

Relations between Socio-economic Status and Skills in PIAAC

Juliet Holmes and Markus Broer

Introduction:

Traditionally, PIAAC uses parental education as a proxy for socio-economic status (SES). This study is focused on the following research question:

1. How does an index composed of several SES proxies compare with the one-variable parental education SES proxy?

This study uses a methodology of creating an SES index that has previously been demonstrated with NAEP and TIMSS data (Broer et al., 2017; Bai & Broer, 2017).

Data and Methods:

This study demonstrates the creation of a proxy SES index for the U.S. PIAAC sample that includes five components: the mother's highest education level, the father's highest education level, the respondent's number of books in the home at age 15, the respondent's highest education level, and the respondent's observed SES status (U.S. interviewers were asked to indicate the rough SES status of the respondent's household from poor to affluent/upper middle class).

Findings:

The proxy SES index explains more of the variation in literacy and numeracy scores than parental education alone. Parental education explains about 14% of the variation in numeracy scores, while the proxy SES index explains about 34% of the variation. Moreover, our results suggest that a large part of Black-White and Hispanic-White achievement gaps is explained by different SES levels between the subgroups when using the proxy SES index. Using parental education alone to represent SES would have underestimated the extent to which SES can explain racial skill gaps.

Implications:

When applying research to policy, researchers and policy makers should consider the confounding effects of socio-economic status. Analyses showing the association between certain predictors and skill outcomes without using a more nuanced indicator of SES may overestimate the potential effect of predictors on the outcome. Thus, research that uses a more comprehensive SES indicator as control variable is more likely to identify malleable factors for policy initiatives or rigorous testing.