United States History

for Middle Grades

An Efficacy Study

Houghton Mifflin Harcourt

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Table of Contents

Abstract

The focus of this study was the effectiveness of United States History©2018, a social studies program for middle grade students, published by Houghton Mifflin Harcourt. The study included students from a single school. The overall demographics of the study sample indicate that the school has twice as many students enrolled in the National School Lunch Programs as the United States average. The percentage of non-Caucasian students was, however, slightly below the United States average.

The study was conducted with 78 students enrolled in grades 7 and 8. Only those students who took both a pretest and posttest were included in the data analysis. The teacher, who had 5 years of teaching experience, was using the program for the first time in the 2017 – 2018 school year. The study took place during the second semester of that school year. The teacher used the program five days per week and 45 minutes per day.

The study was a second semester study and the teacher included modules 6 through 12 with all students as the primary curriculum materials for teaching social studies. A pretest and posttest were developed by social studies/assessment curriculum specialists and were based on program standards and the content of modules 6 through 12. In addition to analyzing the gain scores for the total group of students at each grade, analyses were conducted separately for higher and lower pretest scoring students. Higher and lower scoring students were identified by the students' pretest scores. Those scoring highest on the pretests were designated as the high scoring students and those scoring lowest on the pretests were designated as the lower scoring students.

The average gain scores for the total group of students were statistically significant. The effect sizes were also large. In addition, the average gain scores for the low and high scoring groups were statistically significant, and the effect sizes for the high and low scoring groups were large. *All of the effect sizes exceeded by a large margin the effect sizes needed to determine a substantively important gain.*

Overview of the Study

Houghton Mifflin Harcourt school publishers contracted with the Educational Research Institute of America (ERIA) to conduct a full year study to evaluate the effectiveness of the United States History social studies program for middle grade students. The study compared program assessments administered to students at the beginning of January 2017 to assessments administered at the end of May 2018.

Research Questions

The following research questions guided the design of the study and the data analyses:

- Does the implementation of the *United States History* program increase middle grade students achievement levels to a significant degree?

- Does the implementation of the *United States History* program increase the achievement of middle grade level regardless of the students' achievement levels prior to using the program?

Design of the Study

The design of the program called for the implementation of the United States History program for middle grades students during the 2017–2018 academic year. The school that chose to use the program reported that the program had not been used prior to this time. Since the program was new to the teacher using the program, the study was conducted only during the second semester.

A total of four classes, including both grade 7 and grade 8 students, were included in the study. The teacher reported using the program 5 days a week with an approximate instructional time of 45 minutes per class period. The teacher had five years experience teaching middle grade social studies prior to the study.

Program Overview

The instructional modules included in this study included the following modules:

6. Citizenship and the Constitution
7. Launching the Nation
8. War and Expansion in the Americas
9. A New National Identity
10. The Age of Jackson
11. Westward Expansion
12. Expansion and Conflict

The United States History program for middle-grade students is described by the publisher as follows:

> United States History *is a middle grades program that utilizes-standards-based content and research-based reading instruction to teach* United States History. *It provides the tools to create a richer understanding of America's past and its impact today. Designed to ensure success for all learners*, United States History *integrates the content and skills needed to meet state standards.*

> ### Keeping the Story in History

> > *Houghton Mifflin Harcourt delivers a powerful and personal narrative of a student's curiosity and help them connect their learning to their lives and interests.*

Supporting Inquiry and Active Learning

HMH Social Studies *offers the tools and support necessary to challenge students to approach history through your inquiry.*

Providing Choice and Supporting Learning Needs

HMH Social Studies United States History *presents material and activities in a variety of ways to allow students and teachers to choose the path that works best for them. Differentiated instruction and assessments with built-in feedback provide support for all students.*

Giving the Freedom To Teach Your Way

Designed for flexibility, HMH Social Studies United States History *provides resources in a variety of formats to allow you to easily address content in a manner that best fits students' needs and your instructional style.*

Content Structure

In HMH Social Studies United States History*, the structure of content is shared in digital and print. This enables seamless navigation and content synchronization whether digital, print, or both are used.*

Description of the Assessments

The pretest and posttest used in the study were developed by ERIA curriculum experts. The United States History program begins each unit with an essential question to focus instruction. The essential questions for each module and the program standards for each module constituted the general guidelines for the development of the assessments. In addition, each module includes 2 to 4 **Big Ideas** for each lesson in the modules. These **Big Ideas** provided further focus for the test development.

Table 1 provides the test statistics. The table shows that the reliabilities of the tests provide adequate stability to assess achievement. Of particular importance is the fact that the test reliabilities are higher for the post-tests than for the pretests. This is almost certainly the result of instruction which would result in less random guessing on the post-tests than on the pretests.

Table 1
Pretest and Posttest Statistics for the United States History Students
Middles Grades (7 and 8)

Test	Mean Score	Standard Deviation	KR 20	SEm*
Pretest	260	27.8	.47	20.2
Post-test	340	31.5	.73	16.4

*SEm stands for Standard Error of Measurement.

Description of the Study Sample

Table 2 provides the demographic characteristics of the school included in the study. It is important to note that the school data does not provide a description of the make-up of the classes that participated in the study. However, the data does provide a general description of the schools and, thereby, an estimate of the make-up of the classes included in the study.

Forty-eight percent of students were classified as minority. By comparison, approximately 50% of the students enrolled in U.S. public schools were classified as non-Caucasian.[2]

One hundred percent of students were enrolled in free/reduced lunch programs ranged. By comparison, the reported national average for students enrolled in free/reduced lunch programs in public schools was reported as approximately 48%.[1]

Table 2
Demographic Description of the Middle School Included in the Study

Location	Grades	Enrollment	% Minority	% Free/Reduced Lunch
Suburb-Small	6-8	178	48%	100%

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[1] *The National Center for Educational Statistics* (NCES) reported that for the 2014-2015 school year, 51.8% of public school students were enrolled in free/reduced lunch programs. Also, the NCES reported that for the 2014-2015 school year, 48% of public school students were classified as minority (non-Caucasian) students.

Houghton Mifflin Harcourt—United States History for Middle Grade Students

Data Analyses and Results

Standard scores were used for all data analyses. Raw scores were converted to standard scores with a mean of 300 and a standard deviation of 50. Data analyses and descriptive statistics were computed using students' standard scores.

Paired comparison *t*-tests were computed to determine if differences in pretest and post-test scores were significantly different. The comparisons were conducted for differences between the *United States History January 2017* (pretest) and the *United States History May 2018* (post-test). The ≤.05 level of significance was used as the level at which differences would be considered statistically significant.

In addition, effect sizes (Cohen's *d*) were computed for each of the comparisons. This statistic provides an indication of the strength of the effect of the treatment regardless of the statistical significance. The interpretation of Cohen's *d* statistic reported by the American Institute for Research (AIR) states that "According to guidelines from the *What Works Clearinghouse*, an effect size of .25 or greater is considered to be 'substantively important'." In addition to determining if effect sizes were beyond the level considered to be substantively important, interpretations of effect sizes based on Cohen's *d* statistic were determined. That statistic is interpreted as follows:.20 to .49 = small

.50 to .79 = medium
.80+ = large

All Middle Grade Student Results

Table 3 shows that the average scores of the 78 middle grade students participating in the study increased at a statistical significant level. The effect size was substantively important and was classified as large.

Table 3
All Middle Grade Students
Pretest/Posttest Standard Score Comparisons

	Number Students	*Mean Standard Score*	*SD*	*t*-test	*Significance*	*Effect Size*
Pretests	78	260	27.8	20.804	≤.0001	2.693
Post-tests	78	340	31.5			

Results for High and Low Pretest Scoring Students

The total group of 78 students was divided into two equal sized groups based on their pretest scores. The 39 students scoring lowest on the pretest were considered to be lower achieving students while the 39-scoring highest on the pretest scores were considered to be higher achieving students.
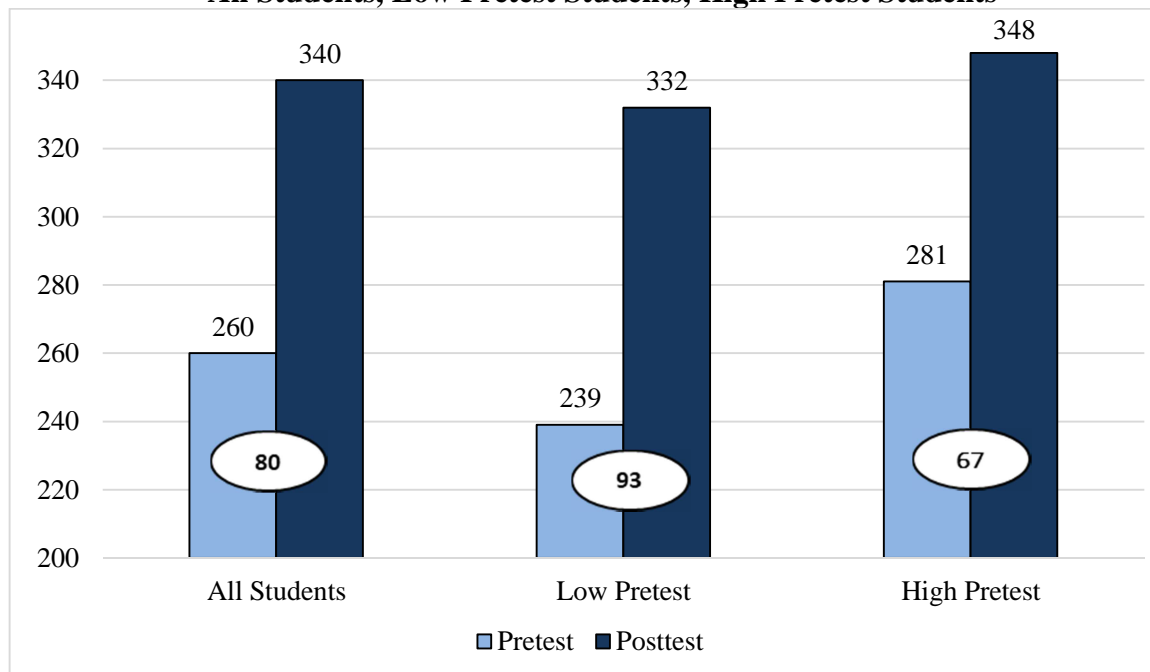
Table 4 shows that both groups made statistically significant gains. The effect sizes for both groups were substantively important and are classified as large.

Page | 7

Table 4
High- and Low-Scoring Pretest Groups
Pretest/Post-test Standard Score Comparisons

Test	Number of Students	Mean Standard Score	SD	t-test	Significance	Effect Size
Lower Scoring Group						
Pretest	39	239	14.5	17.681	≤.0001	3.724
Post-test	39	332	32.2			
Higher Scoring Group						
Pretest	39	281	21.5	13.912	≤.0001	2.619
Post-test	39	348	29.1			

Figure 1 provides a graphic representation of the gains achieved by the middle grade students. In one school year, the total group of students increased their average standard scores by 80 standard score points. The low achieving students increased their average standard scores by 93 points and the high achieving students whose average standard scores increased by 67 points.

Figure 1
Pretest/Posttest Gain Comparison
All Students, Low Pretest Students, High Pretest Students

Conclusions

This study sought to determine the effectiveness of the United States History program by comparing growth on reliable and valid pretests and posttests. The study took place during the second semester of the 2017-2018 academic year. The student population included a larger percentage of students eligible for free-reduced price lunch programs than the national average. The percentage of non-Caucasian student was about the same as the national average.

Two research questions guided the study and the conclusions for each are reported below.

Research Question 1

- Does the implementation of the *United States History* program increase middle grade students achievement levels to a significant degree?

For those students included in the study, achievement growth from pretesting to post-testing was statistically significant. The effect size was above a substantively important level and was classified large.

Research Question 2

- Does the implementation of the *United States History* program increase the achievement of middle grade level regardless of the students' achievement levels prior to using the program?

For those students included in the study, achievement growth for the high achieving and low achieving students were statistically significant. The effect sizes for both the high and low pretest scoring students were above a substantively important level and were large.

On the basis of this study, both research questions can be answered positively:

The United States History program for middle grade students produced statistically significant increases. The effect size for the total group were large.

The United States History program produced statistically significant growth for both higher and lower pretest scoring students and lower pretest scoring students. The effect sizes for both the higher pretest scoring student and the lower pretest scoring students were large.