

Equality of Opportunity of Education and the Role of Learning Intensity: Evidence from a quasi-natural Experiment in Germany

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The goal of this paper is to shed light into how equality of opportunity in education (Equality of Educational Opportunity (EEOp) or respectively Inequality of Educational Opportunity (IEOp)) may be shaped by the recent trend to accelerate and intensify the educational process. For this purpose, I analyze the impact of a controversial reform in Germany that shortened the duration of secondary school (Gymnasium) by one school year from 9 to 8 years while keeping the curriculum unchanged. Exploiting the sharp, staggered introduction of this reform across the different German federal states as a quasi-experimental setting allows estimating the reform induced increase in learning intensity on IEOp for students in a two step Difference-in-Difference estimation approach (DID). To measure this effect, I take the most recent available German-specific data from the Program for International Student Assessment (PISA) studies 2003, 2006, 2009, 2012 (PISA-I-2003-2012) providing comparable measures of cognitive skills in Reading, Mathematics and Sciences for students tested at the end of the 9th grade.

Regression findings suggest that increased learning intensity induced by the Gymnasium-8-reform (G-8-reform) did not improve EEOp. In the short-term, IEOp appears not to have changed. However, in the medium-term, a larger fraction in the variation of test scores can be explained by circumstances beyond the control of a 9th grade student. Thus, the analysis indicates that the reform induced increase in learning intensity aggravated IEOp though only after some time - until, for instance, favorable circumstances such as private tuition opportunities may have been adjusted to the new system for becoming effective on educational outcomes.

Moreover, results provide evidence for the existence of subject-dependent curricular flexibilities, with Maths/Sciences being more inflexible, thus more responsive to changing learning intensity than Reading. In summary, this paper is one of the first to provide based on a quasi-experimental setting causal estimators of how a factor, such as learning intensity, affects IEOp (hence also social mobility).