

Alternate Data File Template

Study Information:

Title: Effects of an Inquiry-Oriented Curriculum and Professional Development Program on Grade 7 Students' Understanding of Statistics and on Statistics Instruction

URL: <https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4567>

Abstract: On average, Florida students earn only half of the points possible in the statistics content area of the state's annual mathematics assessment. Leaders in Broward County Public Schools, a large, diverse, urban school district, viewed changes to statistics curriculum and instruction as one way to address this issue. This study randomly assigned 40 middle schools in the district to either implement a replacement curriculum unit with four days of teacher professional development in probability and statistics or continue with their practice-as-usual instruction in probability and statistics. The replacement unit supported teaching and learning of all the probability and statistics standards in the grade 7 course description. The replacement unit with the associated professional development, called the Supporting Teacher Enactment of the Probability and Statistics Standards program, improved student understanding of statistics and statistics instruction. The magnitude of the effect on student understanding was 23 percent of 1 standard deviation, which is comparable to an increase of 9 percentile points for an average student.

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Description of the Sample:

Grade level(s): Grade 7

Any specific subgroups: Students enrolled in and teachers teaching grade 7 mathematics (including advanced mathematics) in schools with at least 30 students and multiple grade 7 teachers.

Sample size: Levels of Conceptual Understanding in Statistics (LOCUS) analytic sample— 31 middle schools, 86 grade 7 mathematics teachers, and 2,283 grade 7 mathematics students; Instructional Quality Assessment (IQA) analytic sample— 26 middle schools and 74 grade 7 teachers.

Data Information:

Data source #1: Broward County Public Schools—LOCUS analysis

Variable Name <i>(as it appears in the Excel file)</i>	Variable Definition	School Years
Stepss_condition	Condition indicator (1=treatment, 0=control)	2018/19
School_number	School number	2018/19
Teacher_number	Unique number for participating teachers	2018/19
Student_number	Unique number for participating students	2018/19
Advanced_course	Advanced course indicator (1=yes, 0=no)	2018/19
G6_fsamathss	Florida Standards Assessments – Mathematics scale score in grade 6	2017/18
G7_fsamathss	Florida Standards Assessments – Mathematics scale score in grade 7	2018/19
LOCUS	LOCUS scale score	2018/19

Data source #2: Broward County Public Schools—IQA analysis

Variable Name <i>(as it appears in the Excel file)</i>	Variable Definition	School Years
Stepss_condition	Condition indicator (1=treatment, 0=control)	2018/19
School_number	School number	2018/19
Advanced_course	Advanced course indicator (1=yes, 0=no)	2018/19
IQA_total	IQA total score	2018/19

Analysis Information:

The above Excel files are the files used to produce the analysis results in the published report: <https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4567>. The appendix provides details related to the production of the final analytic files from the randomized sample of schools, teachers, and students.

Contact information:

Office maintaining the data: Data files can be obtained from the Office of Student Assessment and Research at Broward County Public Schools in Florida.

Specific database(s) and fields to request: See tables above for this specific information.