

Are separate classrooms inherently unequal?

The effect of within-school sorting on the socioeconomic test score gap in Hungary

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Segregation of students with respect to social, racial or ethnic background is a persistent problem in education, often associated with far-reaching implications for inequalities and social mobility. There is ample evidence on the prevalence of between-school segregation (e.g., Gutiérrez et al., 2020) and its effects on educational inequalities (e.g., Reardon et al., 2022) but within-school sorting of students has received less attention. Most studies that examined the effects of within-school sorting were carried out mainly in the US context and focused on later stages of education, when formal tracking or ability grouping occurs.

Besides formal tracking and ability grouping, however, educational systems and the individual schools within them also use informal differentiation to assign students to classrooms (Kalogrides & Loeb, 2013; Triventi et al., 2020). In contrast to tracking effects, much less is known about the informal processes through which students are sorted within schools, especially at the early stages of education when formal differentiation is less widespread. It is also unclear how sorting students within schools at the lower educational level contributes to educational inequalities.

This study investigates whether informal within-school sorting increases socioeconomic test score inequalities. Using universal test score data on 6th- and 8th-grade students in Hungary, we document the extent of within-school sorting in an institutional context where sorting based on ability or prior achievement is legally not allowed. We identify sorting schools as schools that systematically assign students with low and high socioeconomic status into different classrooms within the school. We show that within-school sorting is prevalent in Hungarian schools with multiple classrooms per year: about 28% of all 6th-grade students attend schools in each year that assign higher- and lower-status kids on average into different classrooms.

Once equipped with measures of schools' sorting practices, we turn to our main focus: the effect of sorting on educational inequalities. We compare the math and reading test score gap between high and low socioeconomic status students in a sorting and non-sorting school environment in 8th grade. To acknowledge and handle the potential endogeneity of why and when schools engage in sorting, we embellish our models in two ways. First, we control for unobserved, time-invariant heterogeneity at the school level using fixed effects. And second, in an instrumental variable framework, we exploit quasi-random variation in schools' sorting practices over time induced by changes in enrollment.

Our main results show significant and economically meaningful sorting effects on test score inequalities between students with different socioeconomic backgrounds. Students with a 1 standard deviation higher socioeconomic status score 11-38% (7-23%) higher in math (reading) than their low-status peers if learning in a sorting rather than a non-sorting school environment. This gradient difference between the two types of schools comes mainly from negative sorting effects for the low-

status students, while high-status kids gain little if anything from attending sorting schools. We provide suggestive evidence that within-school reallocation of educational resources and differences in educational practices underlie our findings.