

Doing Digital History with Students – Is it Engaging, Challenging, and Effective?

Rhonda Clevenson, Primary Source Learning

Natalie B. Milman, George Washington University

Purpose and Objectives

The purpose of this pilot, mixed method study was to examine the level of engagement, challenge, and effectiveness of 36 highly rated, field-tested social studies lesson plans that incorporated digital primary sources as part of the Library of Congress Teaching with Primary Sources professional development program for K-12 teachers. The program is provided through a Library of Congress grant funded by the U.S. Congress. Each lesson (also known as “learning experiences”), freely available and searchable in the online Primary Source Learning teaching materials collection (see http://www.primarysourcelearning.org/teaching_materials/search.php), was field-tested and reviewed by at least three teachers other than the lesson author. Specifically, the study’s objectives were to examine the following research questions about the ratings of social studies lessons that incorporated primary sources from the PSL database:

1. How engaging were the lessons?
2. How challenging were the lessons?
3. How effective were the lessons?
4. What student grouping strategy?
5. How was technology utilized for the lessons that incorporated primary sources?

Perspective

Social studies teachers today have thousands and thousands of digital primary source materials available to them for free on the WWW, as well as an immeasurable number of lesson plans to help them utilize these resources in their classrooms. The proliferation of web-based digital primary source materials and lesson plans, funded largely through government and private grants to establish and utilize digital collections and libraries (Bolick, Hicks, Lee, Molebash, Doolittle, 2004), offers students the opportunity to “do history” (Levstik & Barton, 2001) in ways that could not be accomplished or even imagined before the advent of the WWW. Doing history involves collecting, analyzing, and interpreting data (Levstik, 1996), often using web-based primary sources such as digitized photos and letters accessible on the Internet, and applying these skills to form one’s own understanding of history and its consequences. Many lessons on the WWW are designed specifically for students to do history using primary source materials. Yet, information about the degree and depth to which teachers use these materials and their impact on students’ learning is limited. Even so, there is a growing body of research about primary sources in the social studies and their uses by teachers and/or students.

Most of the current research on digital primary sources has focused on the use of primary sources by teachers (Friedman, 2006; Hicks, Doolittle, & Lee, 2004; Lee, Doolittle, & Hicks, 2006; McGlenn, 2007). Findings from these studies illustrate a complex picture as to how, when, and why (or why not) primary sources are being used in social studies classrooms. For example, Friedman (2006) found three major barriers to implementing digital primary sources in the teachers’ classrooms. These were the

teachers' perceptions that using such materials required more time, the emphasis on teaching to the standards, and limited instructional time to teach the content outlined in the standards. These studies, however, do not examine the quality of the lesson plans that have been developed to help teachers use the digital primary sources. This study examines lesson plans. Clearly, it seems that examining the quality of lesson plans centered on using web-based primary sources would seem beneficial.

In another study by Hicks, Doolittle, and Lee (2004), 158 high school social studies teachers completed a survey examining the extent to which they used web-based primary sources in their teaching. The researchers found that teachers did, indeed, use digital primary sources in their instruction; however, the applications of primary sources were not necessarily consistent with "best practices" in doing history. In this study, too, teachers reported that using primary sources was more time-consuming. Moreover, Lee, Doolittle, and Hicks (2006) had similar results in another study that used the same survey, but with another group of teachers. Here, though, the researchers "emphasized, "[n]either digital nor non-digital historical primary sources will have a major impact in the social studies or history classroom until teachers make more active use of the sources themselves (p. 299). Therefore, it seems logical that quality lesson plans about how to employ the use of web-based digital primary sources might prove beneficial.

McGlenn's (2007) study also surfaced similar barriers to using web-based primary sources highlighted in other studies. However, her study also discovered some new concerns. First the teachers who participated in this study reported that they would use digital primary sources if they were more "teacher friendly" and visible on the WWW. Second, it was difficult to locate sources and "usable materials within the collection" examined. Third, lesson plans were needed to use digital primary sources, as the following illustrates, "[a]lthough he rarely follows lesson plans he finds online verbatim, he did find it extremely helpful to read how other teachers used the resources." Therefore, it is imperative to examine not only whether or not digital primary sources are, indeed being utilized, but which mechanisms, such as lesson plans, might improve the quality and quantity of their use in classrooms.

Research Methods

This study employed a sequential mixed method design (Tashakkori & Teddlie, 1998). These types of studies, which fall under the mixed method umbrella, consist of two methods that occur in different phases of a study, each applying different methods, and conducted sequentially. In this study, a QUAN → qual" design (Morse, 2003, p. 198) was applied.

Quantitative methods involved statistical analyses (e.g., frequencies) of teachers' ratings of 36 different social studies lessons posted in the "Lesson Archive," of a grant-funded collection of lesson plans created through a process of development, field-testing, peer review, and evaluation. The lessons were a part of the Teaching with Primary Sources professional development program for in-service teachers involving collaborative workshops and lesson planning, development, delivery, dissemination, and review to use web-based primary sources housed by the U.S. Library of Congress.

Lessons were correlated to state standards and selected to form a collection that represents identified “best instructional practices,” breadth of digital historical documents used, and depth of curriculum content from all subject areas (Note: This study examined only social studies lessons although the lesson collection contains lesson plans in all the major subject areas). All of the lessons exemplify the “Teaching for Understanding” framework (Perkins & Blythe, 1994) and at least one of the following additional practices: differentiated instruction (Tomlinson, 1999), literacy instruction, or technology integration.

Each lesson was rated using a questionnaire by at least three different teachers after field-testing the lesson in their classrooms. Table 1 lists the number of different lessons submitted to the online database and the number of field tests per lesson by sub-subject and grade range. Teachers who submitted field tests had participated in the Library of Congress Teaching with Primary Sources professional development program, a grant-funded program to prepare teachers to incorporate digital primary sources in their teaching. One of the requirements for completion of the program was to field test a lesson from the Web site data base and report on the experience using an online questionnaire. Frequencies for each item on the questionnaire were analyzed for this study. The questionnaire required completion of the following items using a 5-point Likert scale (1=“little,” 5=“very”):

1. How engaged were your students?
2. How challenged were your students?
3. Rate this learning experience as an effective tool to make visible in the classroom student understanding of central ideas of the subject or discipline
4. Rate this learning experience as an effective tool to increase required student content knowledge.
5. Rate this Learning Experience as an effective tool to help develop student literacy skills.
6. How useful was this experience overall (activity, worksheets, links...)?

Table 2 describes the sample of lessons used in this study by grade range and sub-subject. Note that although two lessons originally designed for high school students received three or more field tests, none of the field tests took place with high school students. There were no lessons with three or more field tests that took place in the high school classroom. Table 3 is a description of the field tests examined in this study. The table shows the total number of field tests submitted and the number of field tests that were attached to the 37 lessons with three or more field tests. These are described by sub-subject within the larger subject of Social Studies. The largest collection of lesson plans were in the sub-subject of United States History with 56%. Table 4 describes the percentage of field tests by grade range and sub-subject. The primary audience for the lesson plans and field tests was a grade range for grades 3 to 5 with 74%. The grade range of Pre-K to 2 had 31% and grades 6 to 8 had 24%.

Table 1: Total lessons submitted and lessons with three or more field tests by grade and sub-subject

N=613 Lessons submitted N = 37 Lessons with 3+ field tests

Submitted	Pre-K – 2	# 3+ field tests	3 - 5	# 3+ field tests	6 - 8	# 3+ field tests	9 - 12	# 3+ field tests	Submitted	# 3+ field tests
Civics	19	2	32	3	17	0	6	0	74	5
Economics	7	1	8	1	4	0	2	0	21	2
US History	43	5	140	8	110	6	50	2*	343	21
Holidays	5	1	0	0	0	0	0	0	5	1
Geography	8	0	11	0	11	0	17	0	47	0
Other	13	0	7	0	0	0	0	0	20	0
World	4	1	22	2	11	1	32	0	69	4
Explorers	4	2	5	2	4	0	0	0	13	4
Government	1	0	3		3	0	14	0	19	0
Psychology	0	0	0		0	0	0	0	0	0
Total	104	12	228	16	160	7	121	2*	613	37

Table 2: Lesson sample used in this study: lessons with 3 or more field tests by grade and sub-subject

N= 37

	Pre-K - 2	3 - 5	6 - 8	9 - 12	Total
Total	12 (32%)	16 (43%)	7 (19%)	2* (5%)	37 (100%)

* Original lesson was designed for high school students, however, the field tests were completed with elementary and middle school students.

Table 3: Total field tests submitted and number of lessons with three or more field tests by grade and sub-subject

N=37 Lessons N = 186 Field Tests

Submitted	Pre-K–2	# 3+ field tests	3 - 5	# 3+ field tests	6 - 8	# 3+ field tests	9 - 12	# 3+ field tests	Total	Total
Civics	18	10	2	0	12	12	0	0	32	22
Economics	6	3	7	4	0	0	0	0	13	7
US History	49	21	69	40	49	30	25	10	192	101
Holidays	8	4	0	0	0	0	0	0	8	4
Geography	6	0	12	7	2	0	2	0	22	7
Other	11	4	1	0	0	0	0	0	12	4
World	15	15	20	13	4	3	1	0	40	31
Explorers	2	0	10	10	2	0	0	0	14	10
Government	0	0	0	0	1	0	5	0	6	0
Psychology	0	0	0	0	0	0	0	0	0	0
Total	115	57	121	74	70	45	33	10	339	186

Table 4: Field tests in sample: # of field tests by grade and sub-subject
N= 186

	Pre-K - 2	3 - 5	6 - 8	9 - 12	Total
Total	57 (31%)	74 (40%)	45 (24%)	10 (5%)	186 (100%)

* Original lesson was designed for high school students, however, the field tests were completed with elementary and middle school students.

Qualitative methods included analysis of comments written in the open-ended section of the lesson review. Answers to the following open-ended questions from the lesson review questionnaire were analyzed:

1. **Description of Classroom Use:** Describe modifications from the original description including the teaching process, Library of Congress primary sources used, and any other changes that you made.
2. **Analysis of Student Learning:** Evaluate student learning by giving examples of student successes and difficulties in relation to the learning experience's understanding goal.
3. **Evaluation and Recommendations:** Reflect upon the success of this learning experience and suggest changes for improvement. Explain the results of using primary sources, best instructional practices, and classroom management.

Erickson's (1986) approach to data analysis, analytic induction, was utilized throughout this study. Analytic induction calls for the generation of empirical assertions which are then warranted through a search for instances of confirming or disconfirming evidence. Through these analyses, a set of empirical assertions will be formulated and warranted through a search of confirming and disconfirming evidence from the quantitative and qualitative data collected and analyzed. As assertions are formulated, the corpus of data will be reviewed continuously to verify the validity of the empirical warrants. Discrepant case analysis will be used to confirm or disconfirm the empirical assertions as they were formed.

Primary Source Learning Professional Development Program

Primary Source Learning, a non-profit organization, originated in 2003 as the "Library of Congress Teaching with Primary Sources Northern Virginia Partnership" (TPSNVA) through an "Adventure of the American Mind" (<http://aamprogram.org/index2.aspx>) program. The TPSNVA's original partners included the Arlington Public Schools, Alexandria City Public Schools, and Falls Church City Public Schools. Fairfax County Public Schools joined the partnership in 2004. The TPSNVA program was a professional development program designed by school personnel in an effort to promote student learning while advancing current local school district pedagogy initiatives. The TPSNVA program has included bringing more than 1,000 educators from Northern Virginia to the Library of Congress for special tours of the architecture and exhibits, lectures with curators and reference specialists to develop educator content knowledge, and hands-on technology workshops focusing on integrating digital primary resources into the instructional program.

The Northern Virginia (TPSNVA) partner school systems, established the non-profit organization, Primary Source Learning (PSL) in 2006, with the following three purposes: 1) Fellowship: introduce collections of resources and best instructional practices related to using digital sources in the classroom for teachers K-12 of all subjects; 2) Scholarship: deepen content knowledge and create teaching materials designed for sharing with other educators for teachers of particular topics and grades; and 3) Leadership: offer opportunities to share expertise and conduct research concerning how teachers teach and students learn with digital resources. Through the PSL professional development program, teachers created thousands of teaching materials which are freely accessible on the PSL Web site for teachers anywhere to share, use, and rate.

Primary Source Learning Lesson Experiences Database and Sample

The Primary Source Learning lesson experiences database, created from 2005, contains 969 lesson plans from all of the major subject areas. The online database of lessons and its accompanying Web site were developed to house and share the lessons created by teachers who participated in the PSL professional development program, as well as the field tests of these lessons. All of the lessons center around using U.S. Library of Congress primary sources with students. In-service teachers submitted one lesson and field test report of a lesson from the online database to complete the professional development program.

For this pilot study, all of the Social Studies lessons were considered for inclusion. However, only 37 out of the 613 Social Studies lessons (6%) had at least three field tests from classroom teachers other than the author of the lesson after being available for two years through a Web site's searchable database. The number of field tests for each lesson in this study varied from three to 13 field tests. Table 2 shows the grade range, total number of field tests, lessons with three or more field tests, field tests examined, and the percentage of field tests examined.

Table 2: Social Studies Lessons – Field tests by Grade Level

Grade Range	Total # of Field Tests	Lessons With 3 Or More Tests	Field Tests Examined	% of Field Tests Examined
Pre-K- 2	115	12	57	50%
3 – 5	121	16	77	64%
6-8	70	7	45	45%
High School	33	2	10*	10*
Total	339	37	189	56%

* Original lesson was designed for high school students, however, the field tests were completed with elementary and middle school students.

Limitations

This pilot study has numerous limitations. First, the data set consists of a ratings of different lessons implemented without observation and do not represent a normal distribution or population. Second, the relationships between variables on the Likert

Scale (little and very) are likely not equal. Third, no effort was made to ensure inter-rater reliability since field tests were performed and reported on a voluntary basis. Also, the focus of the professional development program was learning to use the digital primary sources and developing and sharing lessons for using the primary sources, and not the ratings of these lessons.

Results

Quantitative Results

The frequency of teacher responses on a 5-point Likert scale from (1= “little”, 5=“very”) clustered around ratings of four or five on all of the measures with the exception of Literacy (see Table 3). The item on the questionnaire that received the highest ratings by teachers was “How engaged were your students?” (89 ratings selected “5-Very”) and the lowest rating was “Rate this Learning Experience as an effective tool to help develop student literacy skills.” Table 4 shows the percentile ratings.

Table 3: Frequencies of Ratings of Lesson Plans

N=186

	5 Very	4	3	2	1 Little	No Response	Total
Engagement	83	76	26	1	0	0	186
Challenge	54	90	33	9	0	0	186
Understanding	69	79	32	5	1	0	186
Knowledge	63	84	31	6	1	1	186
Literacy	36	73	49	20	7	1	186
Overall Utility	71	75	33	6	1	0	186

Table 4: Percentages of Ratings of Lesson Plans

N=186

	5 Very	4	3	2	1 Little	No Response	Total
Engagement	45%	41%	14%	0	0	0	100%
Challenge	29%	48%	18%	5%	0	0	100%
Understanding	37%	43%	17%	3%	0	0	100%
Knowledge	35%	45%	17%	3%	0	0	100%
Literacy	19%	39%	26%	11%	5%	0	100%
Overall Utility	38%	41%	18%	3%	0	0	100%

Grouping Strategies

By and large, the most popular grouping strategy teachers describe in the field tests involved placing the students into small groups (43%) when implementing the original lesson plans, as Table 5 shows. However, the teacher directions of the original lesson plans describe how to group students and were divided among whole group and small group (22%), whole group and individual (19%), small group (19%), and whole group (16%).

Table 5: Grouping Strategies Utilized by Teachers

N=37 Lessons

Whole (W)	Pair (P)	Small Groups (SG)	Individual (I)	W/P	W/SG	W/I	P/SG	P/I	SG/I	W/SG/I
6	1	7	3	4	8	7	0	0	0	1
16%	3%	19%	8%	11%	22%	19%	0	0	0	2%

N=186 Field tests

Whole (W)	Pair (P)	Small Groups (SG)	Individual (I)	W/P	W/SG	W/I	P/SG	P/I	SG/I	W/SG/I
50	12	78	16	2	12	14	0	0	1	1
27%	6%	43%	9%	1%	6%	7%	0	0	0	0

Use of Technology

The use of technology to teach with digital primary sources varied between teachers printing primary sources to share with students or projecting or using individual computers to use primary sources in the digital form. Table 6 illustrates the use and non-use of PowerPoint for the lessons.

Table 6: Use of PowerPoint/Projected Images and Printed Images by Teachers

N=37 Lessons

Projected	Printed	Individuals on computer	Projected & Printed	Printed & Individual	Projected & Individual	Projected, Printed, Individual
12	18	0	7	0	0	0
32%	49%	0	19%	0	0	0

N=186 Field Tests

Projected	Printed	Individuals on computer	Projected & Printed	Printed & Individual	Projected & Individual	Projected, Printed, Individual
31	126	6	17	1	5	0
16%	68%	3%	9%	1%	3%	0%

Teaching Strategies

The lessons that received three or more field tests from teachers participating in the professional development program used teaching strategies modeled in the professional development sessions 100% of the time. Each professional development session began with a model activity that demonstrated using primary sources and one of the best instructional practices such as teaching for understanding, differentiated instruction, literacy instruction, and technology integration. All teaching strategies were

demonstrated for teachers of all grades. Table 7 identifies the teaching strategy by grade range and the number of lesson with three or more field tests that used the teaching strategy.

Table 7: Teaching Strategy Used in the Lessons that had 3+ Field tests

Strategy	Pre-K - 2	3 - 5	6 - 8	9 - 12
Document Analysis	5	1	2	0
Images Draw You In		1	1	0
Life in a Box	0	3	0	2 *
Movie Making		1	0	0
Poster	2	2	0	0
Sort it Out	4	6	2	0
Zoom-In	1	2	2	0
	12	16	7	2*

Table 8: Description of the teaching strategies use in the lessons and field tests

Teaching Strategy	Type of Activity	Description
Poster	Introduction	Peak interest in a topic and suggest for further research using a few sources and questions
Zoom-In	Introduction	View pieces of an image to gather clues about a topic
Images Draw You In	Introduction	Use an image and question to draw students into thinking about a topic
Life in a Box	Assessment using themed set of sources	Work as a historical detective using clues to justify a hypothesis
Sort it Out	Assessment using themed set of sources	Use sources as evidence to exhibit a theme or understanding of a topic
Document Analysis	Main activity	Interrogate a primary source working like a historian
Movie Making	Culminating project	Create a digital documentary

Table 9: Lessons by sub-subject, grade, and teaching strategy

	Pre-K - 2	3 - 5	6 - 8	9 - 12
Civics	2 Sorts	3 Life		
Economics	1 Poster	1 Sort		
US History	2 Sorts 1 Poster 2 Analysis	1 Zoom 3 Sorts 1 Poster 1 Analysis	2 Zooms 1 Images 2 Analysis 1 Sort	2 Life 2 Life

		1 Movie Making 1 Images Draw		
Holidays	1 Analysis			
Geography	1 Analysis			
World	1 Analysis 1 Zoom	1 Sort 1 Poster	1 Sort	
Explorers		1 Zoom 1 Sort		
	12	16	7	2

* Note: Field tests of lessons categorized as “Other” were combined with US History for this table.

Qualitative Findings

The qualitative findings addressed themes that were mentioned in the 186 teacher narratives answering three prompts: description of classroom use, analysis of student learning, evaluation and recommendations. Practical implementation issues were mentioned consistently such as problems with the materials being either too easy or hard or too many images or not enough, needing more time, and the need to model for students an example of how the teacher wanted the students to interact with the primary sources. Management of small groups also appeared consistently both as a problem, where the groups were not on task and as a strength in lessons, where groups worked well independently without teacher support. The same lesson plan would often have field tests reporting both problems and successes with small groups. It was often unclear if the field testing teacher was following the implementation directions from the online lesson plan or just using the resources and the general idea of the lesson, but using different teaching methods and grouping strategies for students. This may have contributed to differences in the field test experiences. Consistent problems that students experienced reported by teachers included student lack of background knowledge, needing vocabulary, and low ability to make inferences. Success that teachers reported consistently identified the high quality of student discussion mentioning use of knowledge and vocabulary, listening to and challenging other students, and considering different points of view. Teachers often point out student level of engagement, student ability to use new content knowledge, and connections to required curriculum standards as factors contributing to high ratings in terms of the effectiveness of the lesson.

Implications

This pilot study raises many questions for further studies. For example, the differences in student groupings and how the primary sources were shared with students between the actual online lesson plan description and the descriptions from the field testing teachers raise questions about to what extent teachers use the directions of lesson plans downloaded from the Internet. All of the qualitative comments around materials may suggest that teachers are looking more for materials than for directions on how to

use those materials with students. It seems that asking teachers to report on how they noticed student learning has many benefits for the reflecting teacher but also begins to paint a picture of how teachers recognize and value learning. In future studies, the field testing instrument should be revised to yield data that is suitable for parametric and non-parametric studies. Larger samples of lesson reviews (ratings) are needed. In the future, input from Board, teachers, and school systems should be conducted to shape the revision/future research. A larger review of the literature could be conducted including examining the Technological Pedagogical Content Knowledge (TPaCK) .

Educational and/or Scientific Importance

Numerous organizations have spent and will continue spending a considerable amount of resources for providing primary source materials on the WWW and developing lesson plans to help teachers use them. However, little research has examined the quality of the lessons let alone the results of their implementations. This pilot study provides findings that show how engaging, challenging, and effective a sample of social studies lessons centered around U.S. Library of Congress primary source materials are. The findings may lead to further investigations of lessons centered on primary source materials available on the WWW, suggestions for maximizing their use (e.g., characteristics of highly rated lessons), and the types of tools and professional development necessary to develop, teach, and evaluate such lessons.

References

- Bolick, C., Hicks, D., Lee, J., Molebash, P., & Doolittle, P. E. (2004). Digital libraries: The catalyst to transform teacher education. *AACE Journal*, 12(2), 213-233.
- Friedman, A. M. (2006). World history teachers' use of digital primary sources: The effect of training. *Theory and Research in Social Education*, 34, 124-141.
- Friedman, A. (2006). State standards and digital primary sources: A divergence. *Contemporary Issues in Technology and Teacher Education* [Online serial], 6(3). Available: <http://www.citejournal.org/vol6/iss3/socialstudies/article1.cfm>
- Hicks, D., Doolittle, P. E., & Lee, J. (2004). Social studies teachers' use of classroom-based and web-based historical primary sources. *Theory and Research in Social Education*, 32(2), 213-247.
- Lee, J. K. (2002). Digital history in the history/social studies classroom. *The History Teacher*, 35(4), 503-518.
- Lee, J. K., Doolittle, P., & Hicks, D. (2006). Social studies and history teachers' uses of non-digital and digital historical resources. *Social Studies Research and Practice* 1(2), Retrieved September 24, 2008 from, <http://www.socstrp.org/issues/PDF/1.3.2.pdf>
- Levstik, L. (1996). Negotiating the history landscape. *Theory and Research in Social Education*, 24, 393-397.

- Levstik, L., & Barton, K. (2001). *Doing history: Investigating with children in elementary and middle Schools* (2nd ed). Mahwah, NJ: Lawrence Erlbaum.
- McGlenn, M. (2007). Using the "Documenting the American South" Digital Library in the social studies: A case study of the experiences of teachers in the field. *Contemporary Issues in Technology and Teacher Education* [Online serial], 7(1). Available: <http://www.citejournal.org/vol7/iss1/socialstudies/article1.cfm>
- Morse, J. M. (2003). Principles of mixed methods and multimethod research design. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of Mixed Methods in Social & Behavioral Research* (pp. 189-208). Thousand Oaks, CA: Sage Publications.
- National Council for the Social Studies. (2006). *Curriculum standards for Social Studies: Expectations of excellence*. Washington, DC: Author. Retrieved September 30, 2008, from <http://www.socialstudies.org/standards/introduction/>
- Perkins, D., & Blythe, T.(1994). *Putting understanding up front*. Educational Leadership. Alexandria, VA: Association of Supervision and Curriculum Development.
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: SAGE Publications.
- Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.