

Supplementary Education at College and Its Consequences for Individuals' Labor Market Outcomes in the United States

Steve R. Entrich, Soo-yong Byun¹

Abstract: The current study seeks to expand our knowledge on extended education and its potential contribution to social inequality by examining socioeconomic disparities in supplementary education (SE) at college and its impact on labor market outcomes. Using data from the United States Education Longitudinal Study, logistic and linear regressions deliver the following main findings: (1) Socioeconomic status (SES) significantly affects SE participation, net of other factors. (2) With higher involvement in SE activities, neither employment nor income prospects significantly increase. (3) Low SES graduates are slightly more likely to benefit from SE than high SES graduates. (4) Among high-impact SE practices, only internships exert a positive effect on labor market outcomes.

Keywords: Supplementary education, social inequality, higher education, labor market outcomes

Introduction

Extended education is a broad field covering all kinds of learning outside regular school hours across the individual's life course. Until now, however, most research focused on school-aged children's extracurricular activities, including but not limited to school support programs, community-based after school classes, and supplementary education (Stecher, 2018; Stecher & Maschke, 2013). Few studies have considered extended education activities beyond primary and secondary education. The present article addresses this lack of research by examining supplementary education (henceforth SE) at college. SE at school refers to academic instruction outside regular school hours, especially high-impact activities termed "shadow education", i.e. fee-paying classes at cram and prep schools and private tutoring (Aurini, Davies, & Dierkes, 2013). Likewise, supplementation of formal education at college serves the same purpose: "to enhance the student's formal school career" (Stevenson & Baker, 1992, p. 1639). More explicitly, SE at college refers to those forms of non-regular educational activities meant to improve the student's academic progress and subsequent labor market outcomes, e.g. non-obligatory study abroad programs, research projects, or internships—also known as "high-impact educational practices" (Knouse & Fontenot, 2008; Waibel, Rürger, Ette, & Sauer, 2017).

In particular, the current study seeks to expand our knowledge on extended education and its potential contribution to social inequality by examining socioeconomic disparities in SE

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use at college and its impact on the individuals' labor market outcomes. Past research on SE at the school level has shown that students from high socioeconomic status (SES) families are not only generally more likely to invest in SE, but they also tend to choose those forms and types of SE (e.g., private tutoring, cram school etc.) that often lead to significant advantages in educational attainment, i.e. above average academic achievement and entrance to more prestigious schools and universities (e.g., Buchmann, Condron, & Roscigno, 2010; Byun, 2014; Enrich, 2018). Similarly, research concerned with SE at college claims that social selectivity in access to high-impact educational practices (e.g., study abroad) would strengthen horizontal inequalities in educational and thus status attainment (Lingo, 2019; Netz & Finger, 2016), because of the significant effects for the individual's labor market outcomes (Knouse & Fontenot, 2008; Waibel et al., 2017). How far significant participation in different types of SE at college prove for future employment and income is all but clear, though. The scarcity of studies dealing explicitly with inequality in SE at college and its labor market returns leave us with rather inconclusive findings.

The United States is a particularly interesting case in this regard. Besides academic achievement in terms of high school GPA and SAT/ACT scores, extra-curricular activities (e.g., academic clubs, sports, music and arts) and SE (e.g., private tutoring and prep schools) continue to play a big role for college admission processes (Buchmann et al., 2010; Shulruf, 2010). American universities have a long tradition of active engagement of students in co-curricular activities as well (e.g., involvement in fraternities/sororities, sports/athletics, and clubs). Due to concerns about the quality of liberal higher education, in 2008 the *Association of American Colleges and Universities* (AAC&U) and its *Liberal Education and America's Promise* (LEAP) initiative started to promote the adaptation of a catalogue of specific high-impact educational practices deemed especially effective in preparing students for their careers in the 21st century. Among others, these practices include SE activities outside the core curriculum of upper classmen, most notably internships (within the US or abroad), collaborative assignments, undergraduate research projects, study abroad to foster global learning experiences, and capstones or senior projects (S. R. Johnson & Stage, 2018; Kuh, 2008; Riehle & Weiner, 2013). Even though these practices are now widely used across the US, it is neither clear whether family SES affects participation in these high-impact SE activities nor if positive outcomes for labor market transition and future income are expectable.

Hence, using data from the Educational Longitudinal Study of 2002 (ELS:2002) following 10th grade high school sophomores in the United States over a period of ten years into early adulthood (2002 to 2012), the current study addresses the following research questions:

1. Are there socioeconomic disparities in SE at college (after controlling for other variables)?
2. Does SE at college affect employment?
3. Does SE at college affect income?
4. Are there differences in the use and effects of SE at college according to type?

To answer these questions, we draw on cultural and social reproduction (Bourdieu & Passeron, 1977; Breen & Goldthorpe, 1997) and job-competition theories (Spence, 1973; Thurow, 1976), and derive testable hypotheses. Following an introduction to the ELS:2002 survey data and the variables, we predict the students' participation in SE and its impact on employment probability and early career income by means of logistic and linear regressions.