Changes in High School Curricular Intensity Over Time: Measurement, Access, and Returns

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Introduction
Theories of maintained inequality argue that although the expansion of a given level of education increases the overall rates of attendance in that level for all young people, inequalities will always remain or emerge in the quantity and quality of education to which different groups have access (Hout et al. 1993; Lucas 2001).

Even when gaps in college attendance and completion begin to narrow, inequality is “effectively maintained” (EMI) through qualitative inequalities that emerge—the differentiation of higher education into 2- and 4-year colleges or the stratification of access to high school curricular intensity.

As a result, trends that may be expected to equalize educational opportunity, such as the expansion of higher education or curricular upgrading, will instead maintain or increase stratification of educational opportunity.

This project examines a potential site of maintained inequality—curricular upgrading—and how it may be changing alongside the growth of economic inequality and the expansion of higher education since the early 1980s.

Access and Returns to Curricular Intensity
How has access to an intensive high school curriculum changed over time?
How has the payoff to curricular intensity, in terms of college enrollment, changed over time?
How have gaps in access and returns by students’ parental education and income changed over time?

The following diagram shows the conceptual model that corresponds to the above research questions. Regression models will be used to examine access and returns to curricular intensity within each of the four NCES cohorts, for all students and separately by students’ parental income and education.

Implications
Theories of maintained inequality complicate expectations of how policy-driven educational changes such as curricular upgrading and expansion of higher education will influence educational opportunity.

Although we might expect curricular upgrading to increase curricular intensity for all and close course taking gaps, EMI suggests that stratification of access to curricular intensity by students’ SES may increase over time, due to:

1. rising economic stakes of a college degree,
2. the importance of high school academics in the “meritocracy” of college access (Alon and Tienda 2007), and
3. the expansion of 2-year colleges and concentration of high-SES students at elite universities.

Changes over time in the relationship between high school academic preparation and college entry, especially for students with different parental income and education, may alter patterns of postsecondary stratification.

Some evidence shows that the positive effect of advanced course taking on students’ chances of completing a bachelor’s degree has declined over time (Attewell and Domina 2008). However, returns to curricular intensity likely vary for students entering 2- vs. 4-year colleges (Bound, Lovenheim, and Turner 2010). It is also likely that curricular upgrading has increased the error with which curricular variables are measured. Accounting for changes in measurement error will alter our understanding of patterns of access and returns to curricular intensity.

Measuring Curricular Intensity
How is curricular intensity measured?
How has the importance of curricular intensity factors changed over time?

The following path diagram shows the measures that comprise curricular intensity.

Confirmatory factor analysis will be used to identify the weights of each factor within each dataset, and to test for changes in factor weights and measurement error over time across the four datasets.

Data

Methods
• Confirmatory factor analysis
• Regression models
• Oaxaca decompositions

Variables
• The curricular intensity scale is based on Adelman (1999, 2006). I replicated Adelman’s scale in NELS, then created comparable criterion-based scales in the remaining datasets.
• College enrollment is measured as no college entry, enrollment in 2-year college, 4-year college, 4-year elite college.

This project is supported by an AERA/NSF Dissertation Grant, the Center for Research on Educational Opportunity, and the University of Notre Dame.

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