

Cultivating Learning and  
Positive Change

**Case Study Research of *Study Island* in  
Illinois**

**October 1, 2008**



**Magnolia Consulting, LLC**

3171 Courthouse Road  
Louisa, Virginia 23093

phone 540.967.5540  
fax 540.967.5541  
info@magnoliaconsulting.org  
www.magnoliaconsulting.org

## INTRODUCTION

---

*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. 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 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 motivation tools such as gaming and student-controllable instructional sequences both to engage students and provide students with autonomy over their learning environment.

Through a comprehensive system of assessment and instructional practice tools, the program functions both as 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 in order to meet the needs of all students and target remediation to the areas that are most critical. The web-based platform of the program creates a learning environment that is accessible from any computer connected to the internet, allowing students to practice skills both 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.

*Study Island* strongly believes that its products must demonstrate proven effectiveness in increasing student learning. As such, it has contracted with Magnolia Consulting, LLC, an external, independent consulting firm specializing in educational evaluation, to provide a summary and extension of pre-existing case study evaluations within the state of Illinois. The purpose of this work is to examine the impact of *Study Island* on student achievement at schools using *Study Island* in order to illustrate the effectiveness of *Study Island*. This Illinois specific report is part of a larger nationwide report, *Case Study Summaries of Study Island*, available through Study Island.

## METHOD

---

The methodology of the full nationwide report, *Case Study Summaries of Study Island*, uses extant data that is available to the public through the state Department of Education databases. The evaluation in the full report employs a quasi-experimental framework with design variations by each case. Data sources for this study include historical, state-level, aggregated achievement data, as well as demographic information for either states or individual *Study Island* schools.

Analyses also vary for each case but include:

- comparisons of student achievement before and after *Study Island* use
- comparisons between schools using *Study Island* and local or state norms
- comparisons of changes in proficiency between schools using *Study Island* and other schools in the district or region not using *Study Island*
- trends in growth of student achievement over time at *Study Island* schools

Specifically, the full study addresses the following overarching evaluation question(s) for each case study exemplar (depending on the data available):

1. Is there significant growth over time in student achievement after the students have used *Study Island*?
2. Is there a significant difference in student achievement between schools using *Study Island* and schools not using *Study Island*?

Evaluators conducted statistical analyses in the full study when possible to quantify changes in achievement or differences in achievement between groups. Because state departments of education typically report student results from state testing in the format of the percentage of students meeting proficiency levels, evaluators chose statistical procedures that evaluate the magnitude of the difference between two percentages to analyze these data points. For example, these procedures allow one to compare the change in the percentage of students meeting standards from one year to the next to determine if there was statistically significant growth in the percentage of students meeting proficiency standards before and after program use. Likewise, one can use these procedures to determine if there was a difference in the percentage of students meeting standards between a school using the program and those schools that did not use the program.

Due to the inherent nature of case study analysis using extant aggregate data, limitations exist with regard to the conclusions that one can draw from these 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 these results. Although the present report presents findings only from the state of Illinois, the full report includes data and analyses from a variety of states, grade levels, content areas, and learning environments. One can descriptively examine the findings of these analyses together to determine if overarching patterns exist within the data that can support the overall effectiveness of *Study Island*.

This Illinois specific report presents an evaluation of student achievement in math and reading at *Study Island* schools within the state of Illinois compared to all non-*Study Island* schools in the state, and an evaluation that compares student achievement in *Study Island* schools within Chicago to other schools in the state.

## ILLINOIS RESULTS

### Illinois Schools Using *Study Island* Versus All Other Illinois Public Schools

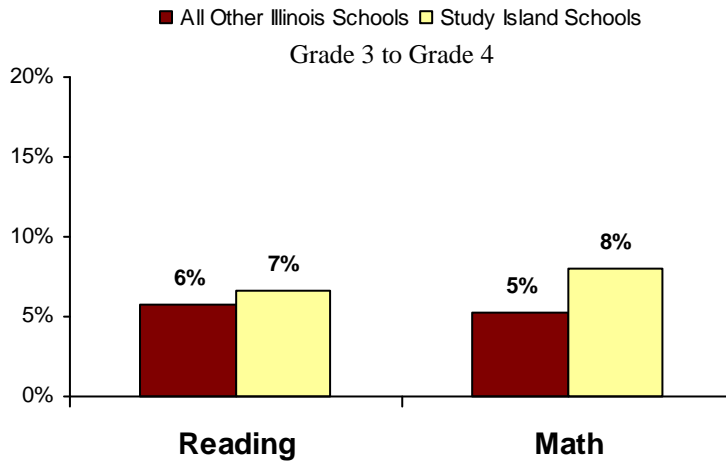
Table 1.  
*School Characteristics and Demographics for Public Schools in Illinois*

IL Public Schools (Total Enrollment = 2,111,706)	
School Characteristics	N
Type of School	Public
Grade Span	PK–12
Number of Teachers	133,652
Demographics	Percentage
<b>Gender</b>	
Male	No Data
Female	No Data
English Language Learner	No Data
Free or Reduced Lunch	37%
<b>Ethnicity</b>	
White	56%
Black	21%
Hispanic	19%
Asian Pacific Islander	4%
American Indian	<1%

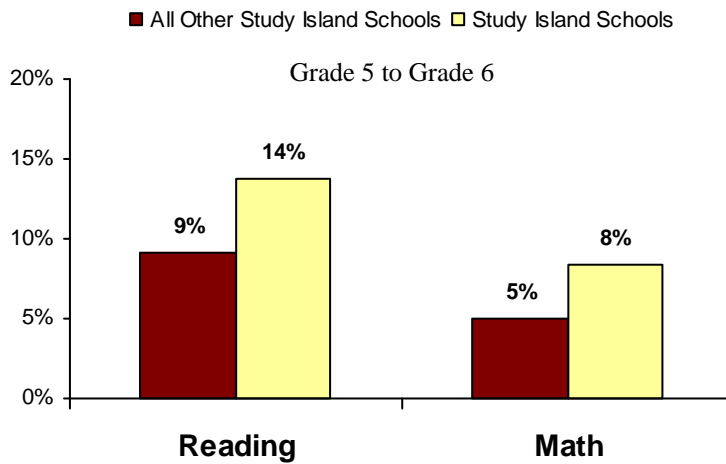
### Background and Analysis

Evaluators compared the Illinois Standards Achievement Test (ISAT) scores of all public schools throughout Illinois who began using *Study Island* for the first time during the 2005–2006 school year to all other public schools in Illinois. The *Study Island* schools were representative of the state and included large and small districts from urban, suburban, and rural schools.

From 2005 to 2006, first-year *Study Island* schools showed greater improvement in scores, meeting or exceeding Illinois standards from third to fourth grade and from fifth to sixth grade over all other Illinois public schools. Specifically, *Study Island* schools showed an average of 6.6% increase in scores meeting or exceeding standards in reading and an average increase of 8.0% in scores meeting or exceeding standards in math from third to fourth grade (see Figure 1). From fifth to sixth grade, *Study Island* schools showed an average of 13.7% increase in scores meeting or exceeding standards in reading and an average of 8.4% increase in scores meeting or exceeding standards in math (see Figure 2).



*Figure 1.* Score growth from Grade 3 to Grade 4 from 2005 to 2006. First-year *Study Island* schools in Illinois compared to all other public schools in Illinois.



*Figure 2.* Score growth from Grade 5 to Grade 6 from 2005 to 2006. First year *Study Island* schools in Illinois compared to all other public schools in Illinois.

## Chicago Public School District

Table 2.  
*School Characteristics and Demographics for Public Schools in Chicago, Illinois*

Chicago Public School District, Illinois (Total Enrollment = 408,601)	
District Characteristics	N
Type of School	Public
Grade Span	PK–12
Number of Teachers	24,664
Demographics	Percentage
<b>Gender</b>	
Male	No Data
Female	No Data
English Language Learner	14%
Students From Low-Income Families	85%
<b>Ethnicity</b>	
White	8%
Black	47%
Hispanic	39%
Asian Pacific Islander	3%
American Indian	3%

Evaluators examined the Illinois Standards Achievement Test (ISAT) scores of fifth- and eighth-grade students in public schools in Chicago, Illinois who began using *Study Island* for the first time during the 2006–2007 school year. Evaluators then compared the percentage of fifth- and eighth-grade students in Chicago *Study Island* schools meeting or exceeding standards on the ISAT to all fifth- and eighth-grade students meeting or exceeding standards in Illinois public schools.<sup>1</sup>

Analysis showed that from 2006 to 2007, fifth- and eighth-grade students in first-year *Study Island* schools in Chicago showed greater improvement in meeting or exceeding standards on the ISAT over fifth- and eighth-grade students within the state. As shown in Figure 3, fifth-grade students in Chicago *Study Island* schools made the largest gains in achievement in math, rising 13.2% from 2006 to 2007. This gain was 9.3% higher than fifth-grades students within the state averaged from 2006-2007. Similarly, fifth-grade students in Chicago *Study Island* schools made gains of 6.0% in reading, which was 1.2% higher than the average gain for fifth-grade students within the state. As shown in Figure 4, eighth-grade students in *Study Island* schools in Chicago made gains of 6.9% and 6.8% in math and reading respectively whereas eighth-grade students in Illinois had average gains of only 2.6% and 3.1% in the same subject areas.

<sup>1</sup> Note that the state-wide averages presented here include the ISAT scores from the fifth- and eighth-grade students in Chicago Public Schools as well.

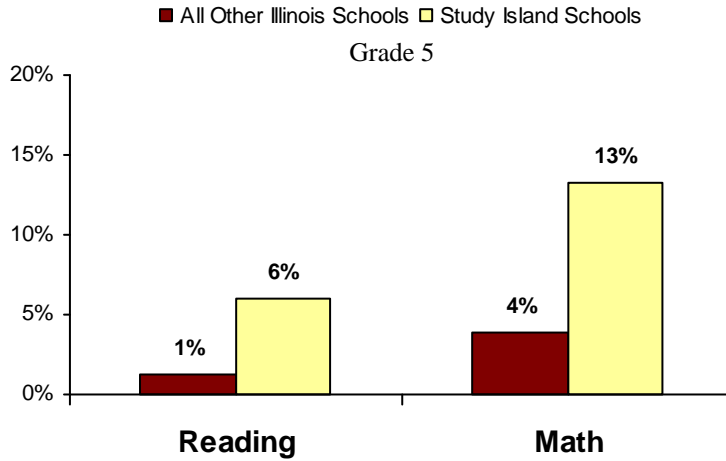


Figure 3. Growth in the percentage of fifth-grade students meeting or exceeding standards from 2006 to 2007. Fifth-grade students in first-year *Study Island* schools in Chicago compared to other students in the state.

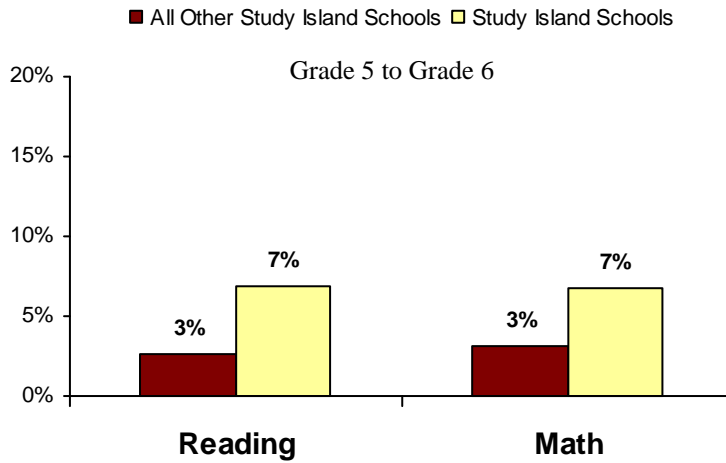


Figure 4. Growth in the percentage of eighth-grade students meeting or exceeding standards from 2006 to 2007. Eighth-grade students in first-year *Study Island* schools in Chicago compared to other students in the state.