



## METHODS

We used propensity score matching to improve the balance of primary disability type and performance distributions between the intervention and comparison 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 and low inclusion. Low inclusion is the treatment.

### Student Level Matching Variables:

- 3<sup>rd</sup> grade ISTEP+ math and ELA scale score
- Reading Scale Score (IRead)
- Attendance (in days)
- FRL status
- Gender
- Ethnicity
- Primary Disability
- Suspension and Expulsion

### School Level Matching Variables:

- FRL percent
- Percent African American
- Percent Hispanic
- Percent White
- Percent Asian

Matching yielded a strong distributional and mean balance for all matching variables and propensities.

## INTRODUCTION

The purpose of this study was to determine the relationship between special education placement and 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 3<sup>rd</sup> grade in 2013, and was followed over time through 8<sup>th</sup> grade in 2018.

## RESULTS

- ✓ Students with placements classified as “high inclusion” scored better on ELA and Math for all analyses.
- ✓ The findings are significant in 10 of 10 analyses.

## DEFINITIONS

**High Inclusion:** In the general education classroom 80% or more for all years of study  
**Low Inclusion:** In the general education classroom less than 80% or more for all years of study  
**Primary Disabilities in study:** Any student in Indiana who took the state assessment and did not take the alternate assessment. This included students with a Cognitive Disability, Learning Disability, ASD, Emotional Disability, Other Health Impairment, Blind/Low Vision, Deaf/Hard of Hearing

## 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.

		ATET	p-value
ELA	2014	22.34	< 0.001
	2015	15.67	0.004
	2016	16.30	0.005
	2017	27.32	< 0.001
	2018	21.03	0.004
	N		63/126
Math	2014	20.97	0.002
	2015	20.18	< 0.001
	2016	18.83	< 0.001
	2017	21.48	< 0.001
	2018	33.71	< 0.001
	N		75/150

N: Treatment/Total  
 Matching 1:1; Caliper = 0.1