



## INTRODUCTION

The purpose of this study was to determine the impact of inclusion on the academic outcomes of students with disabilities. The study followed a single cohort of Indiana students with disabilities to assess the relationship between special education placement and state academic assessment results. This cohort was in 3rd grade in 2013, and was followed over time through 8th grade in 2018.

## METHODS

We used propensity score matching to improve the balance of primary disability type and performance distributions between the treatment and control groups at baseline. By generating two groups that are approximately homogeneous on variables pertaining to placement, subsequent discovery of an effect related to placement in the treatment group is therefore less confounded with the matched variables, thus lending stronger support to a causal claim. Comparative analysis of academic outcomes were conducted for students designated as high inclusion, mixed inclusion, and low inclusion. High inclusion is defined as being in the general education classroom 80% or more for the timespan of the study; Mixed inclusion is defined as sometimes being in a general education classroom 80% or more for the timespan of the study; Low inclusion is defined as being in the general education classroom less than 80% time for the timespan of the study. Low inclusion is the treatment in one analysis; High inclusion is the treatment in another analysis. Students were matched on 3rd grade ISTEP+, IRead scores and their primary disability.

## RESULTS

- ✓ Students with placements classified as “high inclusion” scored better on ELA and Math for all analyses.
- ✓ In all but two of the analyses, the results are significant.

N: Treatment/Total  
 Matching 1:1; Caliper = 0.1  
 \* Significant at 5%; \*\* Significant at 1%;  
 \*\*\* Significant at 0.1%

### High Inclusion vs. Low Inclusion

		Matched on IREAD, corresponding 2013 ISTEP scores, and PD Codes Treatment=Low Inclusion	Matched on IREAD, corresponding 2013 ISTEP scores, and PD Codes Treatment = High Inclusion
		All PD Codes ATET	All PD Codes ATET
ELA	2014	-20.46 ***	34.65 *
	2015	-11.11 *	29 *
	2016	-12.51 *	53.21 **
	2017	-24.43 ***	45.38 **
	2018	-17.88 *	29.92
	N	72/144	1693/3386
Math	2014	-23.57 **	37.31 *
	2015	-26.24 ***	16.99
	2016	-23.55 ***	32.5 **
	2017	-25.51 ***	46.28 ***
	2018	-31.7 ***	37.94 **
	N	87/174	1745/3490

### High Inclusion vs. Mixed Inclusion

		Matched on IREAD, corresponding 2013 ISTEP scores, and PD Codes Treatment = Low Inclusion	Matched on IREAD, corresponding 2013 ISTEP scores, and PD Codes Treatment = High Inclusion
		All PD Codes ATET	All PD Codes ATET
ELA	2014	-8.51 ***	6.19 **
	2015	-7.89 ***	7.94 ***
	2016	-9.32 ***	11.57 ***
	2017	-11.3 ***	11.4 ***
	2018	-22.27 ***	20.89 ***
	N	941/1882	1695/3390
Math	2014	-9.27 **	8.55 **
	2015	-6.59 **	7.96 ***
	2016	-8.85 ***	8.34 ***
	2017	-6.42 **	8.96 ***
	2018	-14.48 ***	19.54 ***
	N	1009/2018	1748/3496

## FUTURE RESEARCH

Conduct a study with a similar research design, researching high school and post-secondary outcomes using qualitative and quantitative data. High School data will include an array of outcome measures including diploma type, state assessments, courses taken, i.e., career pathways, etc. Post-secondary outcome data will include school experiences, higher education participation, employment type and wages, etc.