

Utah State University

New Mexico StartSmart K-3 Plus

DID STARTSMART MINIMIZE SUMMER LEARNING LOSS FOR EARLY-GRADE STUDENTS?

Project Overview

THE PROBLEM: What Challenge Did the Program Try to Address?

Summer learning loss refers to a pattern of academic performance in which students demonstrate lower academic achievement at the start of a new school year compared to the start of summer vacation. Research shows that the impact of summer learning loss varies across grade levels and income, with the greatest impact occurring in early grade levels and among students from lower socio-economic status (SES) backgrounds. If summer learning loss accumulates over several school years, it can also produce significant levels of under-achievement overall. One solution for addressing this problem has been to provide students with additional days of instruction during the summer, which is the core service provided by the New Mexico StartSmart K-3 Plus program.¹

THE PROJECT: What Strategies Did the Program Employ?

Through an i3 validation grant awarded from 2010-2015, Utah State University established StartSmart K-3 Plus in New Mexico. Previously, New Mexico ran the K-3 Plus Extended School Year Program, which provided additional days of instruction in the summer for students entering Kindergarten through 3rd grade. The program was intended to reduce summer learning loss and provide students with academic gains during the summer that could boost their achievement. StartSmart K-3 Plus was designed as a parallel program with the same services and evaluated through a randomized controlled trial. Students in StartSmart K-3 Plus schools were randomly assigned to either receive the 25 days of summer services plus regular school year services (the program group) or to receive regular 1 school year services only (the comparison group). Students were recruited in two cohorts, one that began in Kindergarten in Fall 2011 and a second cohort that began Kindergarten in Fall 2012. Both sets of students were followed over four years until the beginning of what would be their 3rd grade year if they had made normal progress in school. Students were assessed before their first summer school program prior to Kindergarten, after the start of Kindergarten, and again at the beginning of 3rd grade.

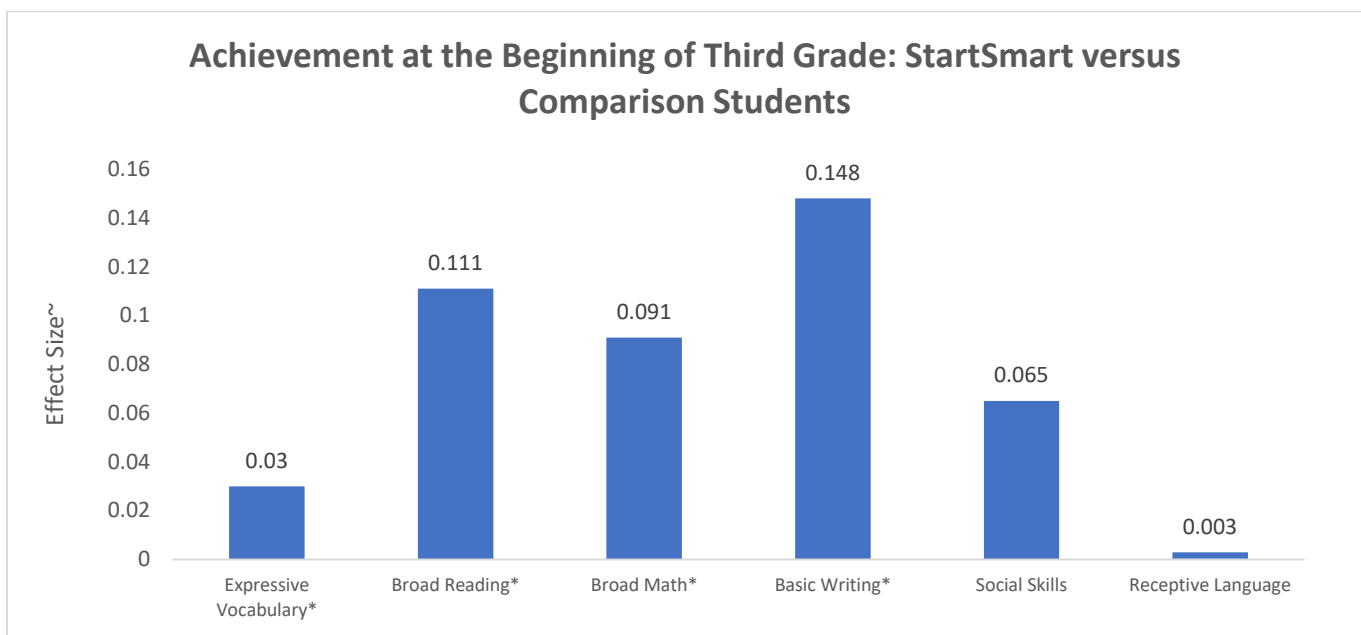
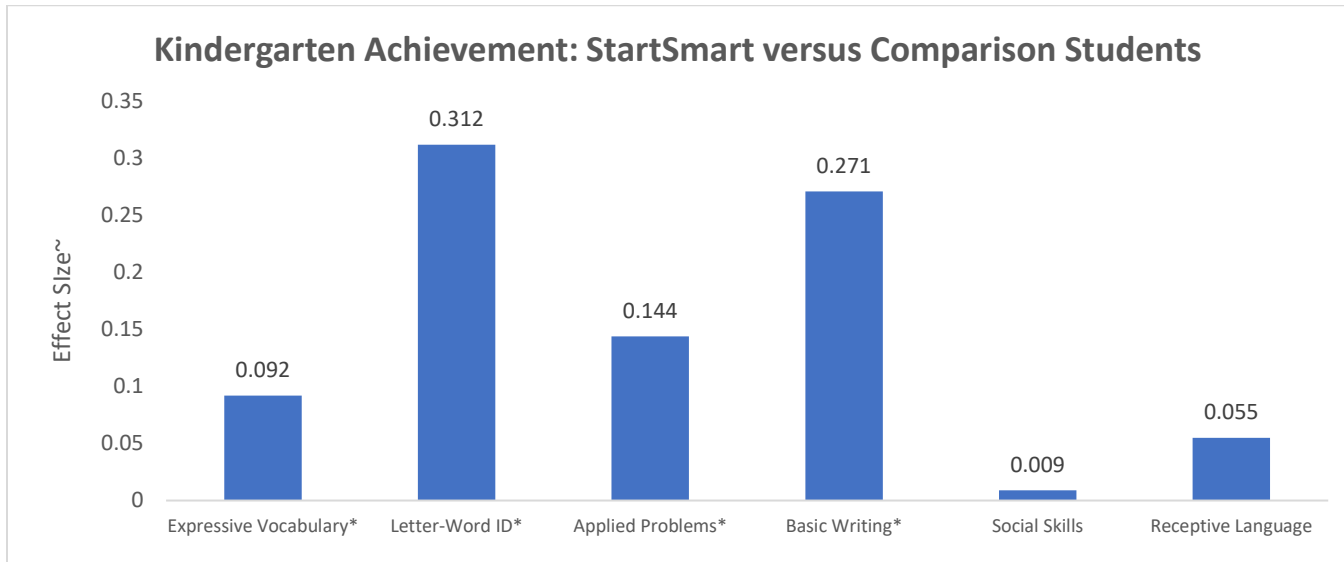
¹ Utah State University received an i3 validation grant supported by the U.S. Department of Education's Investing in Innovation program through Grant Number U396B100267. Validation grants provide funding to support the expansion of projects that address persistent education challenges at the regional or national level. All i3 grantees are required to conduct rigorous evaluations of their projects. The quality of evidence required to demonstrate a project's effectiveness depends on a project's level of scale or grant type.

THE STARTSMART K-3 PLUS MODEL

- **Additional Instruction.** StartSmart provided 25 additional days of school during the summer for two cohorts of students before their Kindergarten, 1st, 2nd, and 3rd grade school years.
- **Consistent School Environment.** Class sizes were no larger in the summer program than during the normal school year. Transportation and meals were provided in the same way as the regular school year.
- **Curriculum.** Lessons focused on math and literacy. Classes were led by certified teachers who had completed PD in literacy.
- **Parents.** Teachers in the program were required to involve parents, but the nature of this involvement was not explicitly specified when the program was established.

Summary of Results

DID STARTSMART MINIMIZE SUMMER LEARNING LOSS FOR EARLY-GRADE STUDENTS?



*Results are statistically significant

~Education researchers generally interpret effect sizes as follows: 0.2 = small, 0.5 = medium, and 0.8 = large. If the impact does not have an effect size of 0.2 or greater, it is not meaningful, even if it is statistically significant.²

² Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.

Assessment results indicated that StartSmart had positive impacts in several of the outcome domains for students entering Kindergarten, but that these impacts had weakened by the time students started 3rd grade.

- **LITERACY AND MATH.** StartSmart had statistically significant positive effects on Kindergarten students' expressive vocabulary, reading, writing, and math, with strong effect sizes for reading and writing.
- **SOCIAL SKILLS AND RECEPTIVE LANGUAGE.** There were no statistically significant effects on Kindergarten students' social skills or receptive language.
- **IMPACT OVER TIME.** When these students entered 3rd grade, assessments indicated that the program had small statistically significant positive impacts on reading, math, and writing. There was no significant impact on expressive vocabulary, receptive language, or social skills.

Please see Appendices A and B for information about the evaluation's design and the quality of the evidence, respectively.

SECONDARY FINDINGS

- **K READINESS.** The study found statistically significant effects of the program on Kindergarten readiness in four out of the six outcome areas: Expressive vocabulary, Reading (measured by letter-word identification), Math (measured by Applied Problems), and Writing. The effect sizes are particularly robust for students on reading outcomes (nearly a third of a standard deviation on the letter-word identification test) and writing outcomes (just over a quarter of a standard deviation).
- **SAME TEACHER IN THE SUMMER/SCHOOL YEAR.** Students who attended the program consistently through 2nd grade and also stayed with the same teacher between summer and the regular school year demonstrated statistically significant positive impacts in both writing and math, with very high effect sizes in both areas.
- **ENGLISH SPEAKERS.** For students who attended consistently through 2nd grade, StartSmart was more effective for English-speakers. The program had a positive, statistically significant impact on these students' reading and writing skills. However, the program did not have a statistically significant impact in any outcome domain for Spanish speakers within this group.
- **ATTENDANCE.**³ In a supplementary report, the evaluators analyzed the sub-set of students in the intervention group who attended the summer sessions consistently through 2nd grade. The program had a statistically and substantively significant positive impact on these students' writing skills.

OTHER CONSIDERATIONS

StartSmart produced positive impacts in some areas of academic performance for early grade students, but the sustainability of these impacts was somewhat unclear. The program's most significant challenge was having students in the intervention group actually attend the summer school sessions.

³ "Supplemental Exploratory Results from the StartSmart K-3 Plus Randomized Controlled Trial," Utah State University, December 2015.

- **ATTENDANCE.** Student attendance at the summer sessions declined in later grades. This may explain why the program demonstrated lower effectiveness by the time students entered 3rd grade.
- **TIME FRAME OF IMPACT.** Since this intervention appeared to show some positive short-term impacts, future studies should examine the conditions that can sustain summer learning gains in the long term.
- **CONTEXT.** The program's impact seemed to be context sensitive, particularly with respect to whether students had the same teacher from summer to the regular school year and whether English or Spanish was their primary language.

For More Information

Evaluation Reports

[Final Evaluation Report \(Full Report\)](#) (Utah State University, December 2015)⁴

Additional Reports

[Final Report Supplement: Exploratory Results](#) (Utah State University, December 2015)

⁴ The information and data for this result summary was collected from the most recent report as of 02/10/2020: "New Mexico StartSmart K-3 Plus Validation Study: Evaluator's Report," Utah State University, December 2015.
<http://ccpi.unm.edu/sites/default/files/publications/EvaluatorReport.pdf>

Appendix A: Students Served by the Project⁵

GRADE(S)													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12

GENDER

RACE/ETHNICITY

COMMUNITY

Not Reported

Not Reported

Not Reported

HIGH-NEED STUDENTSⁱ

Free/Reduced-Price Lunch	English Learner	Students with Disabilities
Not Reported	Not Reported	Not Reported

⁵ These data reflect the entire student population served by the intervention, not just the evaluation sample used in the impact study.

Appendix B: Impact Evaluation Methodology⁶

RESEARCH DESIGN:

Design:	Randomized Controlled Trial (RCT)
Approach:	<ul style="list-style-type: none">▪ Random assignment drawn from nine school districts in New Mexico that agreed to enroll students in the study.▪ Two districts dropped out after one year.
Study Length:	Four years

DATA COLLECTION AND ANALYSIS

Study Setting:	Schools
Final Sample Sizes:	<ul style="list-style-type: none">▪ Not reported
Intervention Group Characteristics:	<ul style="list-style-type: none">▪ Not reported⁷
Comparison Group Characteristics:	<ul style="list-style-type: none">▪ Not reported
Data Sources:	<ul style="list-style-type: none">▪ Student assessments: Literacy, math, and social skills▪ Parent surveys
Key Measures:	<ul style="list-style-type: none">▪ Expressive Vocabulary (Woodcock-Johnson Tests of Achievement III)▪ Reading (Woodcock-Johnson Tests of Achievement III)▪ Math (Woodcock-Johnson Tests of Achievement III)▪ Writing (Woodcock-Johnson Tests of Achievement III)▪ Social Skills (Social Skills Improvement System)▪ Receptive Language (Peabody Picture Vocabulary Test)

⁶ These data reflect only the evaluation sample in the impact study, not the entire population served.

⁷ The evaluators state that the study met WWC standards for baseline equivalence between the intervention and control groups.

Appendix C: Quality of the Evidence

Although an evaluation may not have been reviewed by the time of publication for this summary, it is possible that the study will be reviewed at a later date. Please visit the websites found in the footnotes on this page to check for updates.

WHAT WORKS CLEARINGHOUSE REVIEW⁸

STUDY	RATING
Not reviewed as of 02/10/2020	N/A

EVIDENCE FOR ESSA REVIEW⁹

STUDY	RATING
Not reviewed as of 02/10/2020	N/A

NATIONAL CENTER ON INTENSIVE INTERVENTIONS REVIEW¹⁰

STUDY	RATING
Not reviewed as of 02/10/2020	N/A

⁸ <https://ies.ed.gov/ncee/wwc/FWW>

⁹ <https://www.evidenceforessa.org/>

¹⁰ <https://intensiveintervention.org/>

Investing in Innovation (i3) Grantee Results Summary

Validation, 2010-2015

The [*Investing in Innovation Fund \(i3\)*](#), established under section 14007 of the American Recovery and Reinvestment Act of 2009, is a Federal discretionary grant program at the U.S. Department of Education within the Office of Elementary and Secondary Education (OESE). i3 grants help schools and local education agencies work in partnership with the private sector and the philanthropic community to develop and expand innovative practices that improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, and/or increase college enrollment and completion rates for high-need students.

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ⁱ “High-need student” refers to a student at risk of academic failure or otherwise in need of special assistance and support, such as students who are living in poverty, attend high-minority schools, are far below grade level, who have left school before receiving a regular high school diploma, at risk of not graduating with a diploma on time, who are homeless, in foster care, have been incarcerated, have disabilities, or who are English learners. For more information see: [*Applications for New Awards; Investing in Innovation Fund-Development Grants, 81 FR 24070 \(April 25, 2016\)*](#).