

## REL Midwest Reference Desk

# Relationship Between Teacher Race/Ethnicity and Student Academic Achievement

February 2015

### Question

1. What, if any, is the relationship between teacher race/ethnicity and student academic achievement?
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### Background

Regional Educational Laboratory (REL) Midwest received a request for research on the relationship between teacher race/ethnicity and student academic achievement.

Following an established REL Midwest research protocol, we conducted a search for research reports as well as descriptive and policy-oriented briefs and articles on the aforementioned topic. The sources included federally funded organizations, research institutions, educational research databases, and a general Internet search using Google and other search engines.

We also searched for appropriate organizations that may act as resources on this issue. We have not done an evaluation of these organizations or the resources themselves but offer this list to you for your information only.

### 1. What, if any, is the relationship between teacher race/ethnicity and student academic achievement?

Dee, T. S. (2004). Teachers, race, and student achievement in a randomized experiment. *The Review of Economics and Statistics*, 86(1), 195–210. Retrieved from <http://www.jstor.org/stable/pdfplus/3211667.pdf?acceptTC=true>

*From the abstract:* “Recommendations for the aggressive recruitment of minority teachers are based on hypothesized role-model effects for minority students as well as evidence of racial biases among nonminority teachers. However, prior empirical studies have found little or no association between exposure to an own-race teacher and student achievement. This paper presents new evidence on this question by examining the test score data from Tennessee’s Project STAR class-size experiment, which randomly matched students and teachers within participating schools. Specification checks confirm that the racial pairings of students and teachers in this experiment were unrelated to other student traits. Models of student achievement indicate that assignment to an own-race

teacher significantly increased the math and reading achievement of both black and white students.”

Dee, T. S. (2005). A teacher like me: Does race, ethnicity or gender matter? *American Economic Review*, 95(2), 158–165. Retrieved from [https://www.aeaweb.org/assa/2005/0109\\_1015\\_0602.pdf](https://www.aeaweb.org/assa/2005/0109_1015_0602.pdf)

*From the results:* “For example, these results generally suggest that both white and minority (i.e., black and Hispanic) students are likely to be perceived more negatively by a teacher who does not share their racial/ethnic designation. However, the results in Table 4 also indicate that minority students are particularly likely to be seen as inattentive by an OTHRACE teacher. The effects of OTHRACE teachers are more consistently stark across students with high and low socioeconomic status. Among students with low socioeconomic status, the odds of being seen negatively are 35 to 57 percent higher when evaluated by an OTHRACE teacher. In contrast, these effects, though positive, are consistently smaller and statistically insignificant among students with high socioeconomic status. The results in these three tables also indicate that the effects of an OTHSEX teacher are consistently positive but relatively similar across students with varying racial/ethnic designations and socioeconomic status.”

Egalite, A. J., Kisida, B., & Winters, M. A. (2014). Representation in the classroom: The effect of own-race/ethnicity teacher assignment on student achievement (EDRE Working Paper No. 2013-08). Retrieved from <http://www.uaedreform.org/downloads/2014/09/representation-in-the-classroom-the-effect-of-own-raceethnicity-teacher-assignment-on-student-achievement.pdf>

*From the abstract:* “ Previous research suggests that there are academic benefits when students and teachers share the same race/ethnicity because such teachers can serve as role models, mentors, advocates, or cultural translators. In this paper, we obtain estimates of achievement changes as students are assigned to teachers of different races/ethnicities from grades 3 through 10 utilizing a large administrative dataset provided by the Florida Department of Education that follows the universe of test-taking students in Florida public schools from 2001-02 through 2008-09. We find small but significant positive effects when Black and White students are assigned to race-congruent teachers in reading (.004 to .005 standard deviations) and for Black, White and Asian/Pacific Island students in math (.007 to .041 standard deviations). Effect sizes for Black and White students are strongest at the elementary level whereas effects for Asian/Pacific Island students are strongest at the middle/high school level. We also examine the effects of race matching by students' prior performance level, finding that lower-performing Black and White students appear to particularly benefit from being assigned to a race-congruent teacher.”

Hays, J. M. (2011). *Student to teacher racial/ethnic ratios as contributors to regional achievement gaps, 1999–2008* (Doctoral dissertation). Retrieved from Education Resources Information Center (ERIC). (ERIC Document Reproduction Service No. ED546382)

*From the abstract:* “With the advent of No Child Left Behind legislation in 2002 and its mandates for annual yearly progress for all students, many districts and schools in Texas have had difficulty elevating African American and Hispanic students’ scores. The

current study examined these students' achievement on the annual Texas high-stakes measure as a function of a numerical construct that aligns the race/ethnicity of students when the teacher race is White. Earlier studies have shown that racial/ethnic compatibility between students and teachers improves student achievement in the primary grades. The study, which was set in 10 north Texas school districts and 30 high schools, middle schools, and elementary schools, examined African American and Hispanic students' achievement on the Texas state assessments in reading and mathematics over a 10-year period. District performance data came from 4,664,192 African American, Hispanic, and White students and 222,834 White teachers. Campus level data encompassed 188,839 10th graders, 93,573 eighth graders, and 40,083 fourth graders, and 20,471 White teachers. Analysis revealed that, as the ratios of African American and Hispanic students to White teachers increased, the percentages of these two student groups passing the Texas assessments decreased. These patterns differed for White students whose passing percentages increased as these students' numbers increased relative to White teachers in all settings except in elementary schools. These preliminary findings suggested that racial alignment at the high school and middle school levels might elevate African American and Hispanic achievement. Implications may lead to shifting focus on teacher quality and class size as the primary determinants of student achievement. Findings need validation with further study using larger data sets and sequential grade levels. If validated through further studies involving larger samples, contiguous grade levels, and more sophisticated statistical analysis, this study's findings may have implications for teacher education curriculum, recruitment of minority teacher candidates, workforce retention, and state policy on class size limits."

*Note: REL Midwest was unable to confirm whether this resource has been peer reviewed. In addition, REL Midwest was unable to locate a link to the full-text version of this resource. Although REL Midwest tries to provide publicly available resources whenever possible, it was determined that this resource may be of interest to you. The resource may be found through university or public library systems.*

Howsen, R. M., & Trawick, M. W. (2007). Teachers, race and student achievement revisited. *Applied Economics Letters*, 14, 1023–1027. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/13504850600706453?journalCode=rael20#preview>

*From the abstract:* "Within the education literature, a controversy exists with respect to the issue of matching student and teacher race in an effort to improve student performance. Ehrenberg et al. (1995) finds very little support for this issue, while more recently Dee (2004) finds that there are significant educational gains when students are assigned to an own-race teacher. Dee's result is found after confirming that there was no association between assignment of an own-race teacher and student characteristics, i.e., sorting of students did not transpire. We extend Dee's work by including the effects of student innate ability and teacher gender on student achievement. Our findings indicate that once these two variables are taken into consideration, sorting of students does transpire, and matching students and teachers of similar race has no statistically significant affect on student achievement."

Stroter, A. D. (2008). The effects of teacher-student racial and ethnic congruence on student math learning (Doctoral dissertation). Virginia Polytechnic Institute and State University, Blacksburg, VA. Retrieved from [http://scholar.lib.vt.edu/theses/available/etd-07012008-185907/unrestricted/StroterETD-Toni7\\_21\\_08.pdf](http://scholar.lib.vt.edu/theses/available/etd-07012008-185907/unrestricted/StroterETD-Toni7_21_08.pdf)

*From the abstract:* “The current study examines the question of racial and ethnic matching empirically in the context of a large-scale randomized controlled study of an innovation for middle school mathematics learners. It extends the literature by (1) focusing on the relationship between student-teacher match and a specific, heavily documented situation with targeted learning goals, (2) adding information about Hispanic students to the discussion, and (3) helping evaluate factors that may be important in determining the validity of large-scale experiments. Alone and in conjunction with other similar empirical evidence, it will also have a significant effect on federal and state educational policy. The sample consists of the 92 teachers and 1576 7<sup>th</sup> grade students on 76 school campuses throughout 8 Texas regions who participated in the Scaling-Up SimCalc project. Teachers and students either used SimCalc Mathworlds™ curriculum and technology or a control for a two-week replacement unit. The crux of the current analysis was a match between aggregated and individual teacher and student characteristics and an inquiry into how these matches influence student math performance in the classroom within and between our experimental and control group. Hierarchical Linear Modeling (HLM) analysis was used to investigate the differences in student mathematics performance, modeled as students nested in classrooms nested in schools.”

*Note: REL Midwest was unable to confirm whether this resource has been peer reviewed.*

## **Additional Resources**

Hamlet, C. E. (2012). *Exploration of African-American males and the influence of race, gender and teacher beliefs about their academic success* (Doctoral dissertation). Retrieved from Education Resources Information Center (ERIC). (ERIC Document Reproduction Service No. ED546329)

*From the abstract:* “The purpose of this study was to explore and describe how race, teacher gender and teacher quality impact the academic success of African-American males. It was hoped that this study explored the idea that race, the gender of teachers, and teacher quality were important factors that determined the academic success of African-American males. The methodology used was based on the grounded theory approach. Grounded theory begins with a research situation about a phenomenon. The data collection process that I used was interviews. I interviewed six (6) student participants who were African-American males. The student participants in this study were chosen from the ‘Hopeful Academy’, a pseudonym name, which was a local high school in an urban setting. These participants are drop-outs and potential drop-outs that re-entered academia. I interviewed six (6) teachers employed by this urban school district. They were of different ethnic backgrounds and of different genders. The data collected was analyzed to determine emerging themes. The results of this study contributed to the vast amount of research done on African-American males and their academic success.”

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*resource. Although REL Midwest tries to provide publicly available resources whenever possible, it was determined that this resource may be of interest to you. The resource may be found through university or public library systems.*

Richards, H. V., Brown, A. F., & Forde, T. B. (2007). Addressing diversity in schools: Culturally responsive pedagogy. *Teaching Exceptional Children*, 39(3), 64–68. (ERIC Document Reproduction Service No. ED482325) Retrieved from <http://www.eric.ed.gov/PDFS/ED482325.pdf>

*From the abstract:* “Culturally responsive teaching cannot be approached as a recipe or series of steps that teachers can follow to become effective with American Indian and Alaska Native (AI/AN) students. Instead, it relies on the development of certain dispositions toward learners and a holistic approach to curriculum and instruction. This digest draws on a five-part conceptual framework first derived from the broader multicultural literature by Phuntsog and ties these concepts to recent research in AI/AN education. This framework reflects elements that researchers found to be crucial to culturally responsive education: (1) cultural literacy (teachers’ knowledge of Native cultures and history and awareness of Native learning styles); (2) teachers’ self-reflection and analysis of their own attitudes, beliefs, and stereotypes; (3) caring, trusting, and inclusive classrooms; (4) actions of the school that model respect for diversity, Indigenous knowledge, and alternative ways of knowing; and (5) a transformative curriculum that promotes critical thinking and the advancement of society toward equality of opportunity and social justice.”

Takei, Y., & Shouse, R. (2008). Ratings in Black and White: Does racial symmetry or asymmetry influence teacher assessment of a pupil’s work habits? *Social Psychology of Education*, 11(4), 367–387. (ERIC Document Reproduction Service No. EJ814161)

*From the abstract:* “Racial asymmetry, the circumstance of having a teacher’s race differ from that of his or her student’s race, is often considered important because most Black students are taught by White teachers. This paper analyzes data from a nationally representative sample of students and teachers to ascertain the extent to which Black and White teachers differ in their evaluations of the work habits of their Black pupils. Unlike most other investigations on this topic, we explored the likelihood that subject matter and school demographics influence teacher-student relationships beyond the more visible factors of racial symmetry or asymmetry. Our analyses of NELS: 88 data using this framework reveal an inconsistent racial effect on teachers’ evaluations of Black students. The ratings of African American pupils by both Black and White teachers seem to be influenced by both the academic subject they teach and the demographic characteristic of the school. We discuss these findings and suggest avenues for further study.”

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Villegas, A. M., & Irvine, J. J. (2010). Diversifying the teaching force: An examination of major arguments. *Urban Review*, 42(3), 175–192.

*From the abstract:* “Over the past two decades, the short supply of teachers of color in elementary and secondary public schools has drawn the attention of policymakers and educators alike. To address the widening cultural chasm between teachers and their students, a variety of initiatives that aim to recruit people of color into teaching have been launched. Little attention has been paid, however, to articulating a research-based rationale for increasing the diversity in the ranks of teachers. This gap in the professional literature renders ongoing teacher diversity efforts vulnerable given the emphasis placed these days on research-based evidence in making decisions regarding the proper use of limited public resources, including funding for education. The purpose of this article is to address the noted gap in the literature. From an extensive review of the literature, we identified three major arguments for diversifying the teaching force and assessed the extent to which they are validated by empirical research. The results are reported, and implications of the findings for research and practice are discussed.”

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## Additional Organizations to Consult

- **Center on Great Teachers and Leaders**  
<http://www.gtlcenter.org>

*From the website:* “The Center on Great Teachers and Leaders (GTL Center) is dedicated to supporting state education leaders in their efforts to grow, respect, and retain great teachers and leaders for all students. The GTL Center continues the work of the National Comprehensive Center for Teacher Quality (TQ Center) and expands its focus to provide technical assistance and online resources designed to build systems that:

- Support the implementation of **college and career standards**.
- Ensure the **equitable distribution** of effective teachers and leaders.
- Recruit, retain, reward, and support **effective educators**.
- Develop coherent human capital management systems.
- Create **safe academic environments** that increase student learning through positive behavior management and appropriate discipline.
- Use **data** to guide professional development and improve instruction.”

## Keywords and Search Strings Used in the Search



Teacher AND race OR ethnicity AND student achievement OR academic achievement  
OR relate\* to student achievement

## Search of Databases and Websites

**Institute of Education Sciences (IES) Sources:** Regional Educational Laboratory (REL) Program, What Works Clearinghouse (WWC), National Center for Education Statistics (NCES)

**Other Federally Funded Sites:** National Comprehensive Center for Teacher Quality (NCCTQ), National Center for Teacher Effectiveness (NCTE), Center on Great Teachers and Leaders

**Additional Data Resources:** ERIC and JSTOR databases, ProQuest, Google Scholar, Google, general Internet search

## Criteria for Inclusion

When Reference Desk researchers review resources, they consider—among other things—four factors:

- **Date of the Publication:** The most current information is included, except in the case of nationally known seminal resources.
- **Source and Funder of the Report/Study/Brief/Article:** Priority is given to IES, nationally funded, and certain other vetted sources known for strict attention to research protocols.
- **Methodology:** Sources include randomized controlled trial studies, surveys, self-assessments, literature reviews, and policy briefs. Priority for inclusion generally is given to randomized controlled trial study findings, but the reader should note at least the following factors when basing decisions on these resources: numbers of participants (just a few? thousands?), selection (Did the participants volunteer for the study, or were they chosen?), and representation (Were findings generalized from a homogeneous or a diverse pool of participants? Was the study sample representative of the population as a whole?).
- **Existing Knowledge Base:** Although we strive to include vetted resources, there are times when the research base is slim or nonexistent. In these cases, we have included the best resources we could find, which may include newspaper articles, interviews with content specialists, organization websites, and so on.

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