

**A STUDY OF THE INSTRUCTIONAL EFFECTIVENESS OF  
Civics in Practice:  
Principles of Government and Economics © 2011  
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## ABSTRACT

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To help school students develop better understanding of the principles of government, active civic participation, and responsible economic principles, *Holt McDougal* has published, *Civics in Practice: Principles of Government and Economics* © 2011 for students in grades 7 to 12. The program is designed to help students foster civic responsibility through a balanced course that includes the principles of government, active citizenship, and responsible economic participation. The program supports the Common Core with a variety of authentic and informational reading selections.

To evaluate the program's effectiveness, *Holt McDougal* contracted with the *Educational Research Institute of America* (ERIA) to conduct a year-long study to test the program's effectiveness of the program with students in grades 7 and 8.

A test was designed to assess students' understanding, knowledge, skills and appreciation for civic participation and economic principles. The *Civics in Practice: Principles of Government and Economics* program had not been previously used in the schools by any classes.

The results showed that the students enrolled in classes using *Civics in Practice: Principles of Government and Economics* made statistically significant gains over the course of the academic year-long study. The results also showed that the *Civics in Practice: Principles of Government and Economics* program proved effective with both higher and lower pretest scoring students with both groups showing statistically significant gains. The lower pretest scoring students made large effect size gains and the higher pretest scoring students made medium effect size gains.

## Overview of the Study

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**Holt McDougal** school publishers contracted with the **Educational Research Institute of America (ERIA)** to conduct a year-long efficacy study to determine the impact of the ***Civics in Practice: Principles of Government and Economics*** program.

The program is described by the publisher on the Holt McDougal web site as follows:

*Civics in Practice ensures content mastery by involving students in their learning. The program encourages students to participate while learning their civil liberties and the responsibilities and duties of a citizen, and helps them make sound economic choices. With today's emphasis on Common Core State Standards, it is more important than ever to have a social studies program that meets the rigor these standards demand. Civics in Practice exposes students to a wealth of primary sources and develops critical skills while analyzing a variety of perspectives and investigating key topics. The digital generation of students today is like none before, so another way we help them experience success is to provide the capability to access their Civics in Practice book not only on a computer, but on a variety of mobile devices. From reading support to differentiated instruction, Civics in Practice is filled with a variety of student-friendly features designed to enhance the learning experience. With this support, every student can understand how and why responsible civic participation is important in our country.*

## Research Questions

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

1. Is **Holt McDougal's *Civics in Practice: Principles of Government and Economics*** effective in improving students' civics and economic understanding, knowledge, and application?
2. Is **Holt McDougal's *Civics in Practice: Principles of Government and Economics*** effective in improving students' civics and economic understanding, knowledge, and application of lower performing as well as higher performing grade 7 and 8 students?

## Design of the Study

The program’s efficacy was evaluated using a pretest/posttest design. The study took place during the 2013/2014 academic year with eight different teachers in five schools in two different states. Each of the eight teachers used the program for the full academic year with several classes. The classes included students in grades 7 and 8.

Before the program instruction started, students were administered a comprehensive test designed to cover the content of the *Civics in Practice: Principles of Government and Economics* textbook and other program materials. A similar posttest was used at the end of the study. Both the pretests and post-tests were administered by the teachers. All tests were returned to ERIA for scoring and analyses.

## Timeline and Program Use

The teachers used the *Civics in Practice: Principles of Government and Economics* textbook and other program materials as their primary instructional program. The teachers reported using the program an average of 3 to 4 days per week and for an average of about 40 minutes per day over the entire academic year. Pretests for the year-long study were administered about the middle of September, 2013 and posttests were administered the middle of June, 2014.

## Description of the Research Sample

Table 1 provides the demographic characteristics of the five schools 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 school and, thereby, an estimate of the make-up of the classes included in the study.

**Table 1**  
**Schools Included in the Study: Demographic Characteristics**

School	State	Location	Grades	Enrollment	% Minority	% Free/Reduced Lunch
1	PA	Rural	7-12	375	1%	29%
2	VA	Urban	PK-8	350	88%	72%
3	VA	Rural	6-8	630	26%	45%
4	VA	Urban	7-8	600	90%	76%
5	VA	Rural	8-12	289	22%	37%
AVERAGES				449	45%	52%

## Description of the Assessment

The pretest and posttest used in the study were developed to assess standards-based civics and economics knowledge and skills. Based on these standards a 50 item multiple-choice assessment was developed focusing on the skills, strategies, and knowledge necessary for effective understanding and performance of the civics and economics skills and understanding taught in the *Civics in Practice: Principles of Government and Economics* program.

Table 2 provides the statistical results for the administration of the pretest and the post-test. The KR 20 reliability and the Standard Error of Measurement for the post-test indicates both the pretest score results and the posttest score results were reliable for arriving at decisions regarding the achievement of the students to whom the tests were administered. The lower pre-test reliability indicates the students were guessing more often on the pretest, thus lowering the test reliability.

**Table 2**  
**Pretest and Post-Test Test Statistics**

Test	Reliability*	SEM**
Pretest	.58	3.16
Post-test	.78	3.16

\*Reliability computed using the Kuder-Richardson 20 formula.

\*\* SEM is the Standard Error of Measurement.

## Data Analyses

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Standard scores were developed in order to provide a more normal distribution of scores. The standard scores were a linear transformation of the raw scores. A mean raw score was translated to a mean standard score of 300 and the standard deviation of the raw scores was translated to 50. Standard scores were then used for the statistical analyses.

Data analyses and descriptive statistics were computed for the standard scores from the *Civics in Practice: Principles of Government and Economics* assessments. The  $\leq .05$  level of significance was used as the level at which increases would be considered statistically significant for all of the statistical tests.

The following statistical analyses were conducted to compare students' pretest scores to posttest scores:

- A paired comparison *t*-test was used to compare the pretest mean standard scores with the posttest mean standard scores for all students.
- The students were split into two groups based on pretest scores. Paired comparison *t*-tests were used with the group that scored higher and the group that scored lower on the pretest to determine if the program was equally effective with students who had lower and higher pretest scores.

Descriptive statistics were also used to compare pretest and post-test standard test scores for the total group as well as the higher and lower pretest score groups.

An effect-size analysis was computed for each of the paired *t*-tests. Cohen's *d* statistic was used to determine the effect size. This statistic provides an indication of the strength of the effect of the treatment regardless of the statistical significance. Cohen's *d* statistic is interpreted as follows:

- .2 = small effect
- .5 = medium effect
- .8 = large effect

## Data Results and Analyses

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### Total Group Analysis

Researchers at ERIA conducted a paired comparison *t*-test to determine if the difference from pretest standard scores to posttest standard scores was statistically significant. For this analysis, researchers were able to match the pretest and posttest scores for 324 students. Students who did not take both the pretest and the posttest were not included.

Table 3 shows that the average standard score on the pretest was 281, and the average standard score on the posttest was 319. The increase was statistically significant ( $\leq .0001$ ). The effect size was large.

**Table 3**  
**Paired Comparison *t*-test Results**  
**Pretest/Posttest Comparison of Standards Scores**

<i>Test</i>	<i>Number Students</i>	<i>Mean Standard Score</i>	<i>SD</i>	<i>t-test</i>	<i>Significance</i>	<i>Effect Size</i>
Pretest	324	281	41.2	16.481	$\leq .0001$	.82
Posttest	324	319	50.8			

### Higher and Lower Scoring Students

An additional analysis was conducted to determine if students who scored lower on the pretest made gains as great as those students who scored higher on the pretest. For this analysis students were ranked in order on the basis of their pretest standard scores. The group of 240 students was divided into two equal sized groups of 162 students. The first group included those students who scored lower on the pretest with a mean of 249 with scores ranging from 159 to 274. The higher scoring group scored an average standard score on the pretest of 313 with scores ranging from 274 to 464.

Pretest-to-posttest comparisons are shown in Table 4 for the lower and higher pretest scoring students. Scores were analyzed using a paired comparison *t*-test to determine if both groups made significant gains.

For both the higher and the lower scoring group, the average scores increased statistically significantly, ( $\leq .0001$ ). The effect size for the lower group was large. For the higher pretest scoring group the effect size was medium. The lower pretest group increased 46 standard score points and the higher pretest scoring group increased 30 standard score points.

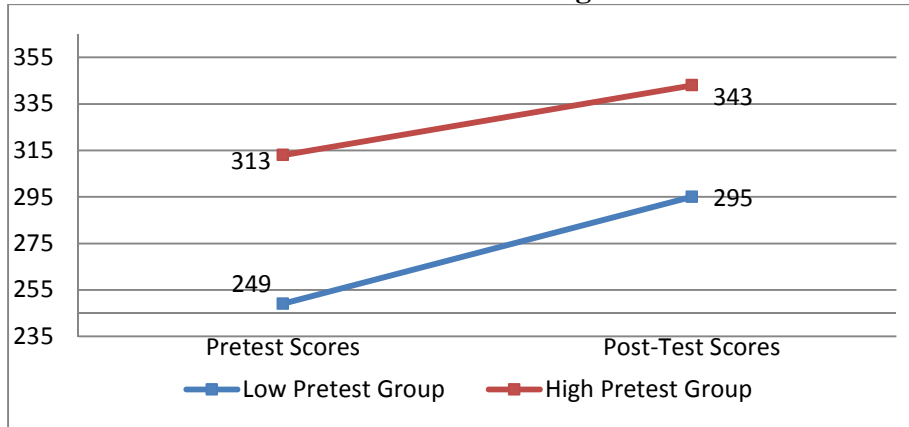


**Table 4**  
**Paired Comparison *t*-test Results for Pretest/Posttest Standard Scores**  
**for the High- and Low-Scoring Pretest Groups**

<i>Test Form</i>	<i>Number Students</i>	<i>Standard Score</i>	<i>SD</i>	<i>t-test</i>	<i>Significance</i>	<i>Effect Size</i>
<b>Lower Scoring Group</b>						
Pretest	162	249	20.7	14.204	≤.0001	1.49
Posttest	162	295	38.5			
<b>Higher Scoring Group</b>						
Pretest	162	313	29.5	9.463	≤.0001	.73
Posttest	162	343	50.2			

Figure 1 provides a pretest-to-posttest comparison of the standard scores of lower and higher scoring pretest students. The lower scoring pretest group increased their scores slightly more than the higher scoring pretest group closing the difference gap from a 64 standard score difference at pretesting to a 48 standard score point difference at post-testing. It should also be emphasized that both groups made statistically significant growth over the full-year study.

**Figure 1**  
**Standard Score Increases for Lower and Higher Pretest Score Students**



## Conclusions

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This study sought to determine the effectiveness of *Civics in Practice: Principles of Government and Economics* © 2011, a 7 to 12 program published by Holt McDougal. The study was carried out with classes at grades 7 and 8. The teachers were using the program for the first time and received no special instruction in using the program.

Two research questions guided the study:

1. Is *Holt McDougal's Civics in Practice: Principles of Government and Economics* effective in improving students' civics and economic understanding, knowledge, and application?
2. Is *Holt McDougal's Civics in Practice: Principles of Government and Economics* effective in improving students' civics and economic understanding, knowledge, and application of lower performing as well as higher performing grade 7 and 8 students?

**Question 1:** Is *Holt McDougal's Civics in Practice: Principles of Government and Economics* effective in improving students' civics and economic understanding, knowledge, and application?

A test designed to assess the civics and economics skills and knowledge was developed to assess students at the beginning and end of the academic year. Statistical analyses of students' scores showed that the students increased their scores statistically significantly. The effect size was large.

**Question 2:** Is *Holt McDougal's Civics in Practice: Principles of Government and Economics* effective in improving students' civics and economic understanding, knowledge, and application of lower performing as well as higher performing grade 7 and 8 students?

Statistical analyses of higher and lower pretest scoring students' scores showed that for both the lower and higher pretest scoring students the increase was statistically significant. For both the lowest pretest scoring students the effect size was large and the higher pretest scoring students the effect size was medium.

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

- *The Holt McDougal's Civics in Practice: Principles of Government and Economics textbook program is effective in improving the civics and economics skills and knowledge of grade 7 and 8 students.*
- *The Holt McDougal's Civics in Practice: Principles of Government and Economics textbook program is effective in improving the Civics and Economics skills and knowledge of lower performing as well as higher performing grade 7 and 8 students.*