



**Student Achievement with Study Island,  
EducationCity, and Reading Eggs**

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**Study Island**<sup>®</sup>



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## Study at a Glance

- The study examines the effectiveness of Study Island on mathematics and reading achievement in 327 classrooms from 77 schools across 12 districts in eight states over a multiyear period.
- Results indicate that classrooms using Study Island, EducationCity, and Reading Eggs solutions experience growth in learning at a rate significantly higher than district and state averages.
- Overall, 77% of classes using at least one of these programs exhibited achievement gains from the prior year in math; 75% of classes realized gains in reading.
- Among classrooms that expanded their subscription to include an additional solution during the second study year, 90% of math and 85% of reading classes saw gains from the baseline year.
- Classrooms using Study Island, EducationCity, and Reading Eggs experienced academic growth gains up to 500% greater than the rate of district growth during the study period.

## Results at a Glance

*Increase in Proficiency Rates from 2010 to 2011 by Learning Solution (Study Island, EducationCity, and Reading Eggs)*

	Total State Gain (%)	Total District Gain (%)	Class Gain (%)	Class vs. District Avg. Growth	
				Raw	%
	Math				
Study Island, EducationCity, and Reading Eggs solution(s) used both years	2	3	6	3	100
By solution added in 2011					
Study Island	2	1	6	5	500
EducationCity	2	3	8	5	167
By solution added in 2011 for existing Study Island users					
Study Island, EducationCity, and Reading Eggs solution(s) used both years	2	3	5	2	67
By solution added in 2011					
Study Island	1	2	6	4	200
EducationCity	1	2	7	5	250
Reading Eggs	2	4	9	5	125
By solution added in 2011 for existing Study Island users					
EducationCity	3	5	8	3	60
Reading Eggs	2	4	9	5	125

## Overview

This study documents the effectiveness of three award-winning instructional and curricular solutions—Study Island, EducationCity, and Reading Eggs—specifically addressing the amount of growth over time in student achievement for schools using these products. Analyses include comparisons of elementary (grades 2 through 6) achievement for classes using various implementation configurations of Study Island, EducationCity, and Reading Eggs solutions. The comparisons

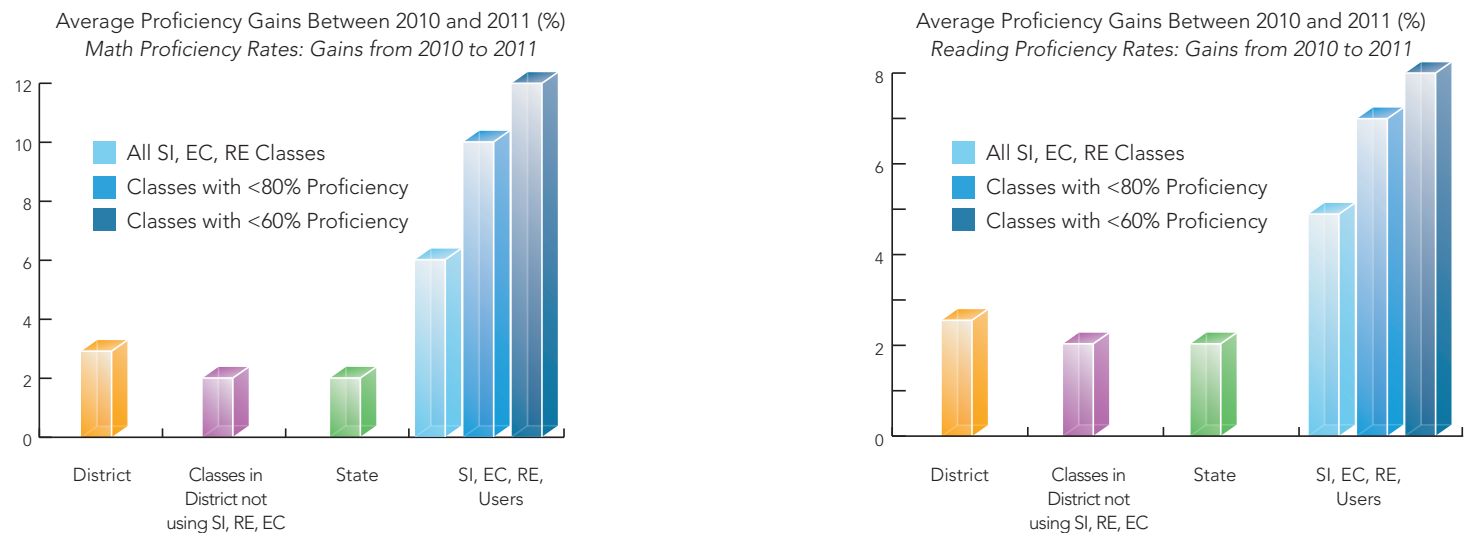
examine changes in the rate of student performance across multiple years against district and state averages and the impact of program usage in low-performing schools. Results show that schools implementing Study Island, EducationCity, and Reading Eggs are making dramatic and significant progress in student learning and achievement. Overall, 77% of classes using at least one of these solutions during the 2010–11 academic year exhibited gains in the percentage of students meeting respective state proficiency targets. The average increase in proficiency for these classes was 9%. In reading, 75% of all classes in the study sample implementing a solution in 2011 observed gains over their 2010 proficiency rates, with increases of 8% on average. For classes that expanded their subscriptions to include an additional instructional program in 2010–11, the results were even more pronounced, with 90% showing gains in mathematics and 85% experiencing student achievement gains in reading. This study details Study Island, EducationCity, and Reading Eggs solutions as highly effective tools for increasing student learning.

## Results

**Effect of Implementing Study Island, EducationCity, and Reading Eggs on Student Achievement** This study evaluated the achievement gains on state assessments in mathematics and reading made by grade-level classrooms implementing various configurations of Study Island, EducationCity, and Reading Eggs solutions during the 2009–10 and 2010–11 academic years. For all classes in the study sample using at least one program during both years, the average gain in the percentage of students meeting or exceeding respective state proficiency standards was 6% in math and 5% in reading (table 1). The gains realized by schools implementing at least one of these solutions were approximately double the average district gain in math (6% versus 3%) and reading (5% versus 3%) and approximately three times greater than the average increase in state proficiency rates (6% versus 2% in math; 5% versus 2% in reading). Comparisons within districts between classes using Study Island, EducationCity, and Reading Eggs solutions and those not using these programs were also evaluated. Figure 1 illustrates the gains made by classes using Study Island, EducationCity, and Reading Eggs relative to district and state gains over the two-year study period.

For lower-performing schools, the gains observed by Study Island, EducationCity, and Reading Eggs users were even more pronounced (table 1). For classes in grades 2 through 6 with less than 80% of students meeting state proficiency targets in 2010, the average gain in math was 10% and the average gain in reading was 7% (figure 1). For classes with less than 60% of students meeting state proficiency levels in 2010, the average gain in math was 12%, while the average gain in reading was 8% (figure 1).

**Figure 1. 2011 Average Proficiency Gains for Classes in Study Sample**



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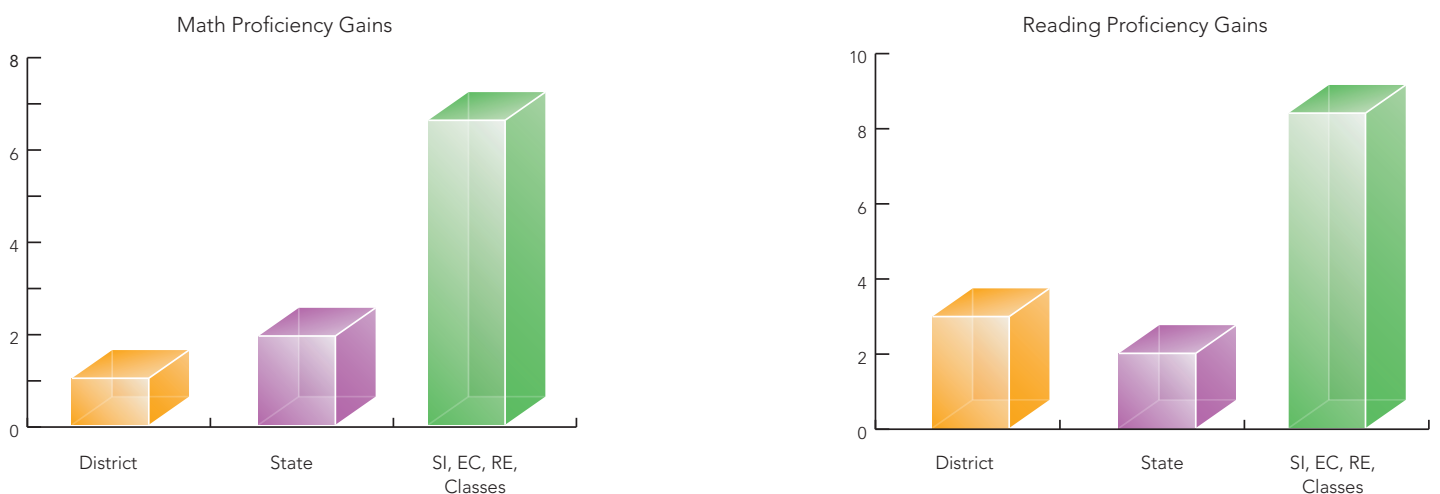
Content	Grade-Level Gains for SI, EC, RE Users					Total Elem. Avg.		SI, EC, RE, Avg.
	2nd	3rd	4th	5th	6th	District	State	
Math: All classes in study sample	16	5	5	6	11	3	2	6
Classes with 2010 proficiency rate <80%	14	8	8	10	12	5	3	10
Classes with 2010 proficiency rate <60%	17	10	9	14	14	6	3	12
Reading: All classes in study sample	13	5	6	5	4	3	2	5
Classes with 2010 proficiency rate <80%	11	7	7	6	5	3	2	7
Classes with 2010 proficiency rate <60%	12	9	9	8	8	4	2	8

Results from this analysis illustrate that grade-level classes in math and reading implementing Study Island, EducationCity, and Reading Eggs solutions experienced gains in proficiency rates that outpaced district and state averages substantially and that this increase was significantly larger for low-performing schools. Overall, 77% of classes using these programs in 2011 exhibited gains in math proficiency rates from 2010, with the overall gain in elementary grades being 9% on average. In reading, 75% of all classes using these products in 2011 observed gains over their 2010 proficiency rates, with gains of 8% on average.

**Effect of Expanding Solution Subscription on Student Achievement**

For classes adding Study Island, EducationCity, or Reading Eggs to their subscription in 2011, 90% showed gains in math (7% average gain in proficiency rate) and 85% showed gains in reading (9% average gain in proficiency rate). In math, the increase in proficiency rates for classes expanding their subscription was seven times greater than the district average from 2010 to 2011, while in reading the 9% increase in proficiency rates was three times greater than the average district-level gain (figure 2).

**Figure 2. Average Proficiency Gains for Classes Expanding Product Subscription in 2011**



Of the 73 classes in the study sample that expanded their subscriptions to include an additional mathematics solution in 2011, 85% (62 classes) had proficiency rates greater than 80% in 2010. In reading, 87% of the 134 classes adding an instructional program to their subscriptions had proficiency rates greater than 80% in 2010. In other words, a majority of classes expanding subscriptions were from high-performing schools, making the observed gains (7% in math and 9% in reading) particularly noteworthy because gains of this magnitude are typically not observed in previously high-performing classrooms. Table 2 details the overall gains in proficiency rates relative to district and state averages for classes adding Study Island, EducationCity, or Reading Eggs to their 2011 subscriptions.

**Figure 2. Average Proficiency Gains for Classes Expanding Product Subscription in 2011**

Content Area	Grade-Level Gains for SI, EC, RE Classes					Total Elem. Avg.		SI, EC, RE, Avg.
	2nd	3rd	4th	5th	6th	District	State	
Math	5	6	5	6	10	1	2	7
Reading	12	7	6	6	9	3	2	9

Table 2 documents the overall change in average proficiency rates without regard to expansion of the specific solution added to a classroom subscription. Table 3 details the observed 2011 proficiency rate gains by the program added (Study Island, EducationCity, or Reading Eggs). Classes that added Study Island to their 2011 subscription experienced gains of 6% in both math (6 times the district average) and reading (3 times the district average) proficiency. Classes adding EducationCity to their subscriptions in 2011 observed gains of 8% in math and 7% in reading, which outpaced district and state averages significantly. Classes adding Reading Eggs to their 2011 implementations had an increase of 9% on average in proficiency rates.

**Table 3. Average Change in Proficiency Rates by Solution Added in 2011**

Solution	Math			Reading		
	District avg.	State Avg.	Class Avg.	District Avg.	State Avg.	Class Avg.
Study Island	1	2	6	2	1	6
EducationCity	3	2	8	2	1	7
Reading Eggs	N/A	N/A	N/A	4	2	9

In math, 84% of the classes in the study sample implemented Study Island in 2010, while 85% of the classes in reading used the Study Island program in 2010. Given the widespread usage of Study Island in the sample, the current study evaluated the average change in proficiency rates for classes adding EducationCity or Reading Eggs to their existing Study Island subscriptions in 2011. Table 4 details the results from this analysis.

**Table 4. Proficiency Rate Changes for Study Island Users Expanding Solution Subscription in 2011**

Solution	Math			Reading		
	District avg.	State Avg.	Class Avg.	District Avg.	State Avg.	Class Avg.
Study Island	3	2	12	5	3	8
Reading Eggs	N/A	N/A	N/A	4	2	9

The EducationCity program, when used in conjunction with Study Island, resulted in average proficiency gains of 12% in math and 8% in reading. Classes that implemented Reading Eggs with Study Island realized 9% gains, on average, in proficiency rates. These results indicate that EducationCity and Reading Eggs, when used in classrooms together with Study Island, yield significant increases in student learning.

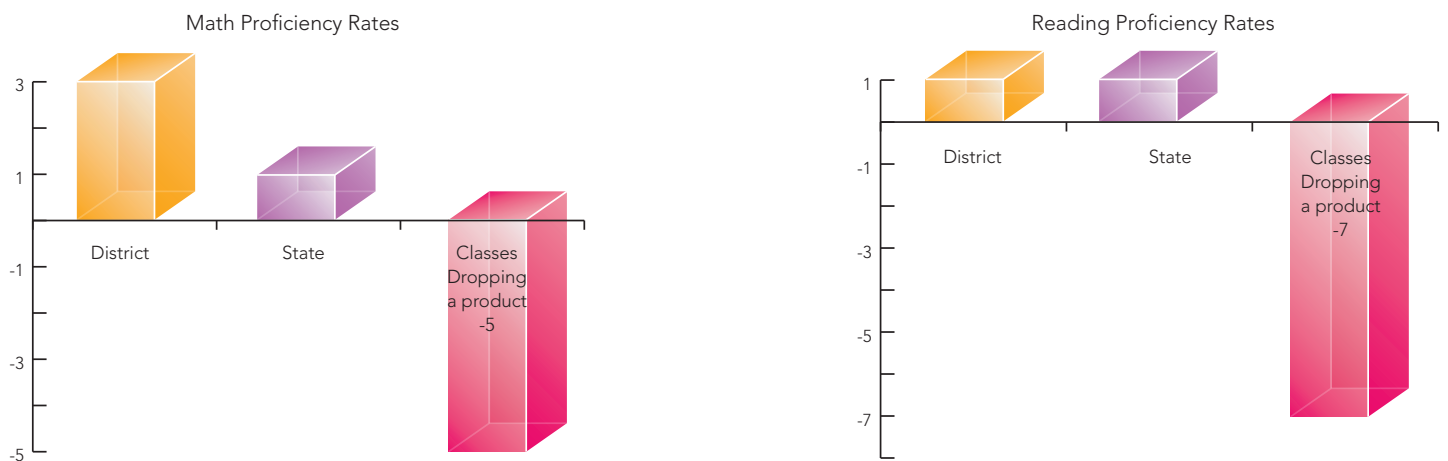
### Effect of Reducing Solution Subscription on Student Achievement

The current study focuses on the impact of implementing Study Island, EducationCity, and Reading Eggs products on classroom achievement. But what happens to student learning outcomes in classes when a school does not renew a solution subscription that was used the previous academic year? Table 5 details the change in average proficiency rates for classes in the study sample that did not renew one of their program subscriptions in 2011. In math, classes that dropped a solution from their subscription saw a decrease in 2011 proficiency rates of 5%. In reading, proficiency rates from 2010 plummeted 7%. It should be noted that despite dropping one instructional program from their 2010 subscription, all classes considered in this analysis retained at least one solution (Study Island, EducationCity, or Reading Eggs) for use in 2011 which likely buoyed the math and reading proficiency rates from an even more calamitous drop. Figure 3 illustrates the negative impact observed in the study sample on student proficiency.

**Table 5. Average Change in Proficiency Rates for Classes Reducing Solution Subscriptions in 2011**

Content Area	Average Change in Proficiency Rates		
	District	State	Class
Math	3	1	-5
Reading	1	1	-7

**Figure 3. Effect of Reducing Solution Subscription on Student Achievement**



## Methodology

### Study Sample

To evaluate the impact of Study Island, EducationCity, and Reading Eggs solutions on student achievement, a sample of schools implementing these programs during the 2009–10 and 2010–11 academic years was randomly selected. The study used publicly available achievement data published on respective state department of education websites. Inclusion in the analysis sample was contingent on a complete record of grade-level results from state testing in the format of the percentage of students meeting proficiency levels from each school. A total of 514 grade-level classrooms (grades 2 through 6) from 81 schools across 12 districts from eight states composed the study sample.

**Table 6. Study Sample**

State	2011 District Demographic Profile				
	Schools (N)	Schools (N)	Minority (%)	LEP (%)	Econ Dis (%)
California district	4	>20,000	66	13	51
California district	5	>9,000	81	36	74
Georgia district	17	>150,000	68	16	52
Illinois district	1	>6,000	31	6	53
Kansas district	4	>45,000	63	19	74
Kansas district	5	>10,000	28	7	33
New Jersey district	12	>16,000	20	1	10
New Jersey district	11	>10,000	9	0	10
New Jersey district	4	>8,000	98	12	65
Pennsylvania district	9	>75,000	86	8	84
Tennessee district	5	>7,000	8	1	68
Texas district	4	>14,000	54	6	59

The 514 classrooms included in the study sample all implemented at least one learning solution (Study Island, EducationCity, or Reading Eggs) during the 2010–11 academic year. This study focused on the effect of the Study Island, EducationCity, and Reading Eggs programs on achievement, examining the learning gains of students across a multi-year period. Of particular interest was the effect on proficiency rates for classes that expanded their classroom subscriptions by adding a solution during the 2010–11 academic year. Table 7 details the solution implementation profile for the schools in the study sample.

**Table 7. 2011 Solution Implementation Profile**

Solution Profile Compared with 2010	Number of Classrooms
<b>Math</b>	
Reduced solution subscription	18
Implemented same solutions as previous year	163
Added at least one solution to subscription	73
<b>Reading</b>	
Reduced solution subscription	17
Implemented same solutions as previous year	109
Added at least one solution to subscription	134

**Analysis**

This study quantified changes in achievement between groups based on solutions implemented during the 2010–11 academic year. Using publicly available results from state testing regarding the percentage of students meeting proficiency levels, the change in the percentage of students meeting standards in 2009–10 was compared to the percentage meeting the standards in 2010–11 to determine the amount of growth in the percentage of students meeting proficiency standards.

Due to the inherent nature of descriptive analysis using extant aggregate data, limitations exist with regard to the conclusions that one can draw from the study analyses. Without a true experimental design that controls for confounding factors and examines data at a student level, other variables may be interacting with those of interest to produce the observed results. To enhance the interpretation and generalizability of this study, schools in multiple states, grade levels, content areas, and learning environments were selected at random for inclusion in the analyses. The results of these analyses, therefore, can be evaluated descriptively to determine whether overarching patterns exist within the data that can support the overall effectiveness of the Study Island, EducationCity, and Reading Eggs learning solutions.

## Learning Solutions

### *Study Island*

Study Island is a Web-based standards-mastery program that combines highly specific and dynamic content with real-time reporting to create a customized assessment, diagnostic, and instructional program based on each state's standards or the Common Core State Standards. The content of the Study Island program is unique to each state and provides assessment and skill practice in all major subject areas in both tested and untested grade levels.

During program implementation, students answer a customizable set of questions that correspond to a state's standards and learning objectives. If students answer a question incorrectly, the program provides immediate feedback and opportunities for remediation and further learning. The Study Island system also uses adaptive testing technology to create individualized learning paths by topic for each student, cycling students down, as needed, to lower levels of practice in skill areas that are building blocks for more difficult skills. This allows students the opportunity to practice continually, build their skills until they reach mastery level for each standard, and demonstrate proficiency at state-required levels. The Study Island program also uses motivational tools such as gaming and student-controllable instructional sequences to engage students and provide students with autonomy over their learning environment.

Through a comprehensive system of assessment and instructional practice tools, Study Island functions as both an instructional program and a progress-monitoring tool, providing instructors with ongoing and in-depth feedback regarding student progress toward mastery of content standards. Educators can use the system as a stand-alone tutorial program or as a supplement to their classroom curriculum. The flexible nature of the program creates a personalized learning experience for each student, helping instructors to individualize and differentiate instruction to meet the needs of all students and target remediation to the areas that are most critical. The program's Web-based platform creates a learning environment that is accessible from any computer connected to the Internet, allowing students to practice skills at school and at home. Through its interactive and flexible instructional platform, Study Island provides engaging, ongoing practice and remediation to help students meet their required standards in all major content areas.

### *EducationCity*

EducationCity is a Web-based program that provides fun and engaging research-based student activities and teaching resources in language arts, math, science, and ESL. EducationCity is mapped to state and Common Core State Standards and features open-ended whiteboard activities for topic introduction and skills reinforcement.



## Reading Eggs

Reading Eggs is a Web-based supplemental literacy program that builds and reinforces the five reading pillars (phonemic awareness, phonics, fluency, vocabulary, and comprehension). The program engages students with interactive animations, e-books, learning activities, songs, and rewards; teachers can monitor student progress with real-time reporting. Reading Eggs is a learn-to-read program in which students begin at an emergent reading level, or a level that matches their reading ability, and progress at their own pace.

## Conclusion

The research evidence documented in this study about Study Island, EducationCity, and Reading Eggs all points in the same direction: Students in classrooms using these solutions exhibit significantly greater achievement gains compared with overall district and state growth rates. Using these products in classrooms resulted in gains that were, on average, three times greater than district and state averages. For schools with the most acute instructional needs, the achievement gains were even more pronounced as product users in low-performing schools achieved rates of growth that were six times greater than nonusers within their district in math and four times greater in reading. Schools that harnessed multiple learning solutions to target specific instructional skills in reading and mathematics evidenced the largest rates of growth in the study sample. In math, classes that bundled Study Island and EducationCity experienced growth that was seven times greater than the district average. Users who implemented various configurations of Study Island, EducationCity, and Reading Eggs experienced approximately double-digit proficiency rate increases in reading over one academic year. Conversely, classes in schools that did not renew their product subscriptions experienced deep declines in proficiency rates in both math and reading, while overall district and state proficiency rates increased during the same period.

