

Trends in school expansion, achievement gaps and segregation by race and parental education in Brazilian K-12 Schools: 1995-2013

Racial and socioeconomic inequalities have always been pervasive in Brazil, particularly in educational outcomes. However, in the 2000s, a change of scene seemed to have occurred. The Brazilian K-12 educational system greatly expanded, including the disadvantaged part of the population, prevalently composed of blacks and children of low-educated parents. A chief consequence of this expansion has been a decline in the inequality of years of education among Brazilians. In the labor market, this contributed to a steady decrease in income inequality. While the decline in years of education and income inequality are well-documented (Neri and Carvalho 2002, Alves 2007), we have little detailed and systematic knowledge about whether these trends are associated with decreasing social inequalities within the school system. Regarding educational opportunities, it is not clear whether the social inclusion has been real or nominal: if the disparities between the most and the least advantaged have become smaller, or if the disparities persist, although the gaps in access to schooling have now been translated into gaps in quality of schooling.

Most of the literature on educational stratification suggests that expansion of educational systems does not lead to the decline of social inequalities (e.g.: Bourdieu and Passeron 1970, Bowles and Gintis 2002, Hout 1993, Shavit and Blossfeld 1993, Lucas 2001). Rather, the access of lower social classes to an educational level may lead to increased social segregation and the differentiation of higher and lower quality paths within the educational system, which Lucas (2001) calls the “effectively maintained inequality hypothesis”. However, recent studies find evidence of a positive association between changes in income distribution and trends in achievement gaps in schools (Reardon 2014). The literature also suggests that an increase in years of education in disadvantaged families may contribute to narrow the achievement gap between children in high- and low-educated families. More educated parents tend to pose higher value in schooling, have higher expectations for their children’s academic performance and engage in the organization of children’s intellectual and socioemotional development. (Barros and Lam 1996, Costa Ribeiro 2007, Lareau 2003).

In Brazil, inequality of educational outcomes by parental education is well documented (Torche 2014, Portela 2013, Marteleto 2012, Alves et al 2013, Ribeiro 2011, Soares and Colares 2006), as well as the inequality in educational outcomes among Brazilian whites, blacks and mestizos (Silva 2000, Fernandes 2004, Botelho et al 2010). Yet, the literature is limited to studies based on cross-sectional data presenting snapshots of social inequalities at single or few points in time. The trends over time in achievement gaps and segregation by social background characteristics, such as race and parental education, have never been addressed.

In this study, I calculate trends on achievement gaps and segregation by race and parental education for 5th, 9th and 12th grade students from 1995 to 2013, drawing on data from SAEB, the Brazilian National Assessment of reading and math performance of children in public and private schools (*SAEB – Sistema de Avaliação da Educação Básica*). I use the V-statistic (Reardon and Ho, 2014) to estimate reading and math gaps between whites and blacks, whites and mestizos, students with parents in the top and bottom decile of the parental education distribution, students with parents with more and less than 8 years of education. The estimation of trends in segregation relies on Theil Information Theory Segregation Index (Reardon and Firebaugh 2002). I use Oaxaca decomposition models to analyze to which extent the changing social composition in schools affect the trends in achievement inequality by race and parental education.

My findings corroborate the effectively maintained inequality hypothesis in that there was no decrease in social inequalities in the Brazilian school system during the period of expansion of vacancies, in the late 1990s, while there was an increase in school segregation. Racial achievement inequality increased up to 1999 for 9th graders, and up to 1997 for 5th and 12th graders. This was true both for the differences among blacks and whites and for those between mestizos and whites, and for both math and reading proficiency. Achievement inequality between students with parents in the bottom 10% of the parental education distribution and those in the top 10% increased from 1995 to 2001 for students in grades 5 and 9, and up to 1999 for students in grade 12. School segregation by race and parental education also increased sharply up to 1999, across grades.

However, aligned to Reardon's (2014) findings of a positive association between income and achievement inequality, I find that in the period of decrease in income inequality in Brazil, from 2001 to 2011, achievement inequality and segregation by race and parental education in Brazilian schools have also decreased. For the mestizo/white and black/white achievement gaps, the decrease in inequality happened from 2005 to 2011, and was more accentuated among 5th and 9th graders _ for 12th graders, the mestizo/white achievement gap increased in the 2000s.

From 2011 to 2013, the trend of decrease in segregation and achievement inequality has stalled, and in some Brazilian states, inequality has started to grow again.

I find that there was no significant change in the achievement returns to race and parental education in Brazilian schools. Both the increase in achievement inequality in the late 1990s and the decrease in inequality in the 2000s were driven by transformations in the social composition of the student body, with the inclusion of disadvantaged students in the first period and an improvement of students' parental education in the second period. That is, white students and children of highly educated parents continued to be favored in the Brazilian school system. However, this relative advantage got diluted as more mestizos and blacks entered the school system, and as parental education increased across the board.

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