

Application for the 1st Annual Joint Research Seminar on Educational Research: Building a Research Partnership between Indiana University School of Education and the University of Warsaw School of Education

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- a. Title of Proposed Presentation: **Is Special Education Effective? A longitudinal examination of academic outcomes for students with disabilities**
- b. Preferred Format (on-site in Warsaw, live interactive session at IU, recorded for website): **On-site in Warsaw**
- c. Indication of Accompanying Paper for Online Discussion (encouraged but not required): **Yes, a paper can be provided**
- d. Abstract (100-150 words): See below
- e. Description of Study (see rubric for critical components): See below, fits under the theme: *Methods and Approaches for Assessing Educational Outcomes*
- f. Potential Areas of Future Collaboration with Faculty from UW SoE: **I would welcome the opportunity to connect with colleagues in Warsaw around approaches to educating students with disabilities, inclusion, and evaluation of special education services. Additionally, my interests extend to developing effective behavioral interventions and supporting students with Autism Spectrum Disorder.**

Is Special Education Effective? A longitudinal examination of academic outcomes for students with disabilities

Abstract: A sample of 527 elementary and middle school students with disabilities were followed longitudinally as they began to receive special education supports and services, in order to evaluate whether being enrolled in special education changed their academic trajectory over staying in general education. Using student fixed effects models, which relate students to themselves over time, individuals' academic growth was measured over a three-year period. Robust results demonstrate that struggling students improved in reading and math after being enrolled in special education. Further, when those students who no longer needed special education services were moved into a full-time general education placement, they continued to follow a healthy trajectory of academic improvement. This research suggests that participation in special education is associated with enduring improvements in academic progress over time.

Description of Study

Under United States federal law, public schools are tasked with identifying students with disabilities and providing them with a free and appropriate public education. Substantial progress has been made since the original passage of the Individuals with Disability Act (IDEA) in 1975, and today about 95% of students with disabilities are educated in regular public schools and most are placed in a general education classroom for at least 80% of the school day (US Department of Education, 2016). Special education is expensive to implement and necessitates a significant commitment of state and federal financial resources. It can be challenging to execute and requires considerable time and effort by teachers, administrators, and families. Given the resources devoted to special education programming, it is important to know whether the endeavor is effective at promoting academic outcomes.

Recent years have seen changes in the approach to special education. Initially the law provided access for students with disabilities to attend their local schools, rather than being excluded because the school did not know how to accommodate them, or being placed in an institution. Today, there is an increasing emphasis on academic advancement and accountability for all students, including those in special education. Because students with disabilities lag behind their same-age peers on standardized measures of achievement, it may appear that special education does not do enough to help their academic advancement, but this current study examines the effectiveness of special education for students with disabilities in a somewhat different manner.

Students in this study were followed longitudinally as they transitioned between general education and special education placements, to see if their learning trajectory changed after enrolling in special education. We employed a novel approach, via student fixed effects models,

which relate students to themselves over time, rather than to other students. This design compares each individuals' test scores under one condition (e.g. when they are not receiving special education services) to their own test scores under different conditions (e.g. after entering special education). A sample of 527 students with disabilities were followed for three years, with assessments collected every semester.

Our analyses concentrated on identifying the effects of special education services on standardized test scores for reading and math. We estimated multilevel student fixed-effects linear regression models, which account for the interdependence among observations that arises when the same subjects are observed at multiple time points.

Robust results demonstrate that struggling students improved academically after being enrolled in special education (see Figures 1 and 2). Further, when those students who no longer needed special education were moved into a full-time general education placement, they continued to follow a healthy trajectory of academic improvement. This research suggests that participation in special education is associated with enduring improvements in academic progress over time.

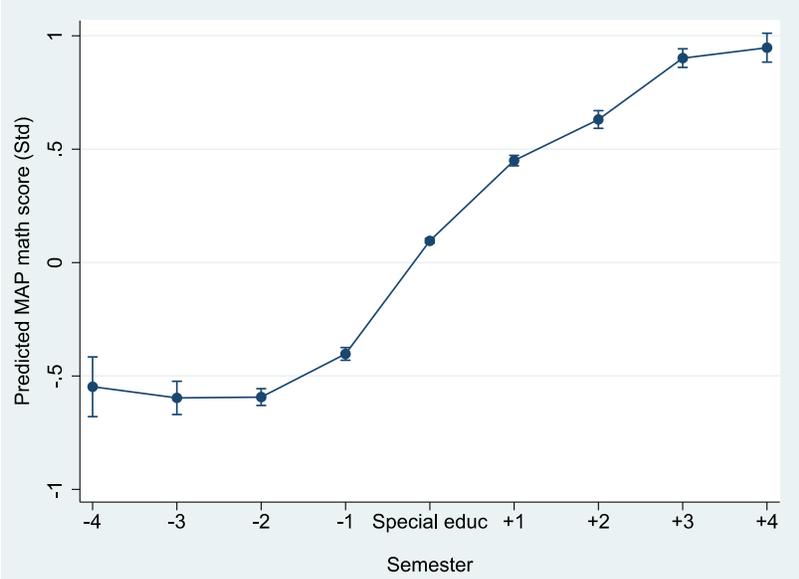


Figure 1. Math scores across the trajectory of special education participation.

Note: A value of 0 on the x-axis indicates semester(s) when a student is participating in special education. Negative values indicate the number of semesters before special education participation, and positive values indicate the number of semesters after exiting special education.

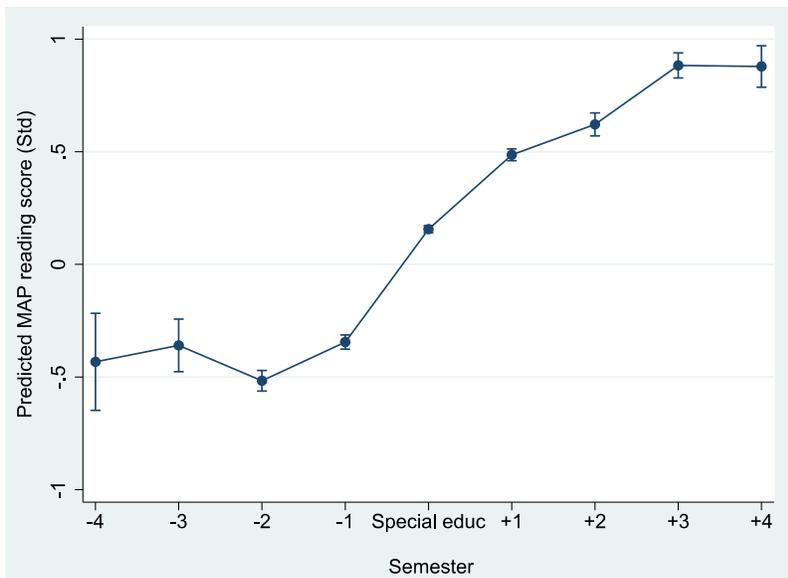


Figure 2. Reading scores across the trajectory of special education participation.

Note: A value of 0 on the x-axis indicates semester(s) when a student is participating in special education. Negative values indicate the number of semesters before special education participation, and positive values indicate the number of semesters after exiting special education.