

Closing Achievement Gaps: Lessons from the Last 15 Years

How educators look at achievement gaps will determine their success in reducing them. The guidelines and caveats presented here will help educators get a good start.

By Joseph Murphy

At first glance, closing the achievement gap seems fairly straightforward. It's a difficult task to accomplish, but it doesn't seem an especially complex one to conceptualize. The differences in scores between group A (say, low-income students) and group B (middle- to high-income students) needs to decline, with the goal of arriving at the point where scores between the two groups are equivalent.

However, as we peer more deeply into the matter, we find that closing the achievement gap is a good deal more complex. There's a host of issues, beginning with decisions about the types of measures to use to chart the gap, carrying through to ways to measure and interpret scores, and ending with questions about the effectiveness of varying strategies.

While educators don't need to study achievement gap research in depth, there are guidelines and key warning signs that educators would do well to heed. For example, educators and policy makers need to keep certain cautions front and center as they interpret achievement gap data. The most important of these cautions follow.

DIFFERENCES WITHIN SUBGROUPS

Even when tests scores are disaggregated by groups (for example, white vs. black), these scores themselves mask differences. Part of the problem is that most racial and ethnic groups have distinctive subgroups. For example, Asian-American students generally have achievement equal to or higher than white students, but Asian-American students from particular cultures and nations tend to achieve at significantly lower levels than others (Shannon and Bylsma 2002).

There also are important social and economic differences among Hispanic subgroups, including Puerto Rican, Cuban, and Central and South American Hispanics (Natriello, McDill, and Pallas 1990). And there are different black populations that correspond to economic status (Farley 1984).

The message for educators is that differences within groups are lost when disaggregation stops at the currently used designations. Reformers are advised to peer more deeply into gap scores and to be more thoughtful about how they interpret gap-related data.

Another problem is the tendency to lump disaggregated groups together, for example, combining black and Hispanic children in the broader category of minority students. There is evidence that certain gap-reduction strategies are more appropriate for

JOSEPH MURPHY is Frank W. Mayborn Chair and associate dean for special projects, Vanderbilt University's Peabody College, Nashville, Tennessee.

PDKConnect

To comment on this article, log in at pdkintl.org and click on PDKConnect.



Mario Noche

one group than another, and the tendency to combine different groups negates the possibility of using these strategies effectively.

Another problem is that, even if one were to uncover all the appropriate subgroups, the use of subgroups still masks the condition of individual students. The use of averages masks differences in skills and hides useful information about the performance of youngsters. There are low- and high-achieving children in all groups. While the achievement gap literature defines equity in terms of groups, the reality is that equity must be determined one student at a time.

WHAT IS MEASURED

Educators also need to be cautious of the truncated understanding of “success” found in much of the achievement gap literature, which highlights one measure of success, that is, equity in the distribution of achievement scores and attainment levels. Educators and policy makers need a broader definition of success, one that includes “equity” but also incorporates information on achievement levels and the value added to achievement. In short, not all gap reductions are equal.

Lee provides a critical insight into the importance of achievement levels when he concludes that “no matter how much the relative achievement gap among different racial and social groups has been narrowed, some disadvantaged minority students’ performance level still may not be acceptable” (2004: 61). Magnuson and Duncan observe that:

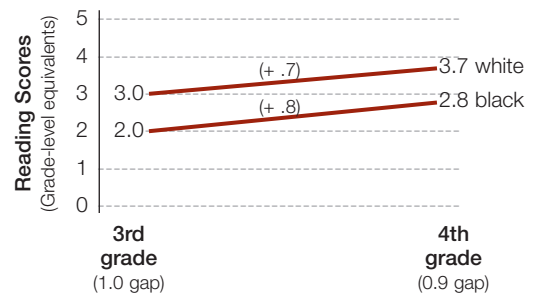
interventions can be designed to improve black (and/or white) children’s relative skills and absolute levels of academic skills at differing points in the skill distribution. However, it is not immediately obvious which is more detrimental to blacks and to society in general — lower levels of achievement among black children or lower achievement of black as compared with white children. (2006: 388)

“Value-added” models examine the school’s contribution to students’ achievement gains. Schools sometimes are given credit for high levels of student learning for which they may not be responsible. For example, if a 4th-grade student starts the year at 7.2 grade-level equivalent in reading and ends at 7.9 grade-level equivalent, that student looks very strong in terms of level. But the school has not contributed much to that success, at least not in the 4th grade. Conversely, schools sometimes are blamed for achievement gaps that aren’t under their control, such as the increase in gaps because of higher summer gains for white students than for black students.

Figure 1 illustrates the problem that can arise when schools are concerned with equity more than

achievement levels and added value. It shows a graph that many educators would present as good news. “Equity” is increasing; the gap is declining. While the achievement gap in reading was 1.0 grade levels at the start of 3rd grade, it was only 0.9 grade levels by the start of the 4th grade. However, neither the added value (only eight months for black students) nor the level of achievement (2nd grade, eight months at the start of 4th grade) is acceptable. Although the achievement gap has decreased, the results aren’t a success.

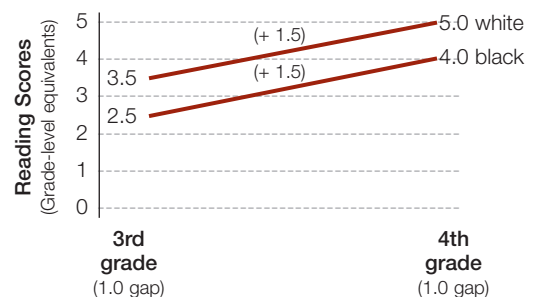
FIG. 1
Although the Achievement Gap Has Decreased, the Results Are Unacceptable



From Joseph Murphy, *The Educator’s Handbook for Understanding and Closing Achievement Gaps* (Thousand Oaks, Calif.: Corwin Press, 2010). Used by permission.

Figure 2 demonstrates the opposite problem in using only equity to measure success. In this scenario, the reading gap remains unchanged from the start of 3rd grade to the beginning of 4th grade. Educators who are concerned with only equity will see this as a failure. However, black students gained a full year and a half in reading, nearly double the growth

FIG. 2
Although the Achievement Gap Remains Unchanged, Student Growth and Achievement Levels Are a Success



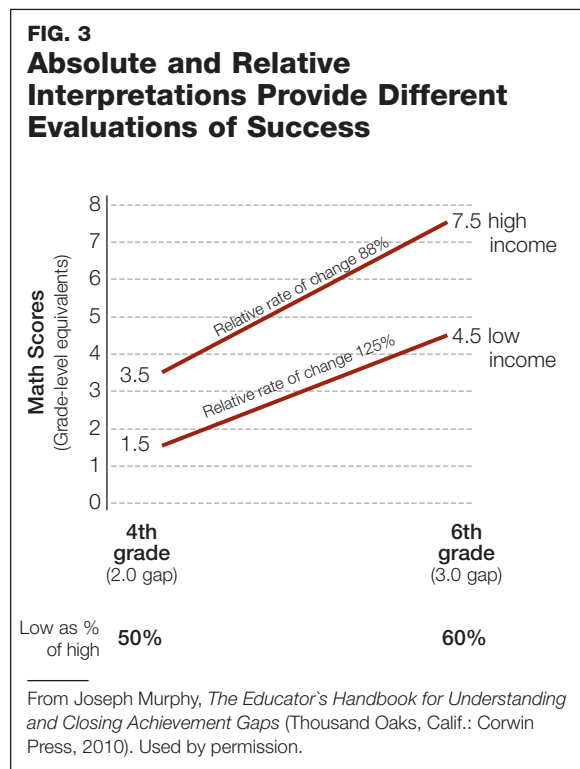
From Joseph Murphy, *The Educator’s Handbook for Understanding and Closing Achievement Gaps* (Thousand Oaks, Calif.: Corwin Press, 2010). Used by permission.

in each of the three previous years. Also, they are now reading at grade level. Even though the gap has not closed, the overall storyline in Figure 2 is positive.

Another problem with what is measured is the nearly exclusive focus on standardized tests, often limited to language arts and mathematics. Rothstein (2004) also raises warnings about the dangers of ignoring the many noncognitive, social skills we would like to see developed at school. He reminds us to be cautious about relying almost exclusively on indices of basic skills, as opposed to more advanced and generally more valued skills. His overarching caution is against narrowness in the quest to enhance equity and quality.

ABSOLUTE VS. RELATIVE IMPROVEMENT

How one measures achievement gaps has a good deal to do with how one works to confront the problem. How one interprets the results of that measurement also is important. That is, educators need to consider whether attention is directed to improving the absolute level or reducing the relative gap. Figure 3 helps illustrate this concern.



In Figure 3, there is a 2.0 year gap in mathematics achievement between low- and high-income students at the start of 4th grade. By the beginning of 6th grade, the gap increased to 3.0 years. Considering only absolute levels, one would say that the gap is widening. However, using relative levels, we would say that the gap is closing. Even though the overall gap has expanded, the rate of growth for low-

income students is much higher than for high-income students (125% vs. 88%). Also, while the low-income students were performing only 50% as well as their high-income peers at the start of the 4th grade, at the beginning of the 6th grade they were doing 60% as well. Note that the achievement level for low-income students (4.5) remains unacceptable, but the added value or growth is good, 2.5 years across the 4th and 5th grades.

While the achievement gap literature defines equity in terms of groups, the reality is that equity must be determined one student at a time.

The goal is not simply to provide equations to evaluate claims about whether the gap problem is being addressed effectively. Rather it is to help educators understand that appropriate metrics and interpretations need to be employed in making judgments about gap reductions. The frameworks for helping eliminate school achievement gaps should spotlight increasing achievement among low-skilled children more than reducing gaps between groups.

GUIDELINES FOR CLOSING GAPS

There are reasons why achievement gaps have been resistant to policy actions. First, the knowledge base on closing the achievement gap for minority students is especially thin. Second, there is a host of pre-established solutions in the general school reform environment (for example, school choice, comprehensive school reform) that advocates link to achievement gaps with very little evidence that they will affect learning differentials. They are solutions in search of problems. But there is no magic elixir that will solve the achievement gap problem.

If closing the achievement gap means improving the learning of targeted students at a faster rate than for other students, then we need to disproportionately advantage these students. The advantaging process can occur in two ways. First, programs can target disadvantaged students specifically. Second, strategies can provide gains to all but provide greater gains to targeted students. For example, the use of cooperative learning strategies and small class sizes in the early grades benefit black students more than white students (Murphy 2009).

The caveats for educators are: 1) raising student achievement generally and reducing the achievement gap are not the same thing; 2) if equity is the goal, focusing on reform strategies that power higher achievement for all students will not ameliorate the gap; and 3) “most school policies have a

small effect on test scores, impacting all racial groups in a similar manner, without redistributing benefits across groups” (Bali and Alvarez 2003: 485).

Over the last decade, we’ve been able to forge important “principles of work” that need to be followed if gap-reduction efforts are to be effective. We introduce some of them here as cautionary rules of thumb.

- Race is important, but socioeconomic status is the critical issue.
- There is no silver bullet that will solve the achievement gap; a combination of strategies is required to gain traction on the issue.
- Equity can be achieved only if the design features strategies that disproportionately advantage students on the wrong side of the achievement gap.
- An integrated, cohesive design that thoughtfully brings together multiple strategies is desirable; isolated actions and ad hoc work have more limited value.
- The cohesive design needs to include both out-of-school factors (for example, academically oriented summer programs in elementary school) and in-school variables (for example, more rigorous curriculum).
- In the school part of the cohesive design, both academic (for example, quality instruction) and environmental (for example, clubs for black students) factors should be included.
- Some factors carry more weight in certain periods of a student’s career (for example, small class size is more valuable in the early grades).
- Local context matters a good deal; interventions perform differently according to the setting.
- Because closing achievement gaps once they have developed is difficult, prevention always trumps remediation; solving the 9th-grade problem in preschool is easier than solving it in 9th grade.
- Length of time in treatment is important; for many gap interventions, benefits escalate the longer the intervention unfolds.
- There are no short-term solutions.
- Supports should not be withdrawn even when gaps are reduced; continued work is required to hold gains.

Two other issues of great importance to educators, cost-benefit data and unintended consequences, haven’t received much attention in the literature. Interventions to close gaps, such as reducing elementary school class sizes, have both benefits

and costs. If the same gain can be garnered from strategy A, and A costs half as much as strategy B, then pursuing strategy A is usually the wiser choice.

Educators also must anticipate unintended outcomes; there will be some. Some thought needs to be devoted to working through potential unintended consequences before undertaking any initiative. But educators should also look for positive unintended consequences.

CONCLUSION

Achievement gaps have important consequences for both individuals and the nation. They damage the economic and social fabric of society, undermine civil rights and social justice for a large segment of the population, and destroy the principles of democracy. A sense of urgency around this issue has emerged in the last dozen years. That commitment is leading to new gap-closing strategies.

Going forward naively, however, will do no one any good. Achievement differences have deep roots. Yet there is hope. Achievement gaps are not inevitable, and many schools are tackling the problem effectively. If educators keep certain caveats in mind when devising interventions, they can go a long way toward solving this problem. **K**

REFERENCES

- Bali, Valentina A., and R. Michael Alvarez. “Schools and Educational Outcomes: What Causes the ‘Race Gap’ in Student Test Scores?” *Social Science Quarterly* 84, no. 3 (2003): 485-507.
- Farley, Reynolds. *Blacks and Whites: Narrowing the Gap?* Cambridge, Mass.: Harvard University Press, 1984.
- Lee, Jaekyung. “Multiple Facets of Inequity in Racial and Ethnic Achievement Gaps.” *Peabody Journal of Education* 79, no. 2 (2004): 51-73.
- Magnuson, Katherine A., and Greg J. Duncan. “The Role of Family Socioeconomic Resources in the Black-White Test Score Gap Among Young Children.” *Developmental Review* 26, no. 4 (2006): 367-393.
- Murphy, Joseph. *The Educator’s Handbook for Understanding and Closing Achievement Gaps*. Thousand Oaks, Calif.: Corwin Press, 2009.
- Natriello, Gary, Edward L. McDill, and Aaron M. Pallas. *Schooling Disadvantaged Children: Racing Against Catastrophe*. New York: Teachers College Press, 1990.
- Rothstein, Richard. *Class and Schools: Using Social, Economic, and Educational Reform to Close the Black-White Achievement Gap*. Washington, D.C.: Economic Policy Institute, 2004.
- Shannon, G. Sue, and Pete Bylsma. *Addressing the Achievement Gap: A Challenge for Washington State Educators*. Olympia, Wash.: Washington Office of the State Superintendent of Public Instruction, 2002. ED 474 392.

File Name and Bibliographic Information

k0911mur.pdf

Joseph Murphy, Closing Achievement Gaps: Lessons from the Last 15 Years, Phi Delta Kappan, Vol. 91, No. 3, November 2009, pp. 8-12.

Copyright Notice

Phi Delta Kappa International, Inc., holds copyright to this article, which may be reproduced or otherwise used only in accordance with U.S. law governing fair use. MULTIPLE copies, in print and electronic formats, may not be made or distributed without express permission from Phi Delta Kappa International, Inc. All rights reserved.

Note that photographs, artwork, advertising, and other elements to which Phi Delta Kappa does not hold copyright may have been removed from these pages.

All images included with this document are used with permission and may not be separated from this editorial content or used for any other purpose without the express written permission of the copyright holder.

Note that some images in this document may be copyright the original publisher and/or the author. Used with permission.

Please fax permission requests to the attention of KAPPAN Permissions Editor at 812/339-0018 or e-mail permission requests to kappan@pdkintl.org.

For further information, contact:

Phi Delta Kappa International, Inc.
408 N. Union St.
Bloomington, Indiana 47405-3800
812/339-1156 Phone
800/766-1156 Tollfree
812/339-0018 Fax

<http://www.pdkintl.org>

Find more articles using PDK's Publication Archives Search at
<http://www.pdkintl.org/search.htm>.