 – Program Accountability:** The LEA monitors and evaluates the local AIG program for effectiveness in meeting the needs of gifted learners.

Note: For a complete overview of the NC AIG Program Standards and practices see <https://files.nc.gov/dpi/documents/advancedlearning/aig/ncaig-program-standards.pdf>.

APPENDIX B

Relative Difference in Composition Index

What is a Relative Difference in Composition Index (RDCI)?

The RDCI represents the difference between a group's composition in gifted education programs and their composition across the LEA expressed as a discrepancy percentage (See Ford & King, 2014).

What constitutes underrepresentation?

An RDCI of 0 represents perfect proportional representation. Any negative RDCI indicates underrepresentation; however, utilizing the Office for Civil Rights proposed threshold of 20 percent, an RDCI of -20 to 20 indicates reasonable representation. A group is considered well-represented with a RDCI of 21 or above. In order to create a state profile of disproportionality, the following scale was used to categorize the representation of each racial/ethnic subgroup across LEAs in North Carolina.

Well-Represented:	RDCI = 21 to 2876
Equitably Represented:	RDCI = -20 to 20
Underrepresented:	RDCI = -45 to -21
Substantially Underrepresented:	RDCI = -84 to -46

How is the RDCI calculated?

Use the following formula to calculate RDCI by subgroup at each school.

$$\left[100 - \left(\frac{\% \text{ of selected subgroup in gifted education at school}}{\% \text{ of selected subgroup in the total school population}} \right) \right]$$

So, for example, if 12.6 percent of students enrolled in the gifted program at a given school are Black and 31.4 percent of total students enrolled in the school are Black, the formula would look like this:

$$\left[100 - \frac{12.6\%}{31.4\%} \right] = -60$$

Indicating, in this case, that Black students are underrepresented in gifted programs by as much as 60% at this school.

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