Question

1. What, if any, is the relationship between teacher gender and student academic achievement?

Background

REL Midwest received a request for information on the relationship between teacher gender 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, several 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 gender and student academic achievement?**


*From the abstract:* “A prominent class of explanations for the gender gaps in student outcomes focuses on the interactions between students and teachers. In this study, I examine whether assignment to a same-gender teacher influences student achievement, teacher perceptions of student performance, and student engagement. This study’s identification strategy exploits a unique matched-pairs feature of a major longitudinal study, which provides contemporaneous data on student outcomes in two different subjects. Within-student comparisons indicate that assignment to a same-gender teacher significantly improves the achievement of both girls and boys as well as teacher perceptions of student performance and student engagement with the teacher's subject.”

*Note: REL Midwest was unable to locate a link to the full-text version of this resource. While REL Midwest tries to provide publically available resources whenever possible, it was determined that this resource may be of interest to you. It may be found through university or public library systems.*

Summary: "This study examined two hypotheses related to same-gender grouping of eighth grade science classes in a public middle school setting. The hypotheses were (a) male and female students enrolled in same-gender science classes demonstrate more positive science academic achievement than their peers enrolled in mixed-gender classes, and (b) same-gender grouping of students has a positive effect on classroom climate. Participants were randomly assigned, and instruction did not vary for the same-gender and mixed-gender classes. The first experimental group was a class of all-male students (n = 20) taught by a male science teacher. The comparison group consisted of male students (n = 42) in coeducational classes taught by the same male teacher. The second experimental group was a class of all-female students (n = 23) taught by a female science teacher. This comparison group consisted of female students (n = 61) in coeducational classes taught by the same female teacher."


From the abstract: "Gender gaps in educational outcomes are a matter of real and growing concern. The author investigated the effect of a teacher’s gender using the National Education Longitudinal Survey (NELS), which contains data on a nationally representative sample of nearly 25,000 8th graders from 1988. In addition to examining the effect of teacher gender on students’ test-score performance, he examined teacher perceptions of a student’s performance and student perceptions of the subject taught by a particular teacher. Results confirm that a teacher’s gender does have large effects on student test performance, teacher perceptions of students, and students’ engagement with academic material. Simply put, girls have better educational outcomes when taught by women and boys are better off when taught by men. These findings persist, even after accounting for a variety of other characteristics of students, teachers, and classrooms that may influence student learning."


From the abstract: "We utilize information from a rich administrative panel dataset following the universe of test-taking public school students in Florida over a period of five years to estimate the relationship between same-gender teacher assignment and student achievement. We estimate how a student’s achievement changes as he/she is assigned to teachers of different genders throughout his/her academic career, holding constant both observed and unobserved factors related to academic outcomes. We find no statistically distinguishable relationship between same-gender teacher assignments and student math or reading achievement in elementary school. We find a statistically significant relationship between being assigned to a female teacher and student achievement in middle and high school, however the magnitude of the effect is small.”
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Additional Resources—International

Note: International classrooms may not operate like classes in the United States. As a result, please review and interpret findings from these resources with caution.


From the abstract: “The aim of the present study was to examine the proposed teacher-pupil gender interaction effect on pupils’ school achievement in Croatian elementary schools. The nationwide sample of pupils and their teachers from all 844 Croatian elementary schools was used. There were 48,232 pupils at the age 10 and 46,196 pupils at the age 14 in the research. Two types of pupils’ school achievement measures were assessed—school marks and standardized knowledge tests for almost all subjects in school curriculum. Results indicate that girls generally outmatch boys by school marks, whereas results are equivocal when standardized tests were used. The teachers’ gender effect measured by knowledge of their pupils reveal the superiority of female teachers, but only on standardized achievement tests. The interaction effects of teachers’ and pupils’ gender on school achievement are generally insignificant. The stability of these results was confirmed in both age cohorts and assumption that differences in boys’ and girls’ school achievement are related to teachers’ gender cannot be supported within Croatian elementary education.”

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From the abstract: “Little conclusive evidence is available on the relationship between teacher gender and student achievement. However, a great emphasis has been placed on hiring more female teachers, both internationally and in India. Given this context, this paper investigates the relationship between student learning outcomes and the presence of women teachers in Indian classrooms. Our analysis shows that male and female teachers differ in terms of their classroom management practices and their belief in students’ learning ability. In partial support of the policy of hiring more female teachers, it also shows that being in a female teacher’s classroom is advantageous for language learning but teacher gender has no effect on mathematics learning.”
Note: REL Midwest was unable to locate a link to the full-text version of this resource. While REL Midwest tries to provide publically available resources whenever possible, it was determined that this resource may be of interest to you. It may be found through university or public library systems.


*From the abstract:* “Since the mid-1990s, considerable concern has been expressed about the feminization of education. The underlying assumption is that the increasing number of female teachers is leading to a lack of male role models, which may then have negative consequences for the achievement and behaviour of boys in particular. For this reason, policy is currently being pursued in several countries to increase the number of male teachers. In the present article, the theoretical foundation for this policy will be shown to be weak at best. To test this empirically, a large-scale study of Dutch primary schools was conducted, which involved 5,181 grade eight pupils, 251 teachers and 163 schools. This study confirmed that teacher sex has no effect whatsoever on the achievement, attitudes or behaviour of pupils. This finding holds for both boys and girls, for both minority and non-minority pupils and for both children from lower and higher social-economic milieus.”


*From the abstract:* “We explore the impact of student gender, teacher gender, and their interaction on academic motivation and engagement for 964 junior and middle high school students. According to the gender-stereotypic model, boys fare better academically in classes taught by males and girls fare better in classes taught by females. The gender-invariant model suggests that the academic motivation and engagement of boys and girls is the same for men and women teachers. We also examine the relative contribution of student-, class-, and school-level factors, finding that most variation was at the individual student level. Of the statistically significant main effects for gender, most favoured girls. In support of the gender-invariant model, academic motivation and engagement does not significantly vary as a function of their teacher’s gender, and in terms of academic motivation and engagement, boys do not fare any better with male teachers than female teachers.”

Additional Organizations to Consult

- Center on Great Teachers and Leaders (Formerly the National Comprehensive Center for Teacher Quality)
  [www.tqsource.org](http://www.tqsource.org)

*From the Center on Great Teachers and Leaders website:* “The Center on Great Teachers and Leaders (GTL Center) is operated by the American Institutes for Research. The GTL Center will continue the work of the National Comprehensive Center for Teacher Quality
and will focus on providing technical assistance to build the capacity of states to attract, develop, reward, and retain effective teachers and leaders for all students.”

- Institute for Student Achievement
  http://www.studentachievement.org/

  From the Institute for Student Achievement website: “The Institute for Student Achievement (ISA) partners with schools and districts to transform high schools so that students who are traditionally underserved and underperforming graduate prepared for success in college and careers.”

- Association for Supervision and Curriculum Development (ASCD)
  http://www.ascd.org

  From the ASCD website: “Founded in 1943, ASCD (doing business as the Association for Supervision and Curriculum Development) is the global leader in developing and delivering innovative programs, products, and services that empower educators to support the success of each learner.”

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**Keywords and Search Strings Used in the Search**

- Teacher gender OR instructor gender AND student achievement OR student academic achievement OR student outcome OR student success
- Gender differences AND teachers AND student achievement OR student academic achievement OR student outcome OR student success
- Teacher gender

**Search of Databases and Websites**

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

**Other Federally Funded Sites:** Center on Instruction, Center on Great Teachers and Leaders

**Additional Data Resources:** Education Development Center, ERIC, EBSCO databases, JSTOR database, Google Scholar, Google, and 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:** Randomized controlled trial studies, surveys, self-assessments, literature reviews, 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?); 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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