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Breaking into the Playground of Privilege: An Analysis of GT Program Identification Procedures

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ABSTRACT

This research seeks to identify solutions to minority exclusion within Gifted and Talented (GT) education programs. Minority students are consistently underrepresented within these programs, highlighting and reinforcing deeper social disparities. This exclusion is perpetuated in part by inequitable identification procedures implemented by school districts. This research conducts a study of relevant literature and compiles interviews of experts in the field of gifted education to identify the causes of and solutions to a lack of minority representation within GT programs. The study finds that parent/teacher nominations, biased standardized tests, and socioeconomic factors can typically be barriers to identification. Universal screening, local norming, and frontloading are identified as strategies to be implemented to improve minority inclusion.

Background

Gifted and Talented (GT) Education Programs are K-12 education programs that seek to teach content and skills to high-achieving students at an accelerated rate. These students exist across all socioeconomic subgroups, regardless of ethnicity or economic status. GT programs often receive extra funding, better teachers, and more attention. However, these programs tend to disproportionately exclude minority students. For example, African American and Latinx students are only 57% and 70% likely, respectively, to be identified for GT programs (Peters et al., 2019a). Thankfully, social movements and calls for change in the last few decades have brought light to these issues, leading to an increase in research and solutions to them. A lack of minority inclusion in advanced programs necessitates a change in identification practices, such as implementing universal screening, using local norms, and frontloading while simultaneously maintaining program effectiveness.

Underrepresented populations typically constitute Black students, Hispanic students, students who qualify for Free and Reduced-Price Meals (FARMs), and Rural students. Other underrepresented populations include Twice-exceptional (2e) students, those who are both gifted and possess a learning disability. Most research measures the underrepresentation of these students using a Representation Index (RI). The RI, or the Risk Ratio, is a proportional measure of a group's percentage of gifted students. For example, if a district's overall student demographics are 20% Asian, and their Gifted program is 40% Asian, then the RI for Asian students in that district would be 2.00 (40/20). Thus, RIs greater than 1.00 show that students are overrepresented, and RIs less than 1.00 show that students are underrepresented. To accurately understand the extent to which these minority groups are underrepresented within GT programs, two factors must be analyzed.

Firstly: Minority representation in academic achievement. Specifically, the extent to which minority students occupy the "high-achieving" top 10% of the student population. This metric is evaluated via the National Assessment of Educational Progress (NAEP), a test taken by students nationwide every 2 years for data collection on academic achievement. A 2008 analysis of test scores from the NAEP for 8th graders found that high achievers were typically White (Loveless). After breaking down the racial composition in the top ten

percent of NAEP scores, only 2.6% of students were African American, and only 4.4% were Hispanic. However, Black and Hispanic students each measured around 16% of the national population (16.1 and 16.2 respectively). Thus, the RI for these students would be ~0.13 and ~0.28 respectively (Loveless, 2008).

Secondly: Representation within GT programs themselves. Specifically, the extent to which underrepresented populations are actually present within GT classrooms, regardless of their scores on achievement tests. A breadth of research demonstrates that the disparity in academic achievement for minority students is also represented by their lack of participation in GT programs themselves. For instance, Siegle et al. found in 2016 that African American students had an RI of 0.25 in Calculus classes nationwide. Another 2019 study found that African American and Hispanic students nationwide had RIs of 0.57 and 0.7, respectively, for their participation in GT programs (Peters et al., 2019b). White students, by comparison, reported an RI of 1.18. The study found that Black and Hispanic students were consistently underrepresented in GT programs (Peters et al., 2019b).

Table 1. Representation Indices by Race/Ethnicity, 2006-2016. (Peters, 2019b)

Subgroup	2006	2016
African American	0.55	0.57
Asian American	1.90	2.01
European American	1.20	1.18
Latinx	0.65	0.70
Native American	0.75	0.87

A general consensus among scholars is that a lack of minority representation in high academic achievement (i.e., the top 10% performers on the NAEP) is, at least in part, perpetuated by their lack of inclusion within GT programs themselves (Cohen, 2022). To evaluate the causes of and potential solutions to this disparity, this study interviews GT education scholars and teachers to gain expert insight.

Methods

4 separate individuals were interviewed over the course of this research:

1) Dr. Jonathan A. Plucker, Professor of Talent Development at the John Hopkins University School of Education
2) Dr. Scott J. Peters, Professor of Assessment and Research Methodology at the University of Wisconsin – Whitewater
3) Dr. E. Jean Gubbins, Professor of Talent Development at the University of Connecticut Rossier School of Education
4) Jane Doe, Anonymous Teacher at Howard County Public Schools, Maryland. *(Name altered for privacy)*

The experts and teacher were identified via authorships of previously read sources, Google Scholar, and independent volunteering. Each interviewee was asked a standardized set of 8 questions during a standardized interview. Throughout the course of the interview, follow-up questions were asked to gain further insight into the interviewee's responses.

Results

Causes of Inequitable Representation

External Factors

The lack of minority representation within GT programs stems from structural barriers woven into both the fabric of society itself and the identification procedures of GT programs. External factors such as parental involvement and education quality impact a child's development. As a result, children who are negatively impacted by such external factors face challenges in being identified as gifted and talented. A plethora of research links poverty and childhood circumstances to decreased long-term academic performance (Hartman, 2019). Interviewee Dr. Jonathan Plucker further explains that "a lot of these differences that we see, like racial differences, gender differences, [and] socioeconomic differences, [...] are due to opportunity gaps." While these factors are largely out of the control of school districts, these districts do have control over the other barrier to GT program involvement: their own identification procedures.

Identification Barriers

These identification barriers manifest primarily in two key ways (Ford, 2010). The first challenge is a lack of parent and teacher referrals. As noted by Dr. Plucker and Dr. Peters, many gifted programs are designed to require teacher referral as a first step before eventually moving into a "phase 2" or more rigorous identification process. However, Elhoweris et al. (2005) find that teachers are often racially biased, even if not intentionally, when making decisions about gifted program referrals. They conducted a study of 207 teachers who, when presented with a portfolio of a given student and told their race, were more likely to select a European/white student than an African American student. As noted by interviewee Dr. Scott Peters, "If you have to please your teacher in order to [advance in the identification process], we're measuring a whole bunch of irrelevant stuff."

Without teacher referrals, parents are forced to advocate for their children. However, parent nominations are further problematic because many parents who do not speak English or speak it as a secondary language are unaware of or unable to engage with complex GT program application/referral procedures. Language may be an important barrier to the identification of qualified, gifted children in a referral-based system (Card & Guiliano, 2016). Additionally, parents may be concerned about the potential socioemotional drawbacks of student enrollment, including classroom alienation or concerns that their child may not be ready (Ford et al., 2008). Because many identification procedures rely on parent or teacher referrals as a first step, such inherent reluctance and potential racism can prevent minority students from even reaching the first step of the process.

The second challenge is students' differential performance on traditional intelligence and/or achievement tests, which occurs as a result of inherently biased tests (Frasier et al., 1995). These tests tend to favor students of a white or European cultural background and are biased against diverse and underrepresented populations (Frasier et al., 1995; Ford, 2010; Ford et al., 2008). For example, Ford et al. (2008) find that Black students tend to score 15 points lower on seemingly objective intelligence tests than White students. To alleviate underrepresentation, researchers have primarily proposed three mechanisms: Universal screening, usage of local norms, and frontloading.

Proposed Solutions

Universal Screening

Many school districts have recently implemented universal screening, a strategy in which all students are automatically tested for GT programs rather than relying on potentially biased nominations or referrals. Currently, standardized testing is the prevailing method of universal screening; all students are offered a test, and their

performance is used to determine whether they will be tested further for admission into a GT program (Card & Guiliano, 2016). These standardized assessments are useful for universal screening because they rarely produce "false positives"-- in other words, students who perform well on a standardized test almost always belong in a gifted program (Plucker). Additionally, standardized testing is already implemented and used for data collection in school districts across the country. Many of these datasets already contain unexpected results; as Dr. Plucker explains,

"One of my favorite things to do is to go into schools […] where [administrators] tell me they don't have gifted students. And I tell them, pull up your test scores right now, and I guarantee you that you have more students working above grade level than you realize. [...] And within five minutes, they're going, oh, my gosh, we do. [...] [Their] expectations are so artificially low that even when [they] have these students right in front of [them] and [they] have [the students'] data, [they're] looking right through them."

However, assessments can be subjective and biased against culturally diverse students, so they should be avoided as a sole method for identification (Ford, 2010; NAGC, 2004; Frasier et al., 1995). Instead, they should be used in conjunction with a variety of other tools. Interviewee Dr. Jean Gubbins notes personal student portfolios and in-class discussions as potential alternate or supplemental avenues for universal screening.

Universal screening has demonstrably increased the odds of low-income students being identified for GT programs. After one district in Florida implemented universal screening, minority students were 174% more likely to be identified as gifted without any other changes to minimum thresholds (Card & Guiliano, 2016). This district specifically used standardized testing as its method, and the newly identified students were more likely to come from schools with previously low numbers of gifted students, which helped to equalize participation across the district (Card & Guiliano, 2016). A study in another district found that universal screening consistently increased gifted education participation rates for all minorities in that district (Fohl, 2021).

Local Norming

Recent research has recommended the implementation of local norming alongside universal screening. Using local norming means that schools focus on the top X percentage of test-scoring students within their own schools, as opposed to students who score above some percentage of national, state, or district scores. Using these norms allows schools with more underprivileged students to still help those who are high-flying in their contexts, which arguably aligns closer with the end goal of gifted education by aiding the top students in ALL schools (Peters et al.,2019a). As Dr. Peters explains,

"Imagine you get a score of 117 [on an arbitrary standardized test]. 117 might only put you in the top 20 percent of the nation, but it might put you in the top 2 percent of your high school. Which is probably a better indicator of you being under-challenged? If the goal of gifted programs is to provide an additional challenge to kids who are most likely to be under-challenged, then looking at how much of an outlier you are compared to your peers at your school, which is what a building norm is, is a better indicator than looking at a national percent. It also has [an] added benefit of identifying a much more diverse student body of gifted kids. If you take the top 5 percent of every school in the country and call that gifted as opposed to the top 5 percent of the country as a whole, you're going to get a much more racially, socioeconomically diverse gifted population."

There is evidence to suggest that there is a need for gifted education in high-poverty schools, as they have students achieving at widely different academic levels. Firmender et al. (2013) found over five different reading levels within a 5th-grade classroom at a high-poverty school. Local norming is a relatively new concep within the field of gifted education, but research thus far demonstrates its effectiveness.

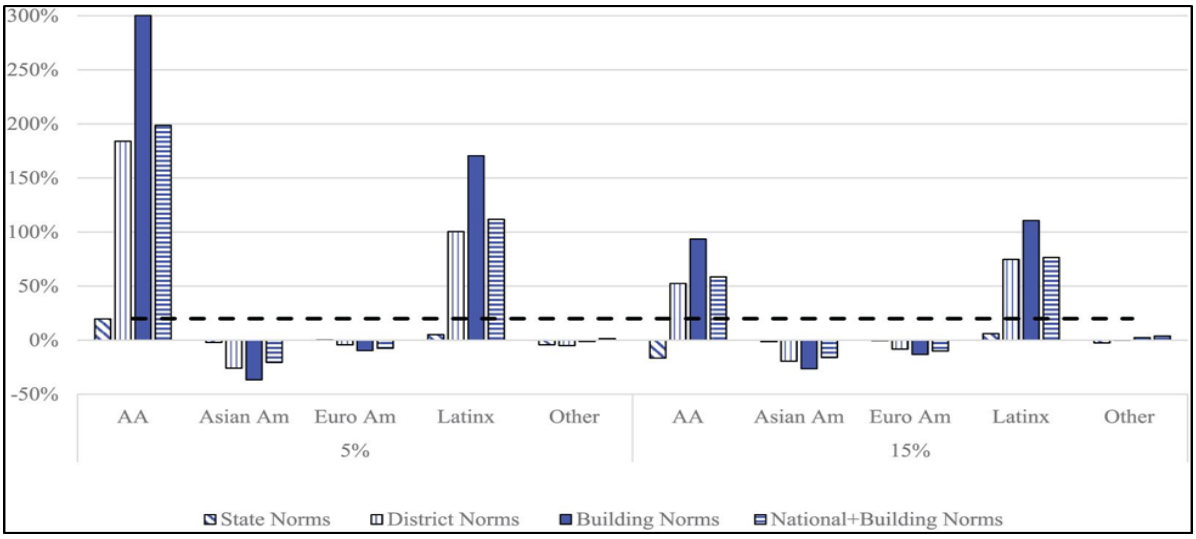

Figure 1. Percentage change in representation indices in mathematics (national norm as reference) by ethnicity and cutoff. AA = African American (Peters et al., 2019a). Note significant increases in AA and Latinx reprsentation after local norming.

Peters et. al (2019) analyzed test scores from the Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) test to determine the hypothetical impact of employing various thresholds and levels of GT program cutoff. Specifically, the study found that the RI for Black students increased by 300% and the RI for Hispanic students increased by 170% (For GT representation in advanced mathematics classes when building-level norms were applied at a 5% cutoff).

Another study in an unidentified state found that the usage of local norms had a positive impact on the rate at which students qualifying for FARMs were identified (Hartman, 2019). Interviewee Dr. Plucker also notes that while the usage of local norms is a field that requires further research, students identified via local norming catch up to their national or state-identified peers by the time they reach high school.

Frontloading

As previously discussed, external socioeconomic factors are largely out of the control of school districts. However, these factors play a major role in students' performance within gifted programs, even after admission. While universal screening and local norms help to close participation gaps within GT programs, they do little to alleviate achievement gaps. Thus, researchers have recently stressed the importance of frontloading programs in improving both minority participation and achievement. Frontloading involves identifying potentially gifted students from a young age and providing them with increased academic support in order to prepare them for more rigorous programs in the future. It operates on the premise that underprivileged students lack access to rigorous external academic resources early on, which disadvantages them (Hartman, 2019; Siegle et al., 2016; Peters et al., 2019b). By providing them with more rigorous opportunities early on, districts can help to level the playing field at an earlier age, taking at least a small step in correcting external barriers.

Perhaps one of the most successful examples of a frontloading program is the Young Scholars program in Fairfax, VA (Horn, 2015). In Fairfax County, the GT program is 4-tiered, as demonstrated below in Fig. 3. Placement in each level of programming involves increasingly rigorous identification procedures. Separate from the gifted program itself, however, Fairfax County operates the Young Scholars frontloading program.

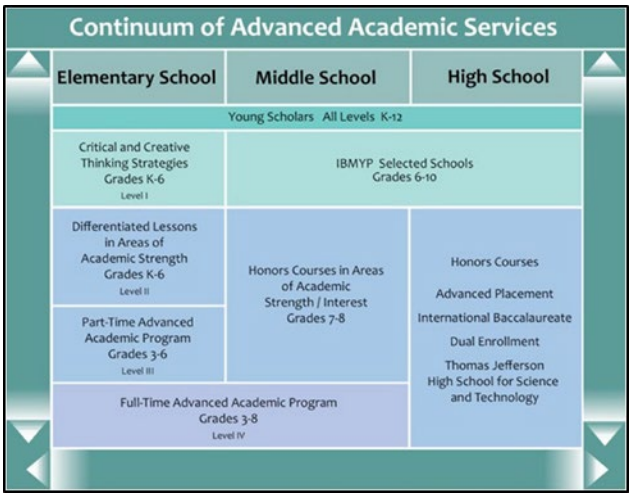

Figure 2. Fairfax County Public Schools continuum of advanced academic services. Adapted from the Integrated Continuum of Special Services by Sally Reis and Levels of Service by Donald Treffinger. (Horn)

Identified Young Scholars receive challenging curriculum and instruction in a supportive and stimulating educational setting that is responsive to cultural, ethnic, and linguistic differences. The teachers in the Young Scholars schools collaborate, plan, and design learning experiences that connect to the students' diverse cultural, ethnic, and linguistic backgrounds (Horn, 2015). Importantly, these experiences are designed for underrepresented students at all grade levels K-12. Identification for young scholars is based on non-standard assessments like teacher observations, anecdotal records, and student work samples external from the other programs. Teachers also use a rating scale developed at George Mason University to increase inclusivity, and the district uses a standardized test to universally screen all students. Once enrolled in the frontloading program, Young scholars receive similar services to other GT students, but they receive more support and long-term assistance to help with their lack of external resources. The goal of the Young Scholars program is to boost preemptive advanced learning for underrepresented students to hopefully boost their future achievement and representation in the official GT program.

Longitudinal evidence of YS success is evident: data shows that the number of Black and Hispanic students in level 4 programs increased by 1000%+ for black students and ~3000% for Hispanic students (Horn, 2015). Similar numbers exist for level 2 and 3 students, with significant gains (Horn, 2015).

Table 2. Enrollment changes in School-Based (Levels II and III) Advanced Academic Services Grades K-8. (Horn)

	White	Black	Hispanic	Other	Asian	Multiracial	Total
2000	6,760	475	311	27	1,158	233	8,924
2014	10,489	2,064	4,079	86	4,678	1,225	22,621

Table 3. Enrollment changes in Level IV (GT Center) Advanced Academic Services Grades 3-8. (Horn)

	White	Black	Hispanic	Other	Asian	Multiracial	Total

2000	2,556	76	66	11	584	95	3,398
2014	9,554	928	1,419	44	5,990	1,222	19,157

Interviewee Dr. Gubbins noted a few different potential options for frontloading program implementation beyond the Young Scholars model. She mentioned pull-out programs as a possibility. She also mentioned in-class frontloading, but did not elaborate. Finally, she discussed before and after school programs, offering the example of frontloading at free breakfast programs in some districts.

Challenges

Unfortunately, frontloading efforts are simply not enough to combat vast economic disparity, so achievement gaps continue to persist. In fact, improving educational opportunities for minorities can sometimes lead to reduced, or at least stagnant, academic performance. For instance, a literature review of the Advanced Placement (AP) program found that as the College Board's goals have shifted towards increasing minority inclusion, their average AP test scores have significantly declined (Kolluri, 2018). This may occur because students at underprivileged schools lack the academic skills and background to succeed in these courses, so they are not immediately able to benefit from them (Kolluri, 2018). This may also occur because the AP curriculum is ineffectively taught at underprivileged schools (Kolluri, 2018). Further research needs to be done on this trend, but it is evident that without proper preparation, increasing access to AP exams has actually led to a decrease in minority students' scores. Because students who are highly talented may not demonstrate high achievement due to a lack of opportunities (Siegle et al., 2016), adding more students to AP programs would undoubtedly widen achievement gaps unless they were given effective learning opportunities beforehand. Schools need to ensure that the quality/rigor of education within Gifted Programs is not reduced to include more students, but rather, they should prepare these students for rigor via frontloading and other mechanisms. While combating entrenched socioeconomic challenges is a difficult task to take, it can be done. Districts can at least begin by properly designing their identification procedures, creating equitable learning opportunitie from a young age, and making sure that their programs are rigorous.

Conclusion

Gifted education is the future. It sharpens the brightest children, paving the path to society's success. But no longer can society stand by and allow it to be the playground of the rich majorities. School districts must implement universal screening, allowing all children a chance at the first step. They must use local norms, allowing children to work in the contexts of their peers. And finally, they must frontload their children, helping them to level the playing field from an early age. For a better future, districts ought to implement these procedures when designing their gifted program identification procedures.

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