



# Universal Screening and the Representation of Historically Underrepresented Minority Students in Gifted Education: Minding the Gaps in Card and Giuliano's Research

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## Abstract

A research paper by Card and Giuliano took advantage of a natural experiment in a large school district to explore the impact that universal screening policies had on the identification of historically underrepresented minorities in gifted and talented programs. The authors concluded that the universal screening system was more effective than the previous teacher and parent referral system in addressing the underidentification of African American, Hispanic, female, low socioeconomic status, and English learner students. However, the present article identified gaps in the system that allowed new inequities to emerge. This review of their study concludes that districts must be advocates for gifted and talented students who come from culturally and linguistically diverse backgrounds. Implementing universal screening procedures can be an important tool in ensuring fair access to gifted and talented services, but districts must manage the increased resource demands of such programs.

## Keywords

identification, underrepresentation, gifted, longitudinal, diversity

Card and Giuliano (2015) recently published a research report that provides a valuable and interesting insight into a perennial issue in gifted and talented education: *What is the best way to use district resources to identify gifted and talented students who come*

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from a diverse range of cultural and linguistic backgrounds? Researchers in the field of gifted education have long been concerned about the process by which students are referred or nominated for consideration for placement in gifted programs (Pfeiffer, 2003; Siegle & Powell, 2004). This concern is especially pronounced when we consider the widespread underrepresentation of certain groups of students, particularly ethnic and racial minority, low socioeconomic status (SES), and English learner students in gifted and talented programs.<sup>1</sup>

## Referral Versus Universal Screening

One of the issues embedded in this topic is the choice between referral (or nomination) as the first step to identification versus the use of universal screening (where everyone is tested) initially. *Nomination* or *referral* is a process by which parents or teachers recommend students for screening (or testing) for gifted services. *Screening* refers to the use of a formal assessment tool (whether a rating scale or an ability or achievement test) for making placement decisions and/or identifying necessary services for the student (McBee, 2006). If referral is the first step of identification, then screening occurs only for nominated students. When all students in an eligible grade level are administered at least one formal assessment as the first step of identification, then it is called *universal screening*. Initial screening is usually followed by additional assessments to determine eligibility and instructional needs. The end result of these processes is *identification* or *placement* into gifted and talented services.

As McBee (2006) described the process, most school districts require a student be nominated or referred before any formal testing process is begun (see also Callahan, Moon, & Oh, 2013; McClain & Pfeiffer, 2012). According to a national survey, 86.5% of districts use teacher nominations and 80.5% use parent nominations as some part of their identification system (Callahan et al., 2013). Importantly, once a student has been nominated or referred, most districts are obligated to use a formal assessment process to identify whether a student requires special services.

There are trade-offs in deciding to use referral versus universal screening as the first step in gifted and talented identification. For referral, the advantage is that it is quick and cost-effective to allow teachers or parents to take the initiative to nominate a student for screening. It lessens the burden on the district because fewer students need to be screened and likely fewer students will require special services. The disadvantage of referral is that nominations are thought to be biased when teachers do not recognize talents equally among all students and may overlook gifted and talented students who do not fit traditional archetypes of giftedness (Frasier, Garcia, & Passow, 1995; Siegle & Powell, 2004). Parent nomination is especially problematic because parental initiative, involvement in schools, and awareness of school services are not distributed equally among racial/ethnic and socioeconomic groups (e.g., Oakland, 1972; Peña & Quinn, 1997; Reese, Balzano, Gallimore, & Goldenberg, 1995).

The advantage to universal screening is that it allows all students to have an equal (or closer to equal) chance of being identified and offered special services tailored to their instructional needs. The disadvantages of universal screening are primarily the

cost and time required to assess all students in a grade level, which can be substantial and add to already extensive testing programs.

## **Improving the Representation of Cultural and Linguistic Minority Students**

The issue of referral versus universal screening becomes especially important when considering the issue of promoting diversity and fair representation in gifted and talented programs. Researchers have consistently reported underrepresentation of many race/ethnicity minorities and low SES students. For example, in a study of the Georgia school system, McBee (2006) noted substantial differences in the number of students nominated for the gifted and talented program based on SES and race/ethnicity groups for both test-based and teacher referrals. Many researchers have sought to untangle the issue of how to identify culturally and linguistically diverse (CLD) students in numbers proportional to their representation in the student population (Ford, Grantham, & Whiting, 2008; Frasier et al., 1995; Harris, Rapp, Martinez, & Plucker, 2007) with little success in identifying valid and reliable alternatives to standardized assessments used for screening. According to a national survey, universal screening is only used by 5.9% of programs with the intent of increasing the diversity of their programs (Callahan et al., 2013).

Research on referrals is similarly fraught with concerns about fairness and bias where there has long been interest in how teachers make identification and referral decisions (Foreman & Gubbins, 2015; McBee, 2006, 2010; Siegle & Powell, 2004). Researchers have explored teachers' ability to recognize talent among girls (Siegle & Powell, 2004), low SES students (McBee, 2006), and underrepresented racial/ethnic minority groups (McBee, 2006, 2010). There has also been concern that students' behavioral problems may help or hinder identification—Siegle and Powell (2004) called for particular caution against identifying students for gifted and talented programs simply because they are “different” or difficult to manage in the general classroom.

Given these challenges in identification, it is important to see research like Card and Giuliano (2015). Their study provides a powerful opportunity to observe the trade-offs of a universal screening process in a large school district in Florida. They looked at the benefits of universal screening in terms of the number and diversity of students identified, and they also identify struggles that the district faced in maintaining this program when a budget crisis forced cuts to programs.

## **Background**

Card and Giuliano (2015) took advantage of a natural experiment in a large school district in Florida to explore the impact that universal screening policies had on the identification of low SES and historically underrepresented minorities for gifted and talented programs. They had access to longitudinal data from a large, diverse district

in Florida that moved from a system based on teacher and parent referral to a system based on universal screening.

An important feature of the identification program in the focal district is that it allowed students from disadvantaged backgrounds to qualify for the gifted and talented program under a different set of guidelines (essentially a lower cut-score on the assessment for each Plan group). According to state laws, *Plan A* students were those considered not to be disadvantaged. These students had to achieve a score of at least 130 points on “a standard IQ test” (IQ scale is typically  $M = 100$ ,  $SD = 15$ ) to be eligible for the district’s gifted and talented program. The state also specified a *Plan B* group, who were considered to be disadvantaged due to being classified as an English language learner (ELL) or being eligible for free or reduced lunch (a marker of lower socioeconomic background). These students were required to meet an IQ threshold of 116 to be eligible for the gifted and talented program.

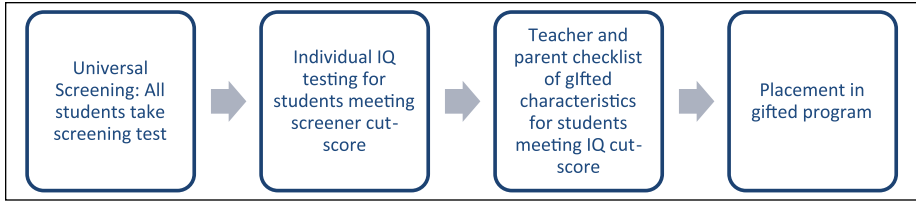
In this district, in the years prior to the start of universal screening, students (whether *Plan A* or *Plan B* eligible) had to be nominated by a parent or teacher before they had access to district testing services, where they took an individually administered IQ test. If their scores met their plan’s threshold, then they were eligible for the gifted and talented program. When universal screening was introduced, the district tested *all* second-grade students using a nonverbal measure of cognitive ability. All students meeting the cut-score on the screening test (130 points for *Plan A* and 116 points for *Plan B* students) were eligible for individually administered IQ testing through the district. Students had to meet the relevant cut-scores on the individually administered IQ test to be considered for the gifted and talented program. One important detail that turns out to be quite critical was that families were allowed to pay for private testing (at a cost of US\$700-US\$1,000) and submit these IQ scores to meet the requirements for the gifted and talented program.

After screening and IQ testing, students faced a final hurdle to being placed in the gifted and talented program: The final determination was made based on “parent and teacher inputs and scores on a checklist verifying that the student showed evidence of ‘gifted indicators,’ including motivation, creativity, and adaptability” (p. 4, Card & Giuliano, 2015). This process is consistent with recommended best practices of using multiple measures for identification (Callahan et al., 2013; Pfeiffer, 2002; see Figure 1).

## Methods in the Original Paper

Card and Giuliano (2015) analyzed the longitudinal data as an “interrupted time series” design (interrupted because of the disturbance of the longitudinal trajectory due to the introduction of the intervention; similar to regression discontinuity). Their data extended from 2004 to 2011, with the universal screening program fully implemented in 2006 and 2007. An underfunded version of the program continued from 2008 to 2010, when the program formally ended.

A strength of this study was the longitudinal data from before and after the program was implemented to compare the impacts of this program with the previous program based on parent and teacher referral. The authors further strengthened their study by



**Figure 1.** The universal screening process.

comparing the proportion of gifted/talented students in the focal district to other nearby districts with similar characteristics. Thus, they were able to confirm that the increase in the overall number of identified gifted and talented students in the district was not due to any regional changes in policies or populations, but most likely due to this new universal screening policy.

## Results and Major Implications

Prior to the introduction of universal screening, even with the Plan A and Plan B qualification differences, the gifted and talented program in the district overrepresented White, high SES students. They found that just 28% of gifted students in third grade (the first year of the gifted and talented program) were African American or Hispanic, although these students made up 60% of the district population. The authors emphasize four main conclusions from their study (summarized in my words):

1. Universal screening led to a large increase in the proportion of students classified as gifted, despite consistency in the cut-scores used.
2. The students identified under the universal screening program (who would not have been identified under the old program) were disproportionately African American, Hispanic, female, low SES, and ELLs.
3. Comparing the distribution of IQ scores before and after universal screening was introduced showed that even students who would have scored significantly above the cut-score were often overlooked under the old referral system.
4. Achievement gains from third to fourth grade were similar for the students identified under the universal screening program compared to the previous referral program, indicating that newly identified students were benefited at least as much as previous cohorts of students in terms of later achievement.

The consideration of later achievement is a strength of this study. Too many studies of identification and diversity do not consider how well students selected under different identification systems actually fare in the program.

The authors note that testing using individually administered IQ tests was time and resource intensive. As a result of universal screening, the authors estimated that the

district provided about 1,300 additional individually administered IQ tests in 2005 and 2006. This required substantial overtime pay for district psychologists that was restricted due to a budget crisis in 2007. From 2007 to 2011, the authors' figures clearly show that not all students who were eligible on the basis of the screening test received IQ testing to be placed in the gifted and talented program. The authors do not address how the district decided which students received IQ testing and whether there was any opportunity for inequity in this process.

The authors conclude that the universal screening system was effective in ameliorating the underidentification of African American, Hispanic, female, low SES, and ELL students relative to a referral program. Although the authors' reporting was detailed and thorough, a few critical results were not explored in their article. These results have important implications for understanding how to implement an effective universal screening program.

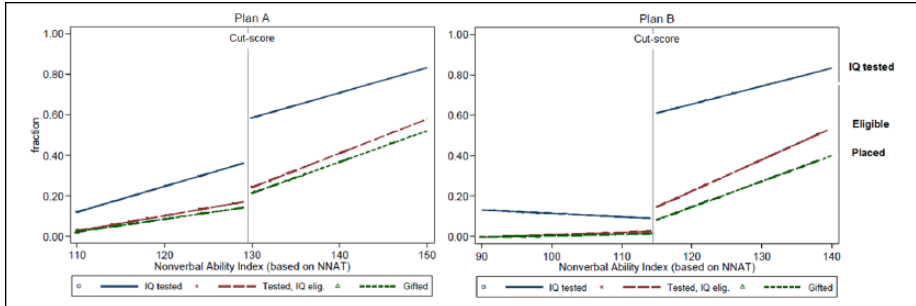
### *Reading Between the (Trend) Lines*

Although the authors did not especially emphasize this result, there was a substantial difference between Plan A and Plan B students in the rate at which students who met the cutoff for gifted placement on the IQ test ("eligible" in Figure 2 which was adapted from their Figure 2) were actually placed in the gifted program. The authors indicate that teachers completed a checklist of characteristics for each student, including a consideration of achievement scores, to decide whether a high IQ score warranted gifted placement. This raises the issue of whether the biases that impact student referral processes—including misperceptions about giftedness and lack of awareness of features of giftedness in underrepresented groups—are impacting the checklist process and preventing some of the Plan B students from being placed in the gifted program. The authors or future researchers could explore predictors of which students from the identified pool (meeting the cutoff) were actually placed in the program to determine if there is a possibility of bias at this stage.

The authors also did not explain why some students identified for further testing by the screener test were not actually tested (i.e., why the IQ testing rate is not 100% above the cutoff). Fair and accessible identification programs ideally should not allow these additional opportunities to fall through the cracks, especially if school resources, parental initiative, or other SES-related factors are related to these gaps. Again, future research might determine when and why students identified by the screener do not receive further assessment.

### *Who Gets a Second Chance at Identification?*

Another feature of Figure 2 reveals an important source of inequity in identification processes both before and after the introduction of universal screening. Specifically, among students who just missed the cutoff for their plan group (1-10 points below the cutoff), I observed that students in the Plan A group who did *not* score above the screener cut-score, but were within 10 points, were much more likely to have IQ scores



**Figure 2.** Screening, IQ testing, and placement outcomes of program. NNAT = Naglieri Nonverbal Ability Test.

than Plan B students with similar “close” screener scores. Their rate of testing (up to 38%) actually approached the testing rate of Plan A students who were just above the cutoff for IQ testing and therefore eligible for free district testing (50%). Plan B students who were within 10 points of the cutoff were much less likely to have IQ testing records (about 10%). Because IQ scores could be submitted from private testing, I suspect that Plan A parents, when they had the necessary resources, were having their nearly qualified students tested privately to provide these IQ scores. This alternative route gave those students an additional opportunity to successfully test above the cut-off for admission when Plan B students have already been excluded from further consideration.

In fact, a substantial percentage (around 5%-10%) of Plan A students who were 1 to 10 points below the cutoff were placed in the gifted program, perhaps due to this private testing route. For Plan B students, virtually none of the students just below the cutoff were tested and, if tested, were placed in the gifted program. Therefore, even when the system is designed to provide fair access to testing to place into the gifted program, these private access routes can lead to inequities.

From the report, we do not know what regulations were placed on the source of these private IQ score reports, although the authors note that a substantial industry had formed around this alternative testing route. In my interactions with gifted coordinators in other districts, I have learned there can be relatively lax regulations on private testing, including allowing older test forms (with outdated norms) to be used. We also cannot rule out that private psychologists (who, the authors say, advertise heavily for this purpose) may not offer test preparation services that provide further advantage. We hopefully can assume that only licensed psychologists (who are bound by professional ethics) were permitted to submit IQ reports.

## Conclusions, Caveats, and Limitations

Although there has not been substantial research in this area, the results of this study—that universal screening increases program diversity—were not surprising. Given the

substantial concern about the impact of teacher and parent referrals on identification, giving all students the opportunity to demonstrate their capabilities through universal screening is clearly a valuable method for improving the access of CLD students to gifted and talented resources (Callahan et al., 2013; Frasier et al., 1995; Lakin & Lohman, 2011).

Educators should note that the particular screening test used is not essential to the results of this study. Universal screening with any good ability assessment would likely have a similar impact (or even more) on identification of underrepresented groups (e.g., Lohman, 2005; Lohman, Korb, & Lakin, 2008). The specific cut-scores used and, particularly, the use of different cut-scores for different students most likely did impact this study's findings. Further research is needed on the impact of universal screening on diversity when common cut-scores are used.

In selecting initial screening and follow-up assessment tools and cut-scores, educators should be alert to managing the number of "false positives" (students identified by the screening tool who do not meet the cutoff on the follow-up assessment) and "false negatives" (students missed by the initial screening tool who would have been successful). In this example, false positives increased the demands on district psychologists to administer tests. However, any effort to decrease false positives would also increase the number of false negatives and prevent eligible students from placing into the program. Researchers and educators should therefore make evidence-based decisions on how liberal to be in setting cut-scores for the initial screening to ensure that students who would be successful are identified for further testing, while not expanding the testing pool too greatly (Lohman, 2012, offers some suggestions). In addition to the cut-score used, the correlation between the screener and follow-up assessment, as well as the reliability of both instruments and their relevance to the target program, will also impact the number of both types of errors in the identification process.

The essential question this study raises is "Why don't all schools implement universal screening?" As I outlined in the introduction, although there are clear benefits to universal screening, some of the reasons that it is not more prevalent include the cost and feasibility of testing all students, including many students who would be unlikely to qualify for the gifted and talented program. Although concerns about time and cost are warranted, the benefits of universal screening are such that any district concerned about the fair representation of their gifted and talented programs should strongly consider this approach.

To address the concerns about resources, my recommendation would be to ensure that the test serves multiple purposes that benefit all of the students and teachers who invest the time to take the assessment. Although many educators believe that ability tests are only useful for gifted and talented identification, ability test data can be valuable to the general classroom teacher to provide instructional differentiation for students with varying cognitive strengths and weaknesses (Lohman & Hagen, 2001, offer many examples).<sup>2</sup> Using cognitive ability scores for differentiating instruction across the school system can increase the value of this testing time for students and teachers and justify the expense and time taken for universal screening.



Another reason that universal screening may be seen as unnecessary is because gifted and talented services, in general, are sometimes viewed as a luxury that can be cut when budgets are under pressure (Pfeiffer, 2002). For higher SES students, gifted and talented services can be obtained through private means when the local school cannot offer them (e.g., summer camps, after-school tutoring, and private schools). For CLD students, however, especially those from low SES families, school-based gifted and talented programs are essential for ensuring that these students develop their academic potential. Although high-poverty schools are less likely to offer gifted and talented programs, those are the places where it is actually most crucial to provide talent development opportunities and to have the most inclusive identification process possible. Failure to provide these services likely exacerbates the “excellence gap” that has been documented (Plucker, Burroughs, & Song, 2010).

The ultimate takeaway from this study is that districts must be advocates for gifted and talented students who come from CLD backgrounds, while also being good stewards of their district resources. Implementing universal screening procedures can be an important tool in ensuring fair access to gifted and talented services for CLD students. Effective use of assessment data and promoting multiple uses of ability test scores can help to justify and preserve this important assessment practice even in difficult financial times.

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### **Notes**

1. For simplicity, I will refer to culturally and linguistically diverse (CLD) students to inclusively refer to these very distinct and diverse student populations.
2. Although the single-format screening test used in this particular district does not offer many of these opportunities for differentiation, other assessments (especially multiformat tests reflecting important content-related reasoning skills like verbal and quantitative reasoning) do offer substantial opportunities for informing differentiated instruction.

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