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Local Norms: A Closer Look

by Dr. Joni Lakin

Gifted and talented services are most effective when they serve students for whom the standard curriculum is not sufficient. The goal is to identify students who are not well served by this curriculum, which is designed for the average student. In deciding whether to use district- or building-level norms it is important to consider this concept. If your district has a tightly controlled curriculum, it may be that the targeted difficulty doesn't vary across buildings much. However, teachers will always have to adapt instruction to the speed and ways in which their students learn best. Students who are more able than their peers will be bored by the repetition and slow pace.

In a previous newsletter, we discussed why local norms can be so valuable to districts whose typical students perform well above or well below national averages. We also mentioned that local norms may help with expanding the diversity of students identified. In this newsletter, we show examples of when local norms will and will not improve representation. We will contrast the impact of district-level norms compared to local norms based on school building.

The Basic Idea

Local norms should compare students only to other students at the same age or grade level in a local population of students.

Thus, you can identify the top 5% of students locally (in other words the 95th local percentile rank [LPR]) rather than using national norms that tell you which students are in the top 5% across the U.S. Whether national norms identify too many or too few students in your district, local norms allow the school to manage the size of their gifted services population and appropriately tailor instruction to their students. The previous newsletter explained how to obtain local norms. This newsletter presents some evidence on how to choose your reference group for local norms.

Will this help with diversity?

Occasionally educators will propose local norms as a strategy to increase the diversity of students identified for gifted services. As the previous newsletter explored, this is not always the case. One scenario where local norms can promote diversity is when there is marked demographic differences across school buildings within a district that lead to substantially different ability score distributions across schools. If some school buildings in a district have higher rates of poverty, then estimating local norms within school buildings will allow each school to identify students most likely to benefit from specialized services within that student population.

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PAGE 1 WILL THIS HELP WITH DIVERSITY

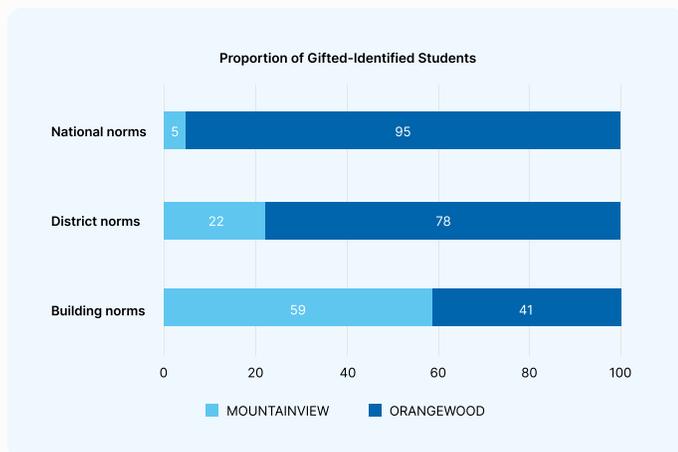
PAGE 2 WHAT ABOUT THE DIVERSITY OF STUDENTS IDENTIFIED?

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As part of a past collaboration (Project Bright Horizon¹), we have data from a school district where two of schools differed quite a bit in terms of their demographics. In 2006, Mountainview School² had about 400 students in grades K-5 and had 100% of its students eligible for the Free or Reduced Lunch (FRL) federal program. Their school population was also 86% Latinx and had a substantial population of English learner (EL) students (around 66%). Orangewood School, by contrast, had about 260 students in K-5 and had 66% of its students eligible for FRL (still a substantial number, but markedly lower than Mountainview). In this school just 18% of students were EL and a larger proportion were white compared to Mountainview. These two schools demonstrate substantially different demographic profiles despite being in the same district.

When we used national norms to identify students in the 90th grade-based percentile rank (PR), we found that Orangewood identified a larger number of gifted students between the two schools. Mountainview actually only had one student qualify in grades K-5. The first bar of **Figure 1** shows this marked difference in the proportion of gifted-identified students at each school.

Figure 1



To look at the impact of local norms, we calculated local percentile ranks that were based on all students in the district (i.e., both schools combined).

We then identified students with 90th PR or better on the district-level norms. Finally, we calculated local percentile ranks within each school and then identified students with 90th PR in their school. Figure 1 shows the results of identifying based on national norms, district-level norms, and school-level norms.

With district norms, Mountainview (which previously identified *one* student) now identified 12 students as needing differentiated instruction for high ability. Orangewood previously had 28 identified students and now has 46. Certainly, Mountainview can now do a better job of serving students with needs that are different from their same-school peers. At least 12 will get appropriate services. However, Orangewood is now identifying about 20% of their students and still makes up 80% of the total gifted program. This means that many students who can be successful with the standard curriculum are now in gifted services with students who have quite different needs. This is not optimal for the students or the program.

With building-level norms, we finally achieve a manageable program size at each school that is likely to include those students who need more accelerated or complex instruction than their peers. Now Mountainview makes up a slight majority of the identified students, which makes sense given that it is a bigger school (400 students compared to about 260 in Orangewood).

What about the diversity of students identified?

We have achieved a reasonable program size in each school by turning to building-level norms. This is a great outcome for appropriately tailoring instruction to the students. However, we should also see if this norm set also addresses our interest in equitable representation of all students in the program.

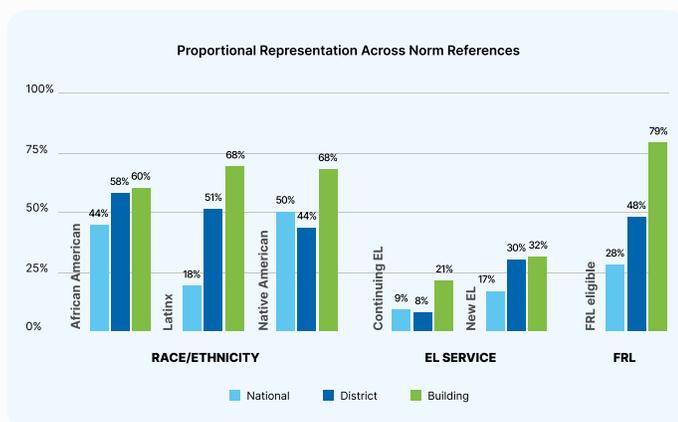
Figure 2 shows the proportional representation of each group of students under each norm reference group. Proportional representation is the ratio of the percent of students in the program compared to their proportion in this school³.

1. Project Bright Horizon was sponsored by a Jacob K. Javits Gifted and Talented Education grant to the Project Bright Horizon Research Team: Dr. Ray Buss, Principal Investigator; Peter Laing, Project Director/Co-Principal Investigator.
2. Pseudonyms are used.

Looking across the different races and ethnicities represented in the district, we see that with national norms they were all underrepresented compared to their proportion of the school population. Using district norms helped somewhat with an increase of 14% for African American students and 33% for Latinx students. Identification of EL student went up 13% for new EL students (those in their first year of English-based schooling), but not for continuing EL students. There is also a substantial increase in the number of students eligible for FRL.

The real boost to proportional representation came from using the building-level norms. The representation of Latinx and Native American students both increased markedly. The proportion of continuing EL students also went up. The biggest gain was for FRL where we achieved almost proportional representation (almost 80%) by using building norms instead of district-level norms.

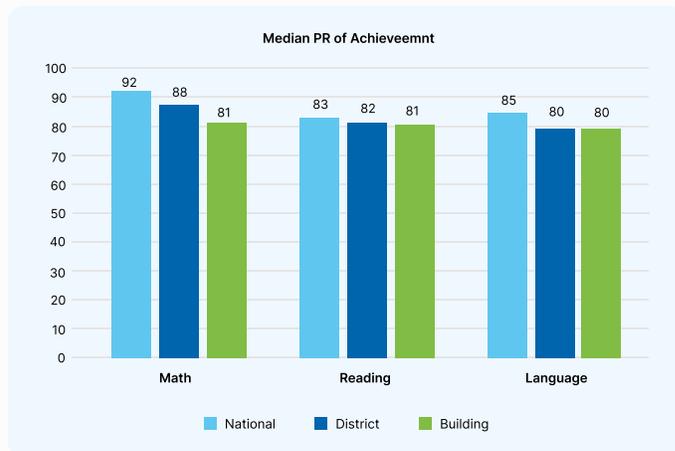
Figure 2



It's one thing to identify a more diverse group of students, but we need to know that these students will be similar to each other in academic skills. Luckily, we had achievement scores for some of these students one year later. Note that we didn't have any control over the services offered, so we don't know which of these students actually received appropriately challenging instruction.

Figure 3 shows the results. We found that using district- or building-level norms resulted in pretty similar achievement profiles among identified students. The change in language achievement (5PR points lower) is really not surprising given that more EL students were included in the program. This suggests that the ability of the students identified is not substantially different under each of the norm reference groups.

Figure 3



Is the real problem that tests are biased against students causing those lower scores?

All tests reflect the impact of educational opportunity. There is no assessment that can see past the experiences of early childhood and quality of education to determine which students are “really” gifted⁴. American society unfortunately has disparities in the quality of education and social support starting at early childhood that impact these opportunities. At the point where we are identifying students for accelerated learning or enhanced challenges, we have to adjust for these differences rather than continue the fruitless hunt for an ability test that isn't impacted by life experiences, including educational quality.

- For example, if female students represented 50% of the sample and made up 50% of the identified pool, this value would be 100%. If they made up just 25% of the pool, this value would be 50%. For the purpose of equity, our goal is to achieve 100% representation relative to the schoolwide proportion of each demographic group.
- If anyone claims they can do this, look for independent evaluations of their assessment.



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