Commentary: Building Web Research Strategies for Teachers and Students

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Abstract

This paper presents web research strategies for teachers and students to use in building Dramatic Event, Historical Biography, and Influential Literature wiki pages for history/social studies learning. Dramatic Events refer to milestone or turning point moments in history. Historical Biographies and Influential Literature pages feature historically prominent people, both real and fictional. As teachers and students research these topics, they practice accessing and assessing online information while expanding web research and digital literacy skills. They discover how the interactive capacities of wiki technology present people, events and literature in multimodal ways that engage students in deepening history learning. The paper includes sample event, biography, and literature pages hyperlinked to Resources for History Teachers, an award-winning open educational content wiki maintained by the History Teacher Education program at the University of Massachusetts Amherst. These model wiki pages incorporate primary and secondary materials, multimedia resources, and multicultural topics for teaching and learning. Students and teachers can use these model pages to construct their own wiki pages tailored to local and state history/social studies curriculum.

In 2014, social studies educators David Hicks, John Lee, Michael Berson, Cheryl Bolick and Richard Diem revisited a set of technology education guidelines for new teachers that had been published in 2000 as part of the inaugural issue of Contemporary Issues in Technology and Teacher Education (Mason et al., 2000). The educators’ goal was to update that earlier framework to encompass how the latest technological developments are influencing middle and high school teaching and learning in history/social studies classrooms. As in 2000, the educators said, computer technology “opens the door to learning in ways impossible in the traditional classroom.” With today’s new tools—ranging from tablets and apps to interactive websites and virtual reality simulations—teachers need new and evolving strategies for using “technologies in meaningful and appropriate ways to promote effective student learning” (Hicks et al., 2014).
Reimagined models of technology use are especially needed when teachers and students conduct online research for history and social studies topics. Today, printed books and human librarians are used less frequently, while powerful search engines are consulted more often, delivering millions of online results instantly to desktops, laptops, tablets, or smartphones (Purcell et al., 2012). With nearly instant access to immense amounts of information, students must learn the skills to search the Internet effectively, evaluate online materials, and accurately synthesize and report the facts, ideas, and theories they have learned.

This paper presents an approach for teachers and students can use to develop web research and digital literacy skills by building Dramatic Event, Historical Biography, and Influential Literature pages in a teacher- or class-made wiki. As a digital learning activity, building wiki pages has teachers and students “using technology to promote effective student learning”—one of the updated principles for technology integration in social studies teacher preparation (Hicks et al., 2014). Inquiry, analysis, and content learning occur in three parts—searching, saving, and sharing—as teachers and students collaboratively examine online sources, assess their credibility, and post their findings online.

**Digital Literacy in an Information Age**

Educators widely agree that teachers must teach and students must learn the skills and dispositions of critical web users and online researchers. The *Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects* (Common Core State Standards Initiative, 2016) have affirmed that students must be able to “determine the central ideas or information of a primary or secondary source” ([CCSS.ELA-LITERACY.RH.11-12.2](#)) and “integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question or solve a problem” ([CCSS.ELA-LITERACY.RH.11-12.7](#)).

The *College, Career and Civic Life (C3) Framework for Social Studies State Standards* emphasized the importance of students “developing questions and planning inquiries, gathering and evaluating sources, and communicating and critiquing conclusions” (National Council for the Social Studies, 2013, p.12). The C3 framework also notes what many classroom teachers know well—rapid access to online resources “does not translate automatically to their wise use” (National Council for the Social Studies, 2013, p.18). For many online searchers, research means using Google, consulting Wikipedia, or viewing YouTube and then reporting what they find as factual information. Reviewing results of a national survey of Advanced Placement and National Writing Project teachers, the Pew Internet Research Project concluded that given the vast amounts of information to consider, students’ research focus has “shifted from a relatively slow process of intellectual curiosity and discovery to a fast-paced, short-term exercise aimed at locating just enough information to complete an assignment” (Purcell et al., 2012).

Academic research by elementary, middle, and high school students is fraught with complexities. In paper-based research environments of the past, students might access a book or an article, copy some text verbatim, and then fail to cite the author and attribute the source. While those same shortcomings can happen in a digital setting, new issues arise as well. Students may be unsure what keywords to use when searching; they may consult only the first page of search results and miss important resources; they may not investigate who authored a
website and for what purpose; they may assume that if information is online, it must be true (Palmer, 2015).

To create more collaborative learning environments where students act as informed users of web-based information, educators broadly agree that students must learn the technical skills and intellectual dispositions of digital literacy. “In the modern world, print literacy is not enough,” stated video game researcher James Paul Gee (2007, p. 19) a decade ago. Digital literacy has been defined as “the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills” (American Library Association, 2012). It includes an interconnected set of skills and dispositions called computer/ICT literacy, media literacy, and information literacy.

Digital literacy requires that students distinguish useful knowledge from useless, biased, and harmful information (Burbules & Callister, 2000). This literacy includes critically evaluating a website’s credibility (Schrock, 2015). As the Global Digital Citizen Foundation (2015) pointed out, students need multiple opportunities in school to ask thoughtful questions, acquire information from print and online sources, analyze that material for its authenticity and relevance, apply their research to academic topics and questions, and share the results of their work with others.

**A Wiki for History Learning**

Finding ways for students to learn and apply the skills of digital literacy is a challenge for teachers. Completing an occasional research assignment, while helpful, is not sufficient for students to develop their web research skills. For this reason, we have been developing educational wikis as formats for teaching about digital literacy.

Wikis are not a new technology. More than a decade ago, in one of its early “7 Things You Should Know About . . .” technology trends briefs, the Educause Learning Initiative (2005) defined wikis as a “database created by a group rather than an individual” that can result in “surprisingly robust, open-ended, collaborative group sites.” Wikis can function as a “composition system, a discussion medium, a repository, a mail system, and a tool for collaboration.” Responding to the question, “Where is it going?” the Educause editors predicted, “Since wikis are easy to edit, they carry an inherent potential to change how we construct knowledge repositories on the Web.”

The importance of wikis is that they can be ever-changing, constantly evolving learning environments (Richardson, 2010). Anyone can read the content posted on a public wiki, such as Wikipedia, and members of the site can add to or revise the online material. To make a change to an existing page or create a new one, a member clicks “edit” and enters the new material. Readers can also see all the earlier versions of the page in reverse chronological order by looking in the page history section. Each change is attributed to the member making the change, so content does not appear anonymously on the site.

The wiki pages described in this paper can be found on [resourcesforhistoryteachers](http://resourcesforhistoryteachers) (i.e., "Resources for History Teachers"), a history learning resource for K-12 and higher education teachers and students housed in
the College of Education at the University of Massachusetts Amherst. [Editor’s Note: URLs for all websites can be found in the Resources section at the end of this paper.] Since 2006, resourcesforhistoryteachers has earned a 2010 Higher Education Webbie Award from the Massachusetts Computer Using Educators (MassCUE) organization and was voted an Edublog Awards Finalist for Best Educational Wiki in 2011, 2013, and 2014. Between March 2012 and October 2015, more than a million people visited the site.

Regular contributors to the wiki include the author of this article (who is also the webmaster of the site), educators from K-12 schools, and college students from University of Massachusetts Amherst history teacher license program who enroll in a three-credit, semester-long course, “New Developments in History and Political Science Education.” The webmaster approves every post, removes biased or inaccurate material, and deletes links that are no longer active. Online resources are selected from historical organizations, museums, governmental agencies, libraries, university and college researchers, newspapers, and other academic sources. As much as possible, posted sites are free from advertisements for products, services, or commercial interests. Links to pages on Wikipedia or other online encyclopedias are avoided.

The site, resourcesforhistoryteachers, began as a standards-based wiki devoted to supplying students and teachers with materials for addressing the Massachusetts History and Social Science Curriculum Framework (Massachusetts Department of Elementary and Secondary Education, 2003). The site’s initial design featured a page of written summaries and linked resources for each of the Massachusetts K-12 learning standards for U.S. history, world history, geography, American government and economics—a total of more than 400 individual pages.

In the past 3 years, pages have been added for the Advanced Placement standards in U. S. history, world history, and American government, all cross-linked so readers can move seamlessly within the site to access ideas and information about historical and contemporary topics.

The first design of the wiki pages were text-filled factual presentations of information related to history learning standards. Teachers said they did not need this type of resource, since detailed overviews of people, places, and events were already online at Wikipedia, Britannica.com, Biography.com, Infoplease.com, and many other sites. Elementary, middle, and high students also did not find the wiki’s initial format helpful to them as learners. Students rated the information presentation dry and uninviting; they wanted pictures, videos, games, and interactive resources so they could experience the pages multimodally, not just read them as printed text.

In response, wiki page formats were reorganized to feature links to multiple types of online materials for use in history/social studies learning: primary source materials; timelines; maps and interactive geographic resources; multimedia; multicultural resources, women’s history resources; lesbian, gay, bisexual, transgender, queer (LGBTQ) resources; economic resources; simulations and serious learning games; and lesson plans and related instructional materials.

Dramatic Event, Historical Biography, and Influential Literature pages are the latest features of the Resources for History Teachers wiki. Organized by topic and linked to standards, these pages offer teachers three ways to teach students how to do online research critically and creatively. Page authors must (a) choose
what to post on a page, practicing the skills of website evaluation; (b) learn to
design and arrange material so readers can experience information multimodally
and interactively; and (c) learn historical content as they connect wiki work to
history and social studies learning standards.

Dramatic Event Pages

Dramatic Event pages are based on important or milestone events in
history. Learning about such dramatic moments, students and teachers have the
opportunity to “delve into the deeper meanings of selected landmark events and
explore their wider context in the greater historical narrative” (in the words of
Symcox, 1991, p. 4). In a dramatic moment approach, textbook readings and
teacher presentations provide the chronology of a time period, setting the context
for why an event itself can be considered a crucial turning-point in history. Then,
as students examine primary sources and consult other history learning
materials, they become “aware that choices had to be made by real human beings,
that those decisions were the result of specific factors, and that they set in motion
a series of historical consequences” (Symcox, 1991, p. 4)

Dramatic Event wiki pages include the following components:

- **Event Summary.** Located at the top of the page, an Event Summary is
  a short written overview of the event that also includes a link to an online
  summary provided by a digital textbook or historical organization. An
  Event Summary can also include links to other secondary source material
  about the topic.

- **Primary Sources.** Documents related to the event from historical
  organizations, museums, government agencies, media outlets, and
  independent researchers.

- **Images and Pictures.** Pictures, photographs and artwork depicting
  historical events and people are placed throughout the page to expand
  how readers think about a topic or standard. As much as possible,
  images and pictures are public domain and freely licensed materials
  found on Wikimedia Commons and other image repositories.

- **Multimedia Resources.** Video or audio materials from YouTube,
  Smithsonian, Library of Congress, and other sources provide multimodal
  listening and viewing experiences for teachers and students.

- **Multicultural/Women's/LGBTQ History Resources.** Online
  resources that reveal hidden histories and untold stories related to people
  and events little known in history.

- **Lesson Plans and Teaching and Learning Resources.** Materials
  for inquiry-based learning experiences include instructional plans for
  teachers and interactive websites, serious learning games, and other
  hands-on learning opportunities for students.

(See example Dramatic Event wiki page on the [The Building of the Panama
Canal](#).)

Historical Biography and Influential Literature Pages

Historical Biography and Influential Literature wiki pages highlight actual
persons and fictional characters in history. People are the engines of history,
from well-known leaders, presidents, entrepreneurs, and change agents to less
well-known people who are often omitted or neglected in textbooks. Their decisions and choices make social, political, and economic change happen.

With one exception, Historical Biography and Influential Literature pages utilize the same resource categories as Dramatic Event pages. Instead of an Event Summary, biography pages have links to historical biographies about a person; literature pages have links to a book, poem, or short story synopsis, as well as to an author or poet biography. (View an example Historical Biography page about Helen Keller; view an example Influential Literature wiki page on the *Grapes of Wrath*.)

**Resources for Building Pages With Students**

The Dramatic Event, Historical Biography, and Influential Literature pages on the [Resources for History Teachers](#) wiki have evolved through successive drafts that reflect the efforts and ideas of multiple contributors. Selections are added and deleted as links are taken down and as new resources are located. That same creating and revising process will happen as teachers build pages with students for their own class wikis. As inexperienced researchers, students may not always find credible or informative resources quickly when they search online. In some cases, they will locate sites that teachers will decide not to post. The key is to give students resources to guide their web research, including search categories and sites to use to locate credible resources.

The following are resources to guide teacher and student page-building efforts, organized according to the categories used to create Dramatic Event, Historical Biography, and Influential Literature pages on the [resourcesforhistoryteachers](#) wiki:

- **Event Summary:** To create summaries or overviews of dramatic events, students are discouraged from linking to Wikipedia or other online encyclopedias. Instead, they look for links to open educational content digital texts such as *Digital History* (University of Houston); *America’s Story* (Library of Congress); *Key Milestones* (Office of the Historian, U.S. Department of State); and *History by Era* (Gilder Lehrman Institute of American History). *U.S. History*, a free online textbook published by OpenStax College at Rice University, is another resource for American history event summaries.

- **Historical Person Biography:** The wiki does not link to dot-com biography sites, such as Biography.com, Biography Online, or Infoplease. These sites may have useful information, but they feature numerous product advertisements as well as links to unrelated sites and topics. Biographies are selected from libraries, museums, historical organizations, foundations, universities, or government agencies. The biography section of the [Internet Public Library](#) site has six broad categories of historical figures: artists and architects, authors, entertainers, musicians and composers, politicians and rulers, and scientists and inventors. The lesson “Unsung Heroes: Encouraging Students to Appreciate Those Who Fought for Social Justice” from the Zinn Education Project offers a starting point for expansive historical biography projects (Bigelow, 2004).

- **Book Synopsis and Author/Poet Biographies:** Links are not posted to online study guide sites, such as CliffNotes, SparkNotes, or
eNotes, for book synopses and author/poet biographies. Instead, students are linked to sites from academic organizations that focus on a book or the book’s author. Book reviews from newspapers like the New York Times’ The New York Review of Books or C-Span’s American Writers are also useful sources for summarizing a book and its historical relevance. Online obituaries by major newspapers like The New York Times are a source of biographical summaries for authors and poets as well as notable historical figures.

• **Primary Sources:** If at all possible, links do not point to primary source materials found on dot-com sites or on the webpages of overtly political organizations. Many exemplary sites for locating primary source materials exist, including American Memory (Library of Congress), America in Class (National Humanities Center), DocsTeach (National Archives); and Many Pasts: U.S. Survey Course on the Web (George Mason University). Paul Halsall’s Internet History Sourcebook Project from Fordham University has multiple world history resources, including source books on ancient, medieval, global, African, East Asian, Islamic, and Indian history. Finding World History from George Mason University is another useful starting place for locating primary sources in a global context.

• **Visual Images and Multimedia Resources:** Public domain and creative common licensed images are accessed via links to videos, audio recordings, photographs, artwork, paintings, interactive timelines, and other pictorial images and multimedia materials. YouTube videos need to be examined to determine who is posting the material—a credible organization or an independent researcher. Wikimedia Commons is an expansive resource for pictures and other images. Smarthistory from Kahn Academy is a source for videos and essays about art history; Internet Archive has moving images that are in the public domain; and The Object of History from National Museum of American History invites students and teachers to discover that artifacts can reveal the past, present and future.

• **Multicultural Resources:** To uncover hidden histories and untold stories about the past, students are provided with topics to research rather than finding topics and resources on their own. Teaching a People’s History from the Zinn Education Project is one source of interesting hidden histories, as are Howard Zinn’s books, A People’s History of the United States and A Young People’s History of the United States. An Indigenous People’s History of the United States by Roxanne Dunbar-Ortiz, A People’s History of the World by Chris Harman, and Lies My Teacher Told Me by James Loewen (2007) are additional sources for teachers to use to identify untold stories for students to research online. Bill Bigelow (2004) has a list of unsung heroes who fought for social justice on the Zinn Education Project

• **Lesson Plans and Teaching and Learning Resources:** Students are directed to reliable sites to access engaging lesson plans and teaching resources to preview and choose to post such as NEH EDSITEment Lesson Plans (National Endowment for the Humanities), Smithsonian’s History Explorer (National Museum of American History), National History Education Clearinghouse (George Mason University), Labor History Curriculum (Illinois Labor History Society); and Teaching American History (George Mason University).
Conclusion

Building Dramatic Event, Historical Biography, and Influential Literature pages on an educational wiki can fulfill multiple roles in history/social studies classes. Using page models from resourcesforhistoryteachers, teachers and students can construct their own pages as a classroom learning activity. Then, using collaboratively built wiki pages as a digital textbook, students can learn multimodally as they read, listen, and view interactive web resources. Reporting what they learned, students can describe how online resources reveal different aspects of larger historical stories.

Beyond these activities, constructing Dramatic Event, Historical Biography, and Influential Literature pages for a class wiki places teachers and students in the roles of critical evaluators of web materials—an essential foundation for digital literacy in today’s computer-based classrooms. As many teachers recognize, having multiple computers and rapid access to web resources “does not equate to students learning anything” (Hicks et al., 2014). When teachers and students engage in thoughtful and purposeful searching for resources to add to wiki pages, they practice asking key questions about online materials:

- What type of site is it (e.g., dot-org, dot-com, or dot-edu) and how does the designation of the site potentially impact its usefulness as a teaching and learning resource?
- Who is the author of the site, an individual or an organization, and what are credentials of that author in terms of this topic?
- What information does the site convey and how effectively does the site convey it?
- Why is this information important to more fully understanding the histories of an event, person, or book?
- Will the page invite other students to interact with the resources and perhaps to add to the page as well?

Wiki page building enlarges everyone’s understandings of the Internet and web-based resources. Consulting sources other than Wikipedia and examining more than the first page of search results, teachers and students see the variety and complexity of online materials. They notice the differences in content and presentation between dot-com and dot-org or dot-edu sites. They learn to identify the author(s) of online material and to assess the background of those individuals or organizations relative to a topic. They benefit academically by explaining why a resource should be included on a wiki page. They practice thinking critically when listening to counterarguments for why a resource might not be a viable choice for posting.

Sugta Mitra, the 2013 TED Prize winner, has noted that technologies like Google have already fundamentally changed how learning happens in schools. The teacher is no longer the sole or primary dispenser of information. Instead, students increasingly locate and use information on their own for their own purposes. In such “self-organized learning environments,” the “ability to find things out quickly and accurately would be the predominant skill. The ability to discriminate between alternatives, then put facts together to solve problems would be critical” (Mitra, 2013).
In researching the web, students need the guidance and direction that teachers can provide while teachers need models and approaches that involve students in focused explorations of historical and social studies resources. Constructing wiki pages collaboratively, teachers and students working as learning partners, gives everyone purposeful ways to develop digital skills and historical knowledge. They learn frameworks for accessing and assessing online materials. They utilize a digital forum for publishing and sharing the results of their research. They participate in an ever-expanding technology resource that propels new learning through collaboration and interaction.

To learn the skills of web research and digital literacy teachers and students must have opportunities to “use technology in ways that are truly digital” (Hicks & Turner, 2013, p. 59). That means no one passively receives information from online sources. Instead, teachers and students, collaborating as learners and researchers, construct knowledge using computers, the Internet, and interactive digital tools. Building wiki pages about events, people, and books can be one of those truly digital ways to use technology to enlarge learning in the history/social studies classroom.

References


Resources

America in Class (http://americainclass.org/)

American Memory (https://memory.loc.gov/ammem/index.html)

America’s Story (http://www.americaslibrary.gov/index.html)

The Building of the Panama Canal (https://resourcesforhistoryteachers.wikispaces.com/Panama+Canal)

C-Span's American Writers (http://www.c-span.org/series/?americanWriters)

Digital History (http://www.digitalhistory.uh.edu)

Docs Teach (http://docsteach.org/)

EDSITEment Lesson Plans (http://edsitement.neh.gov/lesson-plans)

Finding World History (http://chnm.gmu.edu/worldhistorysources/whmfinding.php)

Grapes of Wrath Influential Literature page (https://teachingresourcesforenglish.wikispaces.com/The+Grapes+of+Wrath)

Helen Keller Biography Page (https://resourcesforhistoryteachers.wikispaces.com/Helen+Keller)

History by Era (http://www.gilderlehrman.org/history-by-era)

Internet Archive (https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=internet%20archive)

Internet History Sourcebook Project (http://legacy.fordham.edu/halsall/index.asp)

Internet Public Library (http://www.ipl.org/)

Key Milestones (https://history.state.gov/milestones)

Labor History Curriculum (http://www.illinoislaborhistory.org/curriculum/)

Many Pasts: U.S. Survey Course on the Web (http://historymatters.gmu.edu/)

National History Education Clearinghouse (http://nationalhistorycenter.org/national-history-education-clearinghouse/)

New York Review of Books (http://www.nybooks.com)
The Object of History (http://objectofhistory.org/)

resourcesforhistoryteachers (https://resourcesforhistoryteachers.wikispaces.com/home)


Smithsonian’s History Explorer (https://historyexplorer.si.edu/)

Teaching American History (http://chnm.gmu.edu/tah/)

Teaching a People’s History (http://zinnedproject.org/)


Wikimedia Commons (https://commons.wikimedia.org/wiki/Main_Page)

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