



visible knowledge project

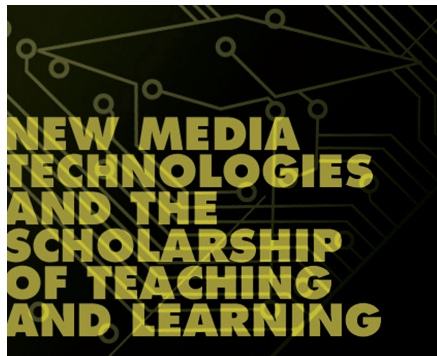
a collaborative investigation of learning, inquiry, and technology



The Difference that Inquiry Makes:

A Collaborative Case Study of Technology and Learning,
from the Visible Knowledge Project.

Edited By Randy Bass & Bret Eynon



"The Difference that Inquiry Makes: A Collaborative Case Study of Technology and Learning, from the Visible Knowledge Project," *edited by Randy Bass and Bret Eynon*

Reprinted from the January 2009 issue of Academic Commons on "New Media Technologies and the Scholarship of Teaching and Learning," edited by Randy Bass with Bret Eynon and an editorial group from the Center for New Designs in Learning and Scholarship (CNDLS) at Georgetown University— Eddie Maloney, Susannah McGowan, John Rakestraw and Theresa Schlafly
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The Visible Knowledge Project (VKP) was funded by The Atlantic Philanthropies, with additional funding from the Fund for the Improvement of Postsecondary Education (FIPSE); current support for the "Social Pedagogies" project is made possible by a grant from the Teagle Foundation.
VKP is a project of Georgetown University and the Center for New Designs in Learning and Scholarship (CNDLS).

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From The Difference that Inquiry Makes: A Collaborative Case Study on Technology and Learning, from the Visible Knowledge Project¹, *edited by Randy Bass and Bret Eynon*

My VKP inquiry began with traditional disciplinary questions about historical thinking. I wanted my students to become more skilled at reading and analyzing primary source documents. Standard approaches to teaching these skills through research papers seemed to have limited results, so I began some cautious pedagogical experiments to focus students on discrete parts of the historical analysis process. At the same time, emerging new media technologies offered me opportunities to immerse my students in digital archives, providing a more diverse and visual set of sources than were available in the campus library. My initial technological and teaching experiments raised a series of questions about how students read sources and make sense of history, leading me not only more deeply into new media tools but also into radically different pedagogies.

A teaching problem launched my initial inquiry.² The first time I taught a senior history seminar on the United States in the 1960s, I could not seem to get students past their naïve preconceptions about the decade.³ The typical student story, which I attributed to the film *Forrest Gump*, went something like this: the 1960s began with a unified nation (except for some backward white southerners) making bold progress in all endeavors, but Vietnam and assassinations tore the country apart, leaving chaos and fragmentation at the end of the decade. This story emerged repeatedly

I About VKP: In all, more than seventy faculty from twenty-two institutions participated in the Visible Knowledge Project over five years. Participating campuses included five research universities (Vanderbilt University, the University of Alabama, Georgetown University, the University of Southern California, Washington State University, and the Massachusetts Institute of Technology), four comprehensive public universities (Pennsylvania's Millersville University, California State University (CSU)--Monterey Bay, CSU Sacramento, Ohio's Youngstown State University, and participants from several four-year colleges in the City University of New York system, including City College, Lehman, and Baruch), and three community colleges (two from CUNY--Borough of Manhattan Community College and LaGuardia Community College, and California's Cerritos College). In addition to campus-based teams, a number of independent scholars participated from a half dozen other institutions, such as Arizona State and Lehigh University. The project began in June 2000 and concluded in October 2005. We engaged in several methods for online collaboration to supplement our annual institutes, including an adaptation of the digital poster-tool created by Knowledge Media Lab (Carnegie Foundation), asynchronous discussion, and web-conferencing. The VKP galleries and archives (<https://digitalcommons.georgetown.edu/projects/digitalstories/>) provide a wealth of background information, including lists of participants, regular newsletters, and reports and essays by participants, as well as a number of related resources and meta-analyses. For this article, the author gratefully acknowledges the students whose work is cited here. All students whose work is included have granted the author permission to use the material.

2 See Randy Bass, "The Scholarship of Teaching: What's the Problem?" *Inventio* 1, no. 1 (February 1999)

3 The next several paragraphs draw on my article "'Photos--The Almost Most Objective Evidence There Is': Reading Words and Images of the 1960s," *Reader* (Spring 2005): 77-94. I also have written about my VKP work in Michael Coventry, Peter Felten, David Jaffee, Cecelia O'Leary, and Tracy Weis, with Susannah McGowan, "Ways of Seeing: Evidence and Learning in the History Classroom," *Journal of American History* 92, no. 4 (2006): 1371-1402.

during the semester as students struggled to reconcile our coursework with their prior understandings—and when conflicts emerged, *Forrest Gump*'s simple narrative often trumped more complex views of the decade.

The next time I taught the course, I began the semester with an exercise designed to confront student beliefs about the decade. Before we even discussed the syllabus, I sent my students to a digital collection of ten primary sources from the 1960s, including excerpts from speeches and letters, a few photographs, a popular song, and a television advertisement. I asked pairs of students to put these sources in chronological order, and to note why they placed each source where they did. After thirty minutes, I called the class together to compare notes. None of the pairs had sequenced the sources correctly, but that was not really the point. Instead, as students talked about each source, the holes in the *Forrest Gump* narrative surfaced. On the first day of class, they began to develop more complex understandings of the 1960s, something that few had done at all the previous semester.

Despite my apparent success with one teaching problem, the exercise also revealed something else: students did not necessarily enter the course with sophisticated strategies for reading primary sources (perhaps that was *Forrest*'s revenge, since unintended consequences are a theme of the film). Visual sources seemed to present a particular challenge to students in the sequencing exercise. Students struggling to read sources would be a substantial problem in this major capstone seminar since each student must write a long paper synthesizing original research.

Sam Wineburg's article "On the Reading of Historical Texts" served as the foundation for my thinking about this problem. Wineburg, a psychologist who focuses on historical thinking, conducted research on how historians and high school students make sense of sources. In his study, the students had at least as much relevant knowledge as the historians. Content knowledge, however, did not determine how people read the sources. Instead, Wineburg found that "for students, reading history was not a process of puzzling about authors' intentions or situating texts in a social world but of gathering information, with texts serving as bearers of information."⁴ Historians, on the other hand, looked more for subtext and meaning than for facts. Wineburg concluded that "the differences in each group's approach can be traced to sweeping beliefs about historical inquiry, or what might be called an epistemology of text."⁵

Wineburg's research raised a central question for me: what beliefs about sources did my students bring to the seminar? As senior history majors, these students fell somewhere between Wineburg's research subjects—no longer high school students, but not professional historians. To explore the epistemology of text in my seminar, I worked with my VKP colleagues to construct a template reflecting the characteristics of a novice, intermediate, and advanced reading of a historical source. (See Appendix A)⁶ These categories attempted to reflect the level of frequency

4 Sam Wineburg, *Historical Thinking and Other Unnatural Acts* (Temple University Press, 2001), 76. This article originally appeared in *American Educational Research Journal* 28, no. 3 (1991): 495-519. In another article, Wineburg explores the reading of historical texts and paintings: Samuel S. Wineburg, "Historical Problem Solving: A Study in the Cognitive Processes Used in the Evaluation of Documentary and Pictorial Evidence," *Journal of Educational Psychology* 83, no. 1 (1991): 73-87.

5 Ibid., 76.

6 Felten, "Photos--The Almost Most Objective Evidence There Is," *Reader*, 47.

and sophistication with which a reader applied Wineburg's sourcing heuristic to encounters with new historical texts.⁷ My experience teaching the seminar also shaped the categories; for example, I noticed that my less advanced students tended to treat skeptically sources they perceived to be biased while attributing great authority to documents judged to be factual.

After developing the template, I had my sixteen seminar students each complete three in-class source reading exercises, at the beginning, middle, and end of the semester. Each exercise required students to analyze a set of historical sources from a digital archive; for example, when we studied the Civil Rights movement, students analyzed visual and textual sources from the 1963 Birmingham protests. In each exercise, I instructed every student to write about "what significant things do you know, and don't you know, about each source?" I also asked students a question similar to one raised in Wineburg's research: "Which is the most trustworthy as a historical source? Rank order the sources, and briefly explain why you ranked them the way you did."⁸

When I began to read student writing from these exercises, I noticed a new teaching problem. Colin, one of the most capable students in the class, performed a fairly sophisticated reading of the photo collection from Birmingham:

Who took these pictures? What is context of the last photo? Some happy, some sad-prayer? Seems like protesters are saying something to the police. Taunting? Singing? Questioning? Police have come prepared for action, carrying nightsticks at the ready.

Colin noted significant details of the photos and he speculated about the meaning of and creator of these images. He had moved well beyond a novice reading of these sources. However, Colin's ranking of the sources seemed to fall back on cultural assumptions about photos rather than to continue his deep analysis: "These pictures record a moment that clearly happened. Pictures shot candidly tend to not have inherent prejudices, though it is easy to interpret them as you will. Pictures are basically neutral." Although Colin speculated on the editorial forces behind the creation and use of journalistic textual sources, he did not consider such factors when looking at a newspaper photo. Other students echoed this view and, like Colin, ignored the editorial process when analyzing published news photographs. Melanie noted that "the Photo Collection is the most trustworthy source—images often speak louder than words." Jane referred to the photos as "snapshots of what actually happened." Marvin summarized the typical student analysis when he wrote: "Photos—the almost most objective evidence there is."

These comments should not have surprised me because they merely repeat cultural clichés about the value and objectivity of images. Research on how people learn has shown that students "come to formal education with a range of prior knowledge, skills, beliefs, and concepts that significantly influence. . . their abilities to remember, reason, solve problems, and acquire new knowledge."⁹ In my class,

7 My thinking also was influenced somewhat by M. Anne Britt, Charles A. Perfetti, Julie A. Van Dyke, and Gareth Gabrys, "The Sourcer's Apprentice: A Tool for Document-Supported History Instruction," in *Knowing, Teaching, and Learning History*, ed. Peter N. Stearns, Peter Seixas, and Sam Wineburg (New York: New York University Press, 2000), 437-470.

8 Wineburg, "Historical Problem Solving," 75.

9 John D. Bransford, Ann L. Brown, and Rodney R. Cocking, eds., *How People Learn* (Expanded Edition, National Academy Press, 2001), 10.

student learning seemed to be hindered by beliefs about the nature of photographs, or what Sturken and Cartwright have called the myth of photographic truth: "It is a paradox of photography that although we know that images can be ambiguous and are easily manipulated or altered . . . much of the power of photography still lies in the shared belief that photographs are objective or truthful records of events."¹⁰ Students also consistently ignored the selection and production processes for news photographs, although they regularly noted the editorial perspective in journalistic texts. In other words, students took photographic truth one step further than Sturken and Cartwright; not only were the photos "true" but the process of creating and publishing pictures did nothing to change the objective nature of the image.

This raised a larger question about my approach to teaching students to read historically: is the process of reading a primary source in history essentially the same regardless of the type of source? My assumption up to this point had been that the type of source mattered little, that historical reading skills could be transferred from text-based to visual sources, and vice versa.

Faced with that realization, I began paying particular attention to how students read different types of sources, a topic I barely had considered before. Taking this new approach, I quickly noticed that students either entered the semester or learned early in the course to apply a key component of Wineburg's sourcing heuristic to written documents, and this learning seemed to endure through the course. Such student proficiency did not surprise me since I was teaching mostly senior history majors who entered my class quite practiced in reading traditional primary sources.

However, students did not consistently transfer this heuristic to their readings of visual sources. In the semester's final source reading exercise, for example, most students analyzed the perspective and context of the written sources, but failed to comment on those issues for the photographic sources. Angela, perhaps the most sophisticated thinker in the class, began her analysis of the two textual sources by considering the author and perspective of the source, but her readings of the photos did not. Instead, she focused on the people in the pictures, speculating on the motivations of those being photographed rather than on the intent of the people who created and used the image. Like her peers, Angela interpreted photos to be actual snapshots of history rather than representations of historical events.¹¹ This belief caused her, and my other students, to not transfer her sourcing heuristic from textual to photographic sources.

This VKP inquiry taught me that the transition from a novice to an expert reading of photographs, and perhaps other sources, involved something of a quantum leap for my students, not just a more developed application of the basic toolkit. Sophisticated readers, including some of my students, do this routinely with textual sources, not only considering the type of source but also probing the "circumstances under which these sources came into being. . . such as the position of the witness vis-à-vis the events they report, the quality of the information available to them, and their ability to tell the truth (provided that is their intention)."¹² But my students failed to wonder about the

¹⁰ Marita Sturken and Lisa Cartwright, *Practices of Looking: An Introduction to Visual Culture* (New York: Oxford University Press, 2001), 17.

¹¹ A helpful article on sources as representations is: Samuel S. Wineburg, "The Cognitive Representation of Historical Texts," in *Teaching and Learning in History*, ed. G. Leinhardt, I.L. Beck, and C. Stainton, (Hillsdale, NJ: Erlbaum, 1994), 85-135.

¹² Wineburg, "The Cognitive Representation of Historical Texts," 103

photographer and publisher of a news photo because, in essence, they believed the image was true regardless of who took the picture and why it was published; the myth of photographic truth overruled what they had learned in history classes (including mine) about the epistemology of text.

For my students to make the leap to advanced readings of all sources, then, they must learn to recognize and confront their own beliefs about different kinds of sources. To address this teaching problem I have shifted how my students and I engage with visual sources in the classroom, moving away from only reading images to composing new meaning with those images through digital storytelling.¹³ In my classes, an end-of-term digital storytelling assignment requires small groups of students to create three- to five-minute multimedia historical narratives that link their individual research projects. This exercise gives the students a new perspective on writing history because they compose primarily with images and music, not text. As the students develop drafts of their digital story, they go through an iterative process of choosing among and revising with visual sources, asking each other epistemological questions about the images as they proceed ("What do we really know about the past from this photo? What kinds of stories can we actually tell with that picture?"). Students regularly practice such interpretive tasks with texts in our classes, both reading and writing with (we hope) growing sophistication as they progress through the term and the college years. To create a similar learning experience with image-based sources, teachers need to move beyond having students write about images to providing opportunities for students to construct arguments and narratives with visuals.¹⁴

My inquiry into student learning from visual sources not only prompted me to think differently about how students understand and represent meaning in history, but also about what motives students to learn history. As I studied how students make sense of images, I repeatedly observed the powerful emotional responses students had to certain visual sources.¹⁵ Many of my students, for example, would read with discomfort but detachment about lynching, but the same students experienced overwhelming emotions when viewing photographs of lynching.¹⁶ As a teacher, I do not want to cause my students emotional distress, but I do want them to engage deeply with the past. I also repeatedly observed how strong emotional reactions provoked some students to make significant strides in their historical

thinking. Rather than turning away from the image, these students became passionate about learning.¹⁷

13 My thinking and classroom practice with this approach have been shaped primarily by the Center for Digital Storytelling, <http://www.storycenter.org>, and the Visible Knowledge Project's Digital Stories Affinity Group. The original Digital Stories Affinity Group included Tracey Weis, Bret Eynon, Rina Benmayor, Cecilia O'Leary, and Michael Coventry. More information on their projects can be found in the VKP archives (<https://digitalcommons.georgetown.edu/blogs/vkp/>)

14 For a similar argument, see: Brian Goldfarb, *Visual Pedagogies: Media Cultures in and beyond the Classroom* (Durham, NC: Duke University Press, 2002), 71-75.

15 Michael Lesy recently made a similar observation, arguing that historians should respond to photographs "empathically and analytically." Michael Lesy, "Visual Literacy," *Journal of American History* 94, no. 1 (2007): 143-152.

16 For example, comparing responses to the text of Philip Dray, *At the Hands of Persons Unknown: The Lynching of Black America* (New York: Random House, 2002), and the photographs in the Web site "Without Sanctuary," <http://withoutsanctuary.org>

17 Grace Hale's review of "Without Sanctuary" deepened this passion for many of my students; *Journal of American History*

Although I use such emotionally laden images with great caution in my teaching, the experience with photographs led me to experiment with “Reacting to the Past,” a pedagogy that uses emotional engagement to motivate learning:¹⁸ “Reacting,” pioneered by Mark Carnes at Barnard College, uses month-long games set at specific moments in the past to immerse students both in a rich historical context and in a distinct personal role in an unfolding drama. To succeed in a “Reacting” game, students must embody their role and argue thoughtfully from primary source texts. The game format creates what Carnes calls a “liminal classroom,” a place where traditional roles are replaced by a structured yet uncertain environment that provokes both creative expression and emotional intensity. Carnes describes his first experience with the pedagogy, noting a profound shift when “unconsciously [female] students had applied male pronouns to each other, and they had used the present tense about historical events. They had slipped into a new identity and a present different from that of the classroom. In that imaginatively charged space, sixteen young women had breathed life into an ancient text.”¹⁹

In my three years of teaching with “Reacting to the Past,” I regularly observe my students have this liminal experience. The game structure requires students to embody their roles. Each student writes and argues from her or his role’s perspective, but the student also must physically enact that role in the classroom by, for example, bowing when the Wan-li Emperor enters the room, or standing before the assembled Puritans to petition for admission to the church. Many students at first find this experience to be strange, even uncomfortable. However, they soon acclimate to their new roles, and then the liminality takes over. Students become so engaged with their roles that the classroom dynamic is transformed. My role as professor becomes nearly irrelevant as students hold each other accountable for the quality of their writing and speaking in class, pushing their peers to articulate points with clarity and to muster the best possible evidence to support claims. Last semester, for instance, every student in my “Reacting” class voluntarily rewrote at least one paper in response to critiques offered by classmates. By inviting students to embody their roles, the “Reacting” pedagogy leads students to become self-directed learners. Although the topics of “Reacting” games may seem esoteric to many students (e.g., Puritan theology or Confucian philosophy), I have found that every semester my students report that the game is different than any class they ever have experienced because they care so passionately about the issues at stake. They are emotionally invested in their roles, so they learn.

Although I have been gratified by the results of my pedagogical experiments with “Reacting” and with digital storytelling, I have developed a habit of inquiry that keeps me from settling for long on any pedagogy or technology. I no longer conceive of teaching as a task to be mastered; rather, I see teaching as a scholarly process centered on inquiry into student learning. I now am exploring how students respond when they encounter serious academic challenge in a class, hoping to better understand what permits some students to persist despite difficulty. This seems to me to be crucial aspect of developing our students as expert thinkers who revel, rather than shrink from, the great questions of their discipline and their world.

89, no. 3 (2002): 989-994.

¹⁸ <http://www.barnard.edu/reacting/>.

¹⁹ Mark C. Carnes, “Being There: The Liminal Classroom,” *Chronicle of Higher Education* 8 (October 2004).

Appendix A: Template on reading historical sources¹

	Novice	Intermediate	Advanced
On what features of the source does the reader focus?	<p>Focus on information</p> <p>Little or no attention to perspective / author</p> <p>Little or no attention to what is missing</p> <p>Little or no attention to the type of source, or treats all sources the same</p>	<p>Focus on information but some attention to meaning and context</p> <p>Notice the perspective/author of the source at some point during the reading</p> <p>Superficial attention to what is not in the source</p> <p>Superficial attention to how to read this kind of source</p>	<p>Focus on context and meaning, not information</p> <p>Significant attention to perspective/author of the source throughout reading</p> <p>Significant attention to what is not in the source (not just what is there)</p> <p>Significant attention to the type source it is (speech, photo, etc.), and how to read this kind of source</p>
What questions will the reader likely ask (and consider most important) while reading the source?	<p>What are the facts contained in the source?</p> <p>Is the source “factual” or is it “biased”?</p>	<p>What are the facts contained in the source, and what might they mean?</p> <p>Who created the source, and how does that “bias” the source?</p> <p>Do the facts in this source confirm or contradict what I already know?</p> <p>What facts are missing or not known in this source?</p> <p>What kind of source is this?</p>	<p>What is the context and subtext of the source?</p> <p>Who created the source, and why was the source created?</p> <p>What is surprising or unexpected in the source’s content or meaning?</p> <p>What is missing from or not known about the content or context of the source?</p> <p>What type of source is this, and what does that tell me about how to read it?</p>

¹ Felten, “Photos – The Almost Most Objective Evidence There Is,” *Reader*, 47.