PACE

COMMENTARY

How Does the Language Mix of Students Affect Student Achievement?

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Immigration has increased sizably in the United States and worldwide over the last decade. In addition to moving to traditional immigrant destinations such as California and Texas, recent waves of immigrants are arriving in states that have had only modest amounts of immigration for the last 50 years if not more.

One potential consequence of this increased immigration is that sizable numbers of Limited English Proficient (LEP) children attend public schools. LEP students speak a language other than English at home and have sufficiently low levels of English proficiency to make them eligible for additional services to improve their English skills.

Many states are seeing dramatic increases in the LEP population, often from a very low base. In the last 15 years, the percentage of LEP students has more than doubled in North Carolina and Virginia (NCELA, 2011). Currently, more than 1 in 10 students in these states are LEP. Affected school districts may not have sufficient resources to educate the rapidly increasing population of LEP students.

Recent immigration patterns show that LEP students are not a mono-linguistic group. Using the2012 American Community Survey, we find that, in the United States, approximately 21 percent of those surveyed speak a language other than English at home. Of these non-English speakers, roughly 62 percent speak Spanish, 18 percent speak another Indo-European language, 16 percent speak an Asian or Pacific Island language, and 4 percent speak an "Other" language.

This increased language diversity in the classroom has potential spillover effects, both positive and negative, on student achievement. For example, teachers may need to alter their teaching practices in response to an influx of LEP students, with the response dependent on the language mix of LEP students. Furthermore, the effect of language mix likely differs between LEP students and non-LEP students. In particular, an LEP student may have additional spillover effects—beyond the "baseline" effect of having LEP peers—due to the share of peers who speak the same non-English language.

In this study, we analyze the effect of LEP peers on student achievement in North Carolina middle schools, which include grades 6 through 8. Our results are likely representative of many areas with dramatic growth in percent LEP but still have relatively small percentages of LEP students. We identify the effect of idiosyncratic changes in peers through a detailed panel dataset of students between 2006 and 2012, along with the use of controls for student, school, and grade-by-year fixed effects to account for student-specific and school-specific differences in peers and in student achievement. This study is the first to study the extent to which the distribution of languages spoken by LEP students affects the achievement of LEP and non-LEP students. In contrast to

previous work, we are able to isolate the effects of having LEP peers from the effects of having low-achieving or low-income peers by including additional controls for these peer characteristics.

For non-LEP students, an increase of 10 percent in LEP peers, approximately two students per classroom, is associated with a 0.7 to 1.1 percent standard-deviation decrease in mathematics and reading test scores, respectively. The language mix of LEP students has no discernable effect on the achievement of non-LEP students. For LEP students, percent LEP is unrelated with reading achievement, whereas a 10 percent increase in LEP peers corresponds with a 2.8 percent standard-deviation decrease in mathematics. Having more LEP students speaking the same language is beneficial for reading achievement and harmful for mathematics achievement among LEP students, but the overall language concentration of LEP students is weakly if at all related with LEP students' achievement in reading or mathematics.

The results of our analysis suggest that both LEP and non-LEP students could benefit if they were separated for language arts instructions, especially if the LEP students are largely mono-linguistic. The policy prescription is less clear for separate mathematics classes. While non-LEP students stand to benefit, we predict that this would have a devastating impact for LEP students.

The full study (ungated) is in Thomas Ahn and Christopher Jepson, The effect of sharing a mother tongue with peers: evidence from North Carolina middle schools, IZA Journal of Migration 2015 4:5.

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