

An Evaluation of Two Methods for Teaching United States History to Students With Learning Disabilities

Abstract: We compared two approaches to teaching United States history to students with learning disabilities (LD). We randomly assigned students in seventh through ninth grades ($n = 44$) to separate treatment groups (strategy-based instruction or traditional instruction). In both approaches, students were taught identical content on two units of the Civil War. Teachers conducted 50-minute lessons each day for 4 weeks. We compared the groups' scores on (a) two unit tests measuring vocabulary and factual recall, (b) two thematic measures, (c) a relevant portion of the *National Assessment of Educational Progress (NAEP)*, and (d) a student attitude-satisfaction scale. Results showed students who received the strategy-based instruction had significantly better scores on all dependent measures except for the student attitude measure.

Textbooks dominate the elementary, middle, and secondary school curriculum as the major instructional tool in content-area classes such as science and social studies. According to Okolo, Ferretti, and MacArthur (2007) and Harniss, Hollenbeck, Crawford, and Carnine (1994), 75% to 90% of classroom instruction is organized around textbooks. However, many students, particularly those with learning dis-

abilities (LD), have difficulty comprehending concepts presented in textbooks.

An emerging base of research on instructional content-area texts suggests that many textbooks and related instructional methods currently used in content-area classes actually contribute to increasing confusion and little retention of material. Texts have come under a great deal of scrutiny and criticism because of their inconsiderate language and focus on factual orientation (Okolo et al., 2007). Textbooks are often organized in such a way that the task of reading and understanding them is made unduly difficult, particularly for the student with low reading skills, including those with LD (Ciborowski, 1992). Further, the large volume of content material presented in textbooks is often so great that it ends up being abbreviated almost to the point of becoming incomprehensible (Okolo et al., 2007).

Kinder and Bursuck (1993) analyzed students' learning through history texts. They found that, although the students were able to decode the textbook, they were unable to gain or retain the information they needed to succeed on the tests. The authors maintained that it is common for students to have difficulty with informational texts and asserted that "the challenge for students with disabilities to gain information from content-area texts has been compared to maneuvering through a camouflaged minefield without a map" (Kinder & Bursuck, 1993, p. 332).

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Other researchers have found that students with LD have difficulty comprehending many critical concepts when taught from traditional textbook materials. For example, Woodward (1989) found that students who received 6 weeks of instruction in a conventional textbook showed a significant decline in retention of basic facts. Conversely, no such decline occurred for a group who received instruction that focused on teaching students key principles and core concepts explicitly. Woodward speculated that traditional materials are often poorly designed for students with disabilities and may not provide explicit instruction in the key concepts needed for students who struggle with comprehension and retention.

Another example of this emerging research base is a study reported by McKeown and Beck (1990), which assessed elementary students' knowledge of history. In-depth interviews were conducted on the prior knowledge of fifth-grade students just before they studied the Revolutionary War, and these findings were compared to that of the sixth-grade students who had used the same text and had the same teacher the year before. The authors found that the knowledge of fifth- and sixth-grade students both before and after instruction was characterized by basic, simple associations and a lack of connected structures. In fact, more interaction with the kinds of texts under consideration actually increased student confusion. When asked questions that were worded to elicit general information, both groups of students were unable to provide such information. Instead, the questions triggered narrow associations. For example, when students were asked, "Do you know what the 13 colonies were? What can you tell me about them?" (McKeown & Beck, 1990, p. 710), they began reciting names of the colonies and provided no analysis of the information. The authors stressed that students should be taught strategies to combine pieces of relevant information and draw relationships among them. Their findings support the notion that textbooks as they now are written

are not effective with students with LD. Kinder and Bursuck (1993) argued that even "good students may come to view their task as one of learning many details with little or no understanding of higher-level structure and conceptual networks; less able students may come to view their task as simply impossible" (McKeown & Beck, 1990, p. 271).

Concern about using textbooks in content-area classes has intensified as educational and curriculum-reform issues have become critical (Harniss, Caros, & Gersten, 2007). Little information is available concerning the appropriateness of the science and social studies instruction that students with learning disabilities are receiving in general education settings. There is evidence, however, that students with disabilities often do not perform adequately in these important subject areas.

According to Harniss et al. (1994), social studies textbooks seem to be among the most laborious reading material students face. Readability assessments of content-area texts showed that over half of upper-elementary students were at their frustration reading level in their textbooks. At the high school level, readability tests showed that 92% of the students tested were at their frustration reading level in their assigned texts. Mainstreamed students with LD have additional difficulties using textbooks. Many lack the basic skills needed and are not able to perform the tasks required to draw out the information from texts.

Because of the discrepancy between the performance levels of students with learning disabilities and the curriculum demands in content-area classes, educating students in the mainstream is particularly difficult. Not only are the characteristics of expository materials more difficult to read, but students are expected to extract, integrate, and retain significant details presented in the material and to learn many specialized vocabulary terms (Deshler & Schumaker, 1993). These

are expectations seldom demanded in narrative reading (Carnine, Silbert, Kame'enui, & Tarver, 2004). These tasks may be extremely difficult for low-achieving students if they do not receive additional assistance from their content teachers. As Harniss et al. (1994) indicated, most content-area teachers spend an insignificant amount of time teaching students how to get information from their textbooks and how to identify and comprehend important information. It is not enough to place students with LD in general classroom settings without providing appropriate training, materials, and support to them and to their teachers. Wagner (1990) noted, "Encouraging greater instruction of students with disabilities in regular education classes, without serious attention to the instruction that goes on in these classes, would seem simply to encourage greater rates of academic failure" (p. 28).

Research suggests that content teachers can lessen the discrepancy between student performance and curriculum demands by providing instruction that actively involves all students and strengthens their understanding of the key points in a lesson (Darch, 1989; Deshler & Schumaker, 1993; Hudson, Lignugaris-Kraft, & Miller, 1993). Observational studies conducted by Armbruster, Anderson, and Meyer (1991) indicated, however, that very little direct instruction of strategies for comprehending textbook material actually occurs in content-area classes. Reading, studying, and thinking skills were primarily taught through practice or application of skills that students had presumably already acquired. According to the content-area experts, this situation may exist for various reasons. One possible reason is that teachers assume that students come to content-area classes already knowing how to study and read with comprehension. Also, teachers are often inadequately trained in providing instruction in reading and studying (Armbruster et al., 1991). As will be discussed in later sections, the assumption that students

come to content-area classes with the ability to read and comprehend text is flawed.

Because almost all students with LD have specific academic problems such as those previously mentioned, well-developed instructional programs must be implemented to meet their needs. Bursuck and Epstein (1987) found that remediation of academic problems was one of the primary concerns and highest-ranked priorities of current research in the field of LD. If we are to meet the goals set forth in the educational reform movements, improvements must be made in content-area curricula in order to provide effective instruction to students with LD.

The purpose of this study was to determine which of two significantly different approaches to teaching U.S. history was more effective in improving the ability of students with LD to recall critical information from textbook material and to understand higher-order concepts. One approach focused on teaching specific strategies for learning U.S. history. The other approach was based on the teaching methods traditionally used in content-area classrooms and used a text-and-discussion approach to teaching history.

Method

Subjects

The 44 subjects for this study were seventh-, eighth-, and ninth-grade students with LD attending two schools in central Alabama. The subjects were identified as having a learning disability by each school's multidisciplinary eligibility team in accordance with the state of Alabama guidelines. As such, these students also met the criteria for the federal definition of LD. Of the 44 students, 31 (70%) were African-American and 13 (30%) were Caucasian.

Students were randomly assigned to one of two treatment groups. Treatment groups con-

sisted of 6 to 13 members, and each group contained a mixture of students in seventh, eighth, and ninth grades. Initially, 50 students were selected for this study. Students with unreasonable numbers of absences (more than 50% of class sessions) were excluded from the study. Six students, three from each group, exceeded the absenteeism criterion and were not included in the final sample. The result was a total of 44 students for this study, 22 for each treatment group. Finally, to control for possible school effects, each school was assigned groups for both the problem–solution–effect strategy-based approach and traditional textbook-only approaches.

Procedures

To increase the external validity of this study, two graduate students who were enrolled in a master's program in special education, as well as the senior author, served as the experimental teachers. Each of the teachers had experience teaching students with LD in both regular and special education classrooms. To control for possible teacher bias and differences in teaching experience, teachers were randomly assigned one group of students for each treatment condition.

Each experimental teacher instructed two groups, one from each treatment (i.e., the strategy-based approach and traditional textbook-based approach). All three teachers taught at two different schools. To control for order effects, one teacher taught the strategy-based group first, while others taught the traditional textbook approach first. The teaching assignments and sequence of teaching each of the instructional groups was determined by random assignment.

Control for Possible Intervening Variables

The amount of instructional time was held constant for all treatment groups. Groups were taught Monday through Friday for 4 consecutive weeks and, based on typical junior high

school class periods, each instructional session lasted 50 minutes. Each experimental teacher taught at least one group from each treatment type, and the order in which the groups were taught was randomly assigned.

Efforts were also made to control for possible teacher effects. First, experimental teachers were required to participate in five, 60-minute training sessions for each instructional method. Each method was modeled by the senior author and teachers were given time to practice and receive feedback. Teachers were instructed how to implement lessons, use specific correction procedures, and guide discussion and supplemental learning activities.

We examined each student's special education file and recorded ability and achievement levels. Table 1 shows the means and standard deviations for their full-scale intelligence quotients on the *Weschler Intelligence Scale for Children—Third Edition* (WISC-III; Weschler, 1991) and their scores on the reading portion of the *Kaufman Test of Educational Achievement* (KTEA; Kaufman & Kaufman, 1992). Analysis of these scores revealed no significant differences between treatment groups on WISC-III or KTEA ($p > .05$).

Table 1
*IQ and Reading Achievement Scores
of Research Sample*

Group	Full Scale IQ		Reading Comprehension	
	Mean	SD	Mean	SD
Strategy-based	88.59	8.61	79.86	12.70
Traditional	88.19	9.99	80.09	12.14

Instructional Materials

The instructional materials used for the two treatment groups included chapters on the Civil War from commercially published U.S. history textbooks, both of which are commonly used in schools around the country. The group taught using the strategy-based approach (problem–solution–effect) used the text *Understanding U.S. History* (Carnine, Crawford, Harniss, & Hollenbeck, 1995). The group taught using the traditional text-based approach used a composite of two textbooks and included activities from *The Story of America: Beginnings to 1877* (Garrity, 1992) and *History of the United States* (Dibacco, Mason, & Appy, 1995). The rationale for drawing content from two traditional textbooks was that those were the two texts that were used for the academic year. The Fry readability formula (Fry, 1978) was used to determine readability levels at the beginning, middle, and end of each text. Both texts had an approximate readability level of 8.0. Tables 2 and 3 provide an example of a lesson from each of the two treatments.

Strategy-based approach. Teachers followed the textbook entitled *Understanding U.S. History Volume 1—Through the Civil War* (Carnine et al., 1995) for the strategy-based approach. This text is an example of a conceptually organized curriculum. The textbook used several historical concepts as a framework for making meaningful connections among historical facts. For example, the strategy-based text structure is used throughout because it provides a useful framework for making meaningful connections among historical facts. Each lesson consisted of several activities that were semi-scripted for each experimental teacher. Opening activities for daily lessons typically reviewed previously learned test questions and other important information. These instructional activities varied between discussion, structured practice, and independent activities.

Next, the material from each chapter was read aloud in round-robin fashion. As Carnine et al. (1995) suggested, reading aloud from the text allows lower-ability readers to benefit from the text while helping all students to focus on

Table 2

Traditional Approach

Day 1

Opening Activities:

T: For the next 4 weeks, I will be teaching you U.S. history. During these 4 weeks we will cover the causes of the Civil War. You will be graded on daily written activities as well as participation in discussions. You will have two unit tests. I have three rules that I will ask you to follow: participate in all class discussions, follow along when we read the textbook material, and do your best work.

Focus/Motivation: Ask students if there is often more than just one reason for an argument or fight. (Yes.) Call on students for examples. Ask: How do little disagreements sometimes lead to a big fight? (*Little disagreements build up over time, eventually erupting into a major fight.*) Tell students to keep this in mind as they read this chapter.

table continued on next page

Table 2, continued

Traditional Approach

- T: In this chapter you will see that the growing feeling of sectionalism and division between the North and the South intensified in the decade before the Civil War.

What do I mean by sectionalism? (Write “sectionalism” on board. Call on students for ideas.)

Write this in your notebook: Sectionalism is when people from one section of the country promote the interests of their section and ignore the needs of people from other sections of the country.

- T: The differences between the North and the South finally came to a head with the election of Abraham Lincoln in 1860. Southern states immediately moved toward secession.

(Read the introductory paragraph aloud. Lecture about the Compromise of 1850.)

- T: This is something important to remember. Take notes on this in your notebook.

New territories were being developed, including California. Northerners hoped to keep slavery out of all of the new territory. Southerners wanted to be able to take their slaves into the new territory. The Compromise of 1850 was a plan that drew a line across the Louisiana Purchase, south of which slavery would be allowed. It appeared to finally put an end to the conflict between the free and slave states. Henry Clay was the author of the Compromise of 1850.

(Read Section 1, pp. 510-512. Stop at “A Novel About Slavery.” Call on students to read short passages. Award points for participation.)

- T: Why did many Northerners support runaway slaves? (Call on students for ideas)

Many Northerners were impressed by the way the former slaves risked their lives to gain freedom. They were outraged to see these former slaves dragged off without being able to defend themselves.

Why did many Northerners object to the Fugitive Slave Law? (Call on students for ideas)

Because it stated that they had to capture runaway slaves when ordered to do so by law enforcement officers; they considered this a violation of their rights.

Activity: You are a Northerner living in Massachusetts in 1852 and opposed to the Fugitive Slave Law. Compose the handbill you would pass out at a town meeting to persuade members of your community to protest the law. (Use back of Section 1 Directed Reading worksheet for guide; pass out to students and read directions. When students are finished, have them share their flyers with the class.)

(Read “Charley Skedaddle” aloud for the last 10 minutes of class.)

Table 3
Strategy-based Approach

Day 1

Opening Activities:

T: For the next 4 weeks, I will be teaching you U.S. history. During these 4 weeks we will cover the causes of the Civil War and the Civil War. You will be graded on daily written activities as well as participation in discussions. You will have two unit tests. I have three rules that I will ask you to follow: participate in all class discussions, follow along when we read the textbook material, and do your best work.

Chapter 1: Oral reading, p. 1-4

T: I will be marking daily points as we are reading and answering interspersed questions. Daily points are part of your grade in U.S. History.

(Call on student to read. Start reading at the top of page 1. Be sure to read all headings and titles.)

S: (Reads from text.)

(If student makes a reading error, tell the student the word and have him/her reread the sentence.)

T: Stop. Good reading. One point.

(Tell student that he gets a plus tally mark to show that he successfully participated. Every time a point is given, inform the student. Students must be aware of when points are awarded and why.)

Interspersed Questions:

T: (Call on student.) I want you to read question 1 and tell me the answer.

S: (Reads and answers question.)

T: Great. You got a point.

(Choose two other students to read and answer the same question. This ensures that everyone in the class is attending and prepared to answer the question. Pace quickly!)

Discussion Question:

T: I'll read the discussion question on page 1. Are you as a student accumulating wealth, or do you have an economic problem?

(Call on several students and discuss answers. Continue calling on students to read on page 1 & 2. Award points.)

table continued on next page

main or key ideas. Interspersed questions were answered during round-robin reading. These questions served to help students focus on the important factual information from a paragraph. Discussion questions were also included to allow for integration of critical information with current or historical events. Students were asked to state opinions, and these answers were not judged as right or wrong.

Review questions were included within the chapters; the questions highlighted critical information and provided the basic background information students needed to answer the higher-order questions at the end of the section and the end of the chapter. Because the information assessed in the test questions was so important, it was tested and reviewed

at several points throughout the chapters. In the text, each test question included a basic and an exemplary answer. These answers highlighted the information the students needed to be able to answer the question in their own words later. At the end of each chapter, practice test questions were a cumulative review of test questions from the chapter.

Graphic organizers were also included as prompts for oral presentation. Graphic organizers contained all the test questions from the entire chapter organized in a logical framework. Students were expected to integrate, explain, and describe the critical information from the chapter. Because this was a complex task and one that focused on the most important information from the chapter, teachers spent time ensuring

Table 3, continued
Strategy-based Approach

Discussion Question:

- T: I'll read the two discussion questions on page 2. For these discussion questions, I want you to tell your neighbor the answer. The person whose name comes first in the alphabet is the "teller." The other person is the "scribe." The scribe writes down the answer in your notebook. Then change roles for the second question. Put both names next to the answer. Take 3 minutes to do this.

(At the end of 3 minutes, stop the class and talk about the students' answers.)

- T: (Read correct answer.) How many groups had an answer similar to mine? Scribes, raise your hand. (Pause) Great. Give your group a point. Put + 1 next to your answer.

Does any group have a different answer? (Discuss. Emphasis is not on right or wrong, but on being able to support their conclusion.)

After class I will look at your notebooks and award a point to those answers that matched mine or to those that we talked about in class. Let's continue reading.

(Continue reading pp. 2-4 and answering interspersed questions. For remaining discussion questions, call on students to answer in groups as time allows. Stop reading at "The Development of People's Rights in the U.S.")

that students were prepared to present orally the information from the graphic organizer.

Traditional textbook approach. The other treatment condition in this study was a traditional approach based on a composite of commonly used history texts, including *The Story of America: Beginnings to 1877* (Garritty, 1992) and *History of the United States* (Dibacco et al., 1995). This approach used instructional methods typically found in popular U.S. history series and currently found in many schools across the country. In the content area of social studies, most lessons are taught through textbook reading, teacher-led discussion, lectures, written assignments, and recitation of facts (Harniss et al., 1994).

Comparison of the Two Treatment Conditions

Although all students were taught the same content (e.g., causes of the Civil War), the two instructional conditions were highly dissimilar in key areas. The curriculum of the strategy-based approach focused on instructional components that effectively teach understanding. In contrast, the curriculum in the traditional, text-based approach was student-oriented. Moreover, instructional components of the lessons in the strategy-based approach were well

defined and structured. The traditional text-based approach had less defined instructional format. Table 4 provides the reader with an overview of the major differences between the two experimental conditions.

Dependent Measures

Because of the complexity of the skills being measured, we used multiple measures to evaluate differences between instructional groups' outcomes. We collected data on four dependent variables used in this study. Three of these measures focused on learning of history content; they included (a) two unit tests of factual information and vocabulary, (b) thematic tests designed to measure conceptual understanding, and (c) a portion of the NAEP United States History exam. In addition, we assessed students' satisfaction with their instruction. Each of these measures is described in the following paragraphs.

Unit tests. Unit tests developed by the experimenter consisted of questions assessing students' ability to recall critical information provided by the text and related activities. Questions for the unit tests were derived from previously taught lessons. Each of the two unit tests contained questions dealing with factual information and vocabulary items. The factual

Table 4

A Comparison of the Major Components of the Strategy-based Approach and the Text-based Approach

Component	Strategy-based	Text-based
Teacher's role	Director	Facilitator
Instructional Climate	Intensive	Relaxed
Instructional Focus	Teacher Directed	Student Directed
Emphasis	Strategies and Rules	Motivation
Corrections	Teacher Directed	Student Directed
Amount of Practice	Specified	Variable

information questions required short answers, while on the vocabulary section students were given a definition and asked to supply the vocabulary term. Unit Test 2 is provided in Table 5.

As a part of each unit test, students answered questions requiring thematic responses. The thematic responses were intended to provide an additional measure of students' comprehension of concepts in U.S. history.

NAEP test. In order to increase external validity, the NAEP history test was used to meas-

ure recall of factual information in U.S. history. The NAEP items are objective, multiple-choice U.S. history items drawn up by teams of history experts and constructed by NAEP's measurement experts. Some of these items have also been used in previous tests with eighth-grade students. For this study, 15 items dealing with the information covered during the intervention were selected. A sample of five items appears in Table 6.

Student satisfaction. This study included a measure of students' satisfaction with the instruction

Table 5
Unit Test Two

Part A: Vocabulary [Answer on a separate sheet]

Write the vocabulary word or words for each lettered definition:

- (a) To give freedom. (emancipate)
- (b) A runaway slave during the Civil War. (contraband)
- (c) A war that is fought between people from the same country. (civil war)
- (d) Destroying everything of military economic value in its path. (total war)
- (e) When warships prevent merchant ships from entering or leaving a seaport. (blockade)

Part B: People

Write the correct name for each lettered definition:

- (a) Commander of the Union forces in the West; made commander of the entire Union Army in 1863. (Ulysses S. Grant)
- (b) Waged total war on the South; March to the Sea. (General Sherman)
- (c) President of the Confederate States of America. (Jefferson Davis)
- (d) Commander of the main Confederate Army of Virginia. (Robert E. Lee)
- (e) President of the United States during the Civil War. (Abraham Lincoln)

Part C: Thematic Questions

- (a) Why was the Confederate draft unpopular in the South?
- (b) What were Lincoln's terms of surrender for Lee's Confederate Army?
- (c) What killed most of the people during the Civil War?

they received, using a three-point Likert scale. Students responded to 10 statements by choosing one of the following: agree, undecided, or disagree (Rabren, Darch, & Eaves, 1999).

Fidelity of Treatment

To ensure fidelity of treatment for both groups, teachers received extensive training using the intervention materials and used scripted lesson plans during intervention, and observations were conducted throughout the intervention. First experimental teachers were required to participate in five, 60-minute training sessions for each instructional method. Teachers were instructed how to implement lessons, use specific corrections, and conduct discussions. Daily lessons for each treatment group were semi-scripted, and teachers followed these scripts to be certain that each instructional method was accurately implemented. To ensure fidelity of treatment, teachers were visited eight times (twice weekly). Observers used a form to note teacher implementation of the lessons. Observers were doctoral students in the special education program at Auburn University. There was 98% agreement between observers on the form, suggesting the two instructional methods were appropriately administered.

Results

In this section we present descriptive statistics on the performance of both groups, as well as the results of the data analysis. Subjects were assessed using (a) unit tests, (b) thematic responses, and (c) a modified version of the NAEP history test. We also asked them about their satisfaction with the instruction provided in the condition they experienced. Separate analysis of variance (ANOVA) procedures were conducted for each of these measures.

The means, standard deviations, effect sizes, and percentages correct for each of the dependent measures are presented in Table 7. Separate ANOVA procedures were conducted

for the unit tests, NAEP test, and Student Attitude/Satisfaction Scale. An alpha of .05 level was used for all analyses. The results of the ANOVAs can be found in Table 8.

Statistically significant differences between the two treatment groups were found for all three dependent variables of both unit tests (i.e., total score, vocabulary responses score, and thematic responses score). In each case, the mean score for students who received strategy-based instruction exceeded the mean for the students receiving the traditional instruction. The median effect size (Cohen's *d*; Cohen, 1988) was 2.69 (range = 1.31 to 3.06). A statistically significant difference was found in favor of the strategy-based instruction group over the traditional instruction group on the NAEP History Test. Cohen's *d* was 1.16.

No statistically significant difference was found between the two groups on the Student Attitude/Satisfaction Scale. There were no significant differences on the questions $F(1, 42) = .003, p > .05$.

Discussion

The question in this study was whether adjustments in the design of instructional materials and teaching methods would result in more successful learning of U.S. history by students who have learning disabilities. The results show that the answer is a clear "yes." Results indicated that there were significant differences between the two treatment groups when compared on each of the unit tests. The students who were taught using the strategy-based approach and the conceptually organized text significantly outperformed students taught using the traditional text on both the vocabulary and thematic measures. The students in the group receiving the strategy-based approach also outperformed the traditional-text students on the NAEP test. These results are consistent with the findings of De La Paz, Morales, and Winston (2007),

Table 6

Modified NAEP History Test (5 of 15 Items)

1. The Emancipation Proclamation issued by Lincoln stated that:
 - (a) Slaves were free in areas of the Confederate states not held by the Union.
 - (b) Slavery was abolished in the Union.
 - (c) The slave trade was illegal.
 - (d) Slaves who fled to Canada would be protected.

2. "Secession" refers to the:
 - (a) Surrender of General Lee to General Grant at Appomattox.
 - (b) Support of Lincoln's stand on slavery.
 - (c) Installation of a newly elected president.
 - (d) Withdrawal of the Southern states from the Union.

3. Harriet Tubman was:
 - (a) A famous nurse during the Civil War.
 - (b) A leader in helping slaves escape to the North.
 - (c) The maker of the first American flag.
 - (d) The first woman to fly across the Atlantic.

4. "Four score and seven years ago, our fathers brought forth on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal."
The quotation above is contained in the:
 - (a) Declaration of Independence.
 - (b) Preamble to the Constitution.
 - (c) First Amendment to the Constitution.
 - (d) Gettysburg Address.

5. Which of the following statements about John Brown is true?
 - (a) He held a high military rank in the Civil War.
 - (b) He fought in the battle of Gettysburg.
 - (c) He led an unsuccessful revolt against slavery.
 - (d) He served in the Confederate army.

who demonstrated the success of using specific teaching strategies (graphic organizer that summarized historical reasoning skills) with students with learning difficulties.

Unit Tests

Analyses indicate significant differences on both the vocabulary measure and the thematic measure on each of the two unit tests. On unit

test one, the students who were taught the strategy-based method significantly outperformed students taught using the traditional text; those who received the strategy-based instruction answered 60% of the vocabulary questions correctly, but those who received the traditional instruction scored at the 8% correct level. On the thematic measure, both groups performed poorly. The students received

Table 7
*Means and Standard Deviations in the Two Treatment Groups
(n = 22) on the Dependent Measures*

Dependent Measure	Score	Group	Mean	SD	Cohen's <i>d</i>	Percentage Correct
Unit Test One	Vocabulary score ^a	Strategy	9.00	4.14	2.46	60
		Traditional	1.22	1.68		8
	Thematic measure ^b	Strategy	1.45	1.56	1.31	24
		Traditional	0.00	0.00		0
	Total Score	Strategy	10.45	5.21	2.38	50
		Traditional	1.22	1.68		6
Unit Test Two	Vocabulary score ^a	Strategy	12.40	3.20	2.92	83
		Traditional	3.22	3.08		21
	Thematic measure ^b	Strategy	3.31	1.18	3.06	55
		Traditional	.45	.59		8
	Total Score	Strategy	15.72	4.69	2.92	75
		Traditional	3.68	3.45		18
NAEP History Test ^c		Strategy	10.36	2.71	1.16	69
		Traditional	7.09	2.91		
Student Attitude	Total Score	Strategy	15.13	3.16	0.01	75
Satisfaction Scale		Traditional	15.09	2.61		75

^a Maximum vocabulary score was 15; ^b Maximum thematic measure score was 6; ^c Maximum NAEP History Test score was 15; Maximum Student Attitude/Satisfaction Scale score was 20.

ing the strategy-based instruction performed at the 24% correct level, but the traditional group performed even more poorly at 0% correct. While students in neither group developed mastery of the content in the 4-week instructional program, students in the strategy group began to understand the connections and organization of the content. Had the intervention been of longer duration, students in the strategy group may have approached mastery levels of learning.

On unit test two, the strategy-based group again outperformed the traditional group on both the vocabulary and thematic measures. On the vocabulary measure, the strategy-based group performed at the 83% level, while the traditional group scored at the 21% level. On the thematic measure, the strategy-based group improved to 55% correct, while the traditional group scored at the 8% correct level.

These results are encouraging given the highly robust median effect size of 2.69 (range 1.31-3.06). These values considerably exceed Cohen's criterion of .8 as a large effect size. All six comparisons attained both statistical and practical significance. The relative success of the subjects in the strategy-based group seems

to validate the idea that if instructional sequences are carefully designed, and careful attention is given to teaching students to use appropriate strategies, then students with learning disabilities can understand and apply critical concepts in U.S. history classes more efficiently than students who are taught with traditional methods typically found in many commercial U.S. history texts.

NAEP Test

One important factor that sets this study apart from others was that a practically significant difference (Cohen's $d = 1.16$) in group performance was found using a nationally recognized test that contained content deemed relevant by experts in the field of U.S. history. Following the lead of Crawford and Carnine (1996), these items were selected for their external validity, since they clearly did not favor either curriculum. In their study Crawford and Carnine did not find significant differences. In contrast, in this study the group receiving the strategy-based instruction significantly outperformed the group taught using the traditional approach (69% vs. 47%). While the scores of students in both groups were relatively low, the cause may be related

Table 8
ANOVA Results

Source	F-Value	Probability
Unit Test One Vocabulary Score	66.47	.0001
Unit Test One Thematic Score	18.59	.0001
Unit Test One Total Score	62.30	.0001
Unit Test Two Vocabulary Score	93.81	.0001
Unit Test Two Thematic Score	49.70	.0001
Unit Test Two Total Score	93.99	.0001
NAEP History Test Score	14.86	.0004
Student Attitude/Satisfaction Score	0.00	.95

to the length of the intervention or the subject population. As opposed to this 4-week intervention with students with learning disabilities, Crawford and Carnine examined a similar methodology in a year-long study of students without learning disabilities in regular classrooms. Over a year's time it would likely be more difficult to maintain the excitement and commitment of the students. Perhaps more likely, the regular education students in both groups in the previous study may have been previously adept at using the strategies taught, thus causing the lack of differences between groups.

Student Attitude/Satisfaction Scale

The purpose of the student attitude/satisfaction scale was to determine whether there were differences in the two groups' satisfaction with the instruction they received. Interestingly, in spite of the fact that significant differences occurred in all measures of performance, no significant differences were found between the groups on the total satisfaction scale. These results seemed peculiar because it was expected that students who were more successful would have more favorable attitudes toward instruction.

The level of satisfaction in both groups was generally good, leading to the speculation that perhaps the novelty of the intervention and the break in the regular school routine could have led to positive attitudes from both treatment groups. It seems possible that over a longer period of time, the results might favor students who had higher levels of achievement. These results contradicted two previous studies that employed a similar attitude/satisfaction scale, both of which had more positive results for one treatment type (Rabren et al., 1999).

Instructional Implications

The results of the current investigation show promise that carefully designed strategy-based instruction may be beneficial to students with learning disabilities when learning from U.S.

history textbooks. Listed and discussed below are four implications teachers should consider when selecting textbooks in U.S. history or designing their own instructional materials.

Teach students a learning strategy. The most effective instructional programs for students with learning disabilities use strategy-based instructional sequences (Deshler & Schumaker, 1993; Ferretti, MacArthur, & Okolo, 2001).

Textbooks that rely on teaching students to memorize facts without also including explicit instruction on how to organize facts for understanding and recall will be less helpful for students with disabilities.

Pre-teach critical concepts. Also, include interactive dialogue between the teacher and the students to diagnose misconceptions quickly. It was evident to the authors that pre-teaching prerequisite information before students read independently from the textbook is beneficial for students. Making sure that all students in the group understand prerequisite concepts is essential and can be achieved by teaching groups of students.

Provide specified and frequent correction procedures. Researchers have demonstrated the importance of using specified correction procedures with students with learning and behavior problems (Darch & Carnine, 1986). This study supports using specified correction procedures when teaching students U.S. history content as well.

Ensure that all students are taught concepts to mastery. This can be accomplished by controlling the difficulty of each task. Ensuring that students practice strategies and concepts to mastery is an important instructional design feature in history textbooks and will help students with disabilities learn to persist and succeed in learning. History textbooks must be designed in a way that maximizes the amount of practice students have in learning and applying important historical concepts.

It is suggested that this study be replicated with other content areas and with other grade levels. This study involved teaching U.S. history to seventh-, eighth-, and ninth-grade students. Future researchers should investigate the effects of age, grade, and content area.

The results of this study are limited to students with LD. However, Carnine and Crawford (1996) completed a similar study with regular education students and found similar results. Future researchers should focus attention on students with other disabilities such as behavior disorders, as well as with other low-performing students.

The sample size of this study (i.e., 44) limits the generalizability of the results. We recommend that researchers use larger samples when designing studies that evaluate the effectiveness of instructional approaches; the smaller sample we used here prohibited us from analyzing for other effects (e.g., differential effects based on prior knowledge). Further, there were 20 instructional days of intervention. Future research should replicate this study with a comparable sample allowing for a lengthier intervention.

Because the content area covered called for very specific measures, we used experimenter-designed measures. The strength of these measures was that they were directly tied to the content taught to both groups and, thus, increased internal validity. However, because we do not know how well they correspond with other measures of students' understanding of history, these experimenter-designed measures represent a limitation of the study. In this study, in order to increase generalizability, the NAEP history exam was used as an additional measure. Future research is needed in the area of experimenter-designed instruments; also, researchers who use experimenter-designed instruments should carefully design and adequately report the use of these instruments.

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