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High School Research and Critical Literacy: Social Studies With and Despite Wikipedia

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Drawing on experiences in his social studies classroom, Houman Harouni evaluates both the challenges and possibilities of helping high school students develop critical research skills. The author describes how he used Wikipedia to design classroom activities that address issues of authorship, neutrality, and reliability in information gathering. The online encyclopedia is often lamented by teachers, scholars, and librarians, but its widespread use necessitates a new approach to teaching research. In describing the experience, Harouni concludes that teaching research skills in the contemporary context requires ongoing observations of the research strategies and practices students already employ as well as the active engagement of student interest and background knowledge.

I first became aware of Wikipedia's impact on my classroom after listening to my eleventh-grade class present research projects on the rise and fall of empires. There was an eerie overabundance of facts in every presentation. Succinct but disconnected ideas and details existed side by side, and names were mispronounced at an alarming rate:

So in 1521, Hernán Cortés, and a whole bunch of Nahuatl speaking Native Americans he had allied, conquered Tenochtitlan and brought down the Aztec Triple Alliance, whose King was Hueyi Tlatoani Moctezuma, the Second.

And then, almost in the same breath:

Being free from Aztec rule may have been considered a positive thing by most of the other cultures. Also, the upper classes of the Aztec empire were at first considered noblemen by the Spaniards. Later, though, they lost all their rights.

For some time, I had been noticing that the research projects I assigned to my students were failing. The facts were there—in abundance—and my students with stronger writing skills had no difficulty presenting them coherently and with some flair. Missing, however, was a diversity of resources, personal investment in developing certain points beyond others, and distinctions between fact and opinion. I thought perhaps I had been too lax in my approach to the way students were quoting sources. For some time, I had adamantly demanded that research projects be in the students’ “own words,” an insistence aimed at improving the cohesion of certain projects. Students would have to think harder to rephrase quotations and identify an internal logic to the order of ideas. But in most cases, my instruction only further confused students. I had wrongly assumed that in the process of searching for information and in tying fact to fact, learners would need to “try on” different ideas, make decisions about which ideas to choose over others, gauge the strength of sources, and form new questions. The projects, however—as far as I could tell—had neither inspired questioning nor, evidently, enthusiasm.

This essay captures my attempt to address a variety of issues regarding student research—the independent gathering and evaluation of information—in a classroom committed to fostering critical literacy. It draws on the notes I took on my social studies classes over a period of two years and ongoing conversations with students designed to refine and expand the relationship between my students and sources of information. It is a record of one teacher’s attempt to reevaluate his curriculum in response to the changing technological and cultural conditions that have an impact on students and the task of research. I have tried to present an account of my own thought process in reconciling my vision of a successful social studies classroom with the reality of my practice as a teacher.

Wikipedia enters this account as an obstacle to learning that I felt compelled to address since it defined my students’ experience with research. The further focus on Wikipedia is because I saw an opportunity in the structure of the Web site to address issues of reliability, bias, and accuracy that apply to sources of information in general. The editorial structure of the Web site is such that, considered closely from whatever angle, it problematizes the way we try to fill in gaps in our knowledge using secondary or tertiary sources. It is also important to mention that these notes were taken in high school classrooms with curriculum requirements matching the expectations set by the California Board of Education (California Department of Education, 2007). The vast array of information available on Wikipedia was useful in allowing for a research literacy curriculum that could fit into the various content areas the standards expected my class to address.

Investigating the Research Projects

For two semesters, research projects remained a part of my curriculum—not because they were wonderful learning experiences, but because I could not justify, to myself, a social studies class that did not work to improve the way students navigated the ocean of available information. My curriculum at the time, in one way or another, worked on fostering critical perspectives toward texts.¹ When I was able to combine this critical approach with media and pop culture, the work was easy.

The students liked analyzing films, photographs, and music, but when it came to other sources of information, neither the same enthusiasm nor the same critical skills were evident. I asked myself, how would my students go about forming knowledge of the outside world? How would they evaluate information presented to them beyond the medium of popular culture?

Two related realizations caused me to reconsider my approach to research projects. The first of these occurred while I listened in despair to my eleventh graders present their first research projects of the year. While the facts themselves were plentiful and, for the most part, accurate, what worried me was that my students did not question the accuracy or the strength of the ideas they had gathered. They felt that their work, which I found shallow and unquestioning, was adequate. I realized that in focusing on the final products, I had neglected the learning and teaching embedded in the process: by concentrating only on the strength and cohesion of the presentations, I let the central processes of research, to search and to search again, be pushed to the margins.

The second realization began to take shape when I noticed that less than three full days before the presentations, my students had not yet begun gathering their data. This was true for all of them, whether they actively cared about doing well on the project or not. I wondered, how did they expect to do all the work the project required in just three days? During a homework period, when my students asked to work on their research in the computer lab, I became curious about how they would proceed. I saw one group using Wikipedia, reading an article about the rise and fall of the Sikh empire. As I went from group to group, I was astonished: every group, without exception, was logged on to that very same Web site, each reading an article that seemed relevant to their topic.

I had used Wikipedia before. Now and then a search would bring me to a Web site that seemed to contain an interlinked collection of encyclopedic facts. I would search around a little but soon move on to consult other sources. I was aware of Wikipedia's open contribution policy, but I had not given it much thought, other than to doubt whether it could ever compete with the "classic" encyclopedias written and edited by experts. The impact it could have on the way people gathered information, or the debate it would generate across national newspapers and academic journals, had not occurred to me.² Still, I knew enough to understand the serious problems with my students trusting this Web site as a credible source of information. Casually, I asked them to tell me more about Wikipedia—who prepared it and what they thought of its articles. Only two students knew enough about the workings of the Web site to seriously question its reliability. Every student, however, agreed on one thing: you can find *everything* on Wikipedia.

Wikipedia as a Source

Criticism of Wikipedia's dominance as a source of information raises issues that directly concern any teacher of the humanities (Achterman, 2005). The articles are written and edited by anonymous contributors, and users can review and rewrite any entry at any time. The idea behind it is that the social construction of knowledge will result in information that is reliable and useful. For teachers, however, the lack of assured expert review is problematic. In 2008, the Scottish Parent Teacher Council went so far as to blame Wikipedia, which it claimed was the main source of information for students, for Scotland's falling exam pass rates:

Children are very IT-savvy, but they are rubbish at researching. The sad fact is most

children these days use libraries for computers, not the books. We accept that as a sign of the times, but schools must teach pupils not to believe everything they read. (McLaughlin, 2008, para. 5)

The lack of authoritativeness is perhaps the main drawback of Wikipedia, as the information on the Web site is constantly exposed to special interests, false or unreferenced statements, and even vandalism.³ Consequently, articles can boast neither reliability nor neutrality, although they are often considered to have such qualities by users, particularly young people, who are unaware of, or unconcerned with, the open editorial process (Fallows, 2005; Wilder, 2005). Criticism is also leveled against the overabundance of information, wondering if this easy access to facts somehow dulls the researching mind and pushes society further toward acceptance of commonplace notions (“Will Wikipedia Mean the End,” 2006).

These concerns would not be so prominent if the strengths of Wikipedia were not undeniable. In contrast to Encyclopedia Britannica’s 66,000 articles, Wikipedia includes more than 2 million articles in English alone. This gratis network of information is contained within a uniform framework that enables interlinking, referencing, and access to other online sources. Also, unfit as the entry information may be for citing in an academic article or research paper, the Web site is often surprisingly accurate.⁴

Until noticing my students’ use of Wikipedia, I had allowed the process of research to remain outside the classroom. Therefore, I knew very little about the ways my students actually approached the task of gathering and making sense of information, despite having given lessons on using the Internet and their local library. I had never taught in a classroom equipped with more than a single computer, nor did my previous students have access to well-stocked libraries.⁵ If students do not engage in the process of research inside the classroom, then it is natural for them to view the assignment in a results-oriented manner—the only manifestation of their work being their final paper and presentation. It is not surprising, then, that they are willing to quickly accept the most easily accessible and seemingly accurate information that satisfies the assignment and spares them the anxiety of questioning their data. And when their final products did not meet my expectations, the students responded not by rethinking the research process itself but by simply attempting to adjust the product in light of what they perceived to be my personal preferences. They imagined successful research to be what inspired the least negative reaction on my part, opting out of the deeper learning involved. In order to shift the emphasis from the product to the process, I realized, the latter had to become a part of the classroom experience.

Contemporary as authorship issues of Wikipedia may seem, every complexity mentioned above is part of the relationship between high school students and the ocean of available information. As students search for data, whether in traditional sources such as books and newspapers or online, they have no convincing reason to trust the information they encounter. Critical trust in a source is established over time and through repeated interaction—experiences particularly unavailable to young researchers.

At a basic level, every student must be made aware of the open nature of entries on Wikipedia. The easiest solution for a teacher is to simply inform the class of this; it is also the most common solution. Generally, a lecture on the mutability of Wikipedia information also leads to a ban on its use as a source for student research projects (Davidson, 2007). Yet, the matter is more complicated than a

simple warning can address. The material on Wikipedia is often accurate, properly cited, and comprehensive. Whatever a teacher's assertions about the eventual unreliability of the data, experience will tell the students that the information they gather at the site is effortlessly accessible and sufficiently inclusive.

Also, knowledge of the uncertainties of a source does not automatically translate into an awareness of one's relationship with the information. Popular media has informed many American adults regarding the editorial policy of Wikipedia. Yet as of 2007, on a typical day, at least 8 percent of online American adults consult Wikipedia; in fact, among sites focused on educational and reference material, Wikipedia is by far the most popular, drawing nearly six times more traffic than the second most popular site (Rainie & Tancer, 2007). So whether adolescent students understand through a short lecture or a demonstration how the articles on Wikipedia come to exist is inconsequential; the issue should be whether they can effectively question the authorship of the articles and apply what they have learned in questioning all their sources. Additionally, banning the use of Wikipedia in research projects would not end my students' use of the Web site in their lives; it would merely remove it from the supervised learning environment of my classroom. It was precisely this separation between classroom and everyday research practices that I was trying to eliminate.

Investigating Authorship Issues

Throughout the week following my first observations of the students' research strategies, I struggled with these ideas, trying to understand their impact on my curriculum. The more I thought about the relationship of my students to research, the more I felt compelled to retrace their steps and replicate their thinking for myself. Studying their papers, I searched the Web for phrases or thoughts they had used with seemingly little consideration. More often than I liked, these searches led me to Wikipedia articles. I became curious enough to look more deeply into the Web site, its editorial process, the strengths or weaknesses of its articles on subjects I knew well, and places where the contradictions in its structure became puzzling or interesting. This led me to attempt to change the content of some articles. It was in the process of tinkering with existing entries that I became curious about my students' responses to a particular aspect of Wikipedia and devised a lesson to uncover their assumptions.

At the time, we were working on a unit on the specialization of labor.⁶ I began a session by going through a few Wikipedia pages projected onto a large screen. As we moved through the pages, something odd attracted the attention of the students. All the pictures pertaining to various professions, from article to article, were of the same person, who on closer inspection was one of the teachers at our school. It took a few viewings for my students to notice the act of vandalism, but they quickly realized that I, their teacher, had perpetrated it. I had designed this activity out of my curiosity to know to what extent they were aware of the underlying assumptions of Wikipedia. Most, I found, were quite shocked by the idea that the content they had trusted was so open to random alterations, but those who were more familiar with the Web site laughed or shrugged their shoulders. Overall, the experience confirmed that the majority of students had not previously understood the open nature of the site.⁷ I stopped the lesson and allowed the discussion to turn to the more immediate problem of the unexpected appearance of my colleague's picture on the Web site. The students familiar with the structure of the site attempted to describe the process to their classmates. Perry, his arms crossed at his

chest, simply declared that he had “told us so.”⁸ When asked to clarify, he said that from the beginning of the lesson he had felt uneasy about me, a teacher, using Wikipedia in the classroom and that he had said as much to the student next to him. Another student came to my defense by saying that he and everyone he knew used Wikipedia on a regular basis, and he did not see why it should be excluded from our classwork. Perry thought this over for a moment. His reply reflects the sense of disquiet that the prominence of Wikipedia inspires in researchers and educators: “I look up all kinds of stuff on Wikipedia too. But that’s no excuse for a teacher!”

As we continued to discuss Perry’s discomfort, the discussion, independent of my guidance, turned to the authorial process that checks the content of the articles. My notes indicate a list of questions by the students: How many people were involved in the process and who were they? Were any of the “editors” paid? Did they possess any qualifications? I had assumed that Perry would be able to answer some of these questions, but he seemed to wonder about the same issues. It turned out that Perry did not actually understand the problem with Wikipedia; he disliked my use of it because his previous social studies teacher had told him that it was not a good source of information.

One student came up to my computer and decided to look for the answers online. The site she chose for her research, of course, was Wikipedia, and the search item she entered was “Wikipedia” as well. Her classmates laughed and pointed out the irony of the choice. But when I asked them whether they could think of another source to consult for the information, no one volunteered a suggestion, so we eventually chose to search Google. The only relevant link within the first fifty results was a *Washington Post* article, which was selected and quickly abandoned using the “back” button.

I then offered some basic information on how I had changed the Web site. I showed the students the registration process, logged in, and brought them to the editing software that gives access to the entries. As they watched, I changed one of the pictures back to its original state. It was by watching me log in with an anonymous user name, and asking me whether or not I had provided my real name, that the students found out how easily the information on Wikipedia can be manipulated.

The discussion of the switched pictures, which took all of our next session as well, was a simple way of introducing the class to the concerns that exist regarding Wikipedia, without the more usual lengthy, admonitory lecture. One important finding for me was that the concerns voiced by the students regarding issues of authorship mirrored those expressed by academics. For many of the students, this was a serious issue worth exploring. I neither had to solicit their interest nor force the conversation onward. In our second session discussing the switched pictures, I handed out a printed version of the email sent to me by Wikipedia warning me of the consequences of vandalizing the articles. This focused our discussion on trying to understand the editorial practices and structures of the Web site. Who had sent the warning? What consequences did it entail? Were these enough to hinder future vandalism? What could other “editors” do if vandalism continued? At that point, my role was not to provide a lecture on these practices but to keep track of the puzzles and questions and point out the complexities, ambiguities, and contradictions. The problem of authorship had become a problem worth investigating.

Critical Analysis of Sources: The Problem with an Algorithmic Approach

Traditionally, students are taught about the reliability of sources by being given a series of rules they

can apply to a document. For ease of application, these rules are generally framed as questions, representing an algorithm for determining verifiability:

1. Does the document you are examining contain facts or opinions?
2. Are the opinions unbiased?
3. Does the work extensively or marginally cover your topic?
4. Does the document clearly cite reliable third-party sources for its facts? Is the author associated with a reputable organization?
5. Is there a process by which the accuracy, timeliness, and thoroughness of the sources in question are verified?⁹

We are also taught that certain sources, such as academic journals or books published by reputable houses, are generally reliable because checks and balances are in place to verify content. Credibility and reputation depend on these checks for accuracy. Until I began paying attention to my students' use and understanding of Wikipedia, this was the way I chose to teach my students as well. I would assign them a short document—an article I had previously studied or something intentionally peppered with a few dubious statements—and ask them to evaluate the text in light of the rules enumerated above. The exercises would usually proceed smoothly and uneventfully. The students seemed to learn the basic rules, and some became proficient at performing the activity. Soon, however, I noticed that the students' application of the principles seemed to remain mechanical and, in cases of more complex issues, superficial. Two observations confirmed the shallowness of the learning experience created through the exercise: first, the students did not apply their learning unless I asked them to do so; second, they remained dependent on the list of rules and questions to guide their inquiry. The exercise also seemed to have little impact on the way they viewed the information they gathered from Wikipedia. My students did not seem personally invested in checking the verifiability of the pages. It appeared that the only way for me to combat their uncritical trust of Wikipedia was to go on a personal crusade against the site, openly lament its demerits, or even ban its use for future projects.

As I looked more closely at the problem, I came to understand that there were flaws in the basic premise of the exercise I had hoped would instill a sense of inquiry. What I had taken for granted was the existence of a strong research background combined with the well-developed cultural capital required for understanding highly complex concepts. For example, how do we know if a third-party source is reliable? I could familiarize my students with the format of such sources. I could, for example, hand out academic journals and reputable newspapers so that they could become familiar with the feel and format of these; still, the criteria for reliability would not be clear. We consider a source reputable because over time we have seen it referred to by people we respect, or because in one way or another it has proven its integrity and goodwill. Could I simply tell my students the names of these resources? What I consider reliable in many ways corresponds to my ideological makeup. As a teacher, I do not want my students to accept my preferences as their own. When they leave my social

studies, history, or comparative religion class, it is important for me to know that they will not be unduly influenced by other voices. Instead, I hope that they will hold on to skills and habits that enable them to judge these voices for themselves.

Most primary sources of information do not enjoy the academic oversight that journals do, or the vetting of information that happens with newspaper editing. One of my students, for example, asked me if she should consider information provided by the Japanese government as reliable. It was a good question for which I had no ready answer. (At that point, I had only recently begun observing my students' research habits.) In this case, my student was a young Korean American trying to learn about the Japanese campaign in Korea during World War II. Her background and the specific context had led her to question whether the Japanese government would be a proper source for information on the matter. Still, she was curious as to what to do with the information she had gathered from the Japanese government, which she believed could add an interesting dimension to her research. After some thought and discussion, she independently arrived at a decision resembling one made by academics: to include controversial data in her work while warning the reader of the possible unreliability of the information. Problems like these led me to think that although a rule-based approach to understanding issues of authorship may seem quick and to the point, it merely oversimplifies a complex issue. Not only is this oversimplification unhelpful for students, it also silences their legitimate questions about the sources of information.

The rules method eventually turns into a form of recursive reasoning: the final step asks the student to look for another authority that can guarantee the reliability of the information in the document. But what makes an institution or a person authoritative to begin with? Furthermore, this method assumes that the students can recognize controversial statements when they see them. For that, the student should understand that each source may have a different perspective on the specific issue being investigated. Without that understanding, my students would be unable to evaluate the neutrality of a source. Unless for every problem we painstakingly devise a taxonomy of divergence in interest and opinion, there is no guarantee that all students will apply the same conventions of judgment to evaluating a source. What is guaranteed, however, is that every person possesses a direct relationship to some aspect of the social structure, and this relationship creates a need for, an interest in, and an engagement of moral reasoning in understanding the intricacies of topics surrounding the problem. Lara Ramsey writes, "Without some recognition of why a problem is problematic, without a sense of contradiction or surprise, there is no foothold for approaching new understanding" (as cited in Duckworth, 2005, p. 145).

I had to reconcile my teaching of research skills with these observations, so I developed two intimately related criteria for my classroom activities. First, the activity should involve the student's own background knowledge in evaluating the authority of a document. In other words, if the student is not familiar with the subject, she cannot easily imagine different sides to its discussion. Second, the student should have a chance to employ her learning from this experience by evaluating her own practice of sharing knowledge so that she can hopefully gain an understanding of the importance of presenting information in a grounded and verifiable manner. Although curricula fitting these criteria can be designed around traditional sources, the vast array of information on Wikipedia allows the students to work with topics that they relate to on an individual level. This same diversity of topics provides the opportunity to once again connect the activities with the larger issues being studied by the group.

Evaluating a Source: Amrita Looks at School Demographics

In designing subsequent classroom activities, I wanted both to engage students' knowledge bases and to signal to them that uncertainty is valued and its display welcome and necessary to our learning. We met in the computer room for our next session, and I asked pairs of students to find an article on Wikipedia about a topic they knew well. What did I mean by something they "knew well," students wanted to know. One girl, a particularly high-achieving student, claimed that she did not know much about anything. (I believe I have heard this comment, from different students, for every similar activity.) I explained that the article could cover just about any topic—their school, their hometown, someone in their family, something or someone they had just read about, or a topic from a previous project. I stayed away from movies and pop culture, because suggesting these could direct the entire class in that direction, and articles on bands and films rarely consider the content with any depth.

My instructions were simple: "Read for any statements you strongly doubt." What I meant by "doubt" was another question, and I found it best to return such questions to the class by asking them what they associate with the idea of doubt. A few students equated doubt with uncertainty, disbelief, mistrust, and surprise. These and other definitions could be equally correct, and I noted to myself that all exclusively described the speaker's personal relationship with the statement. When we find ourselves skeptical, we might experience an idea as utterly acceptable but must also acknowledge that others may feel differently. In my first try at this activity, my students made me aware that I had not thought out my wording as well as I should have, and I resolved to expand the exercise to include the more impersonal aspects of skepticism.

After some time, I asked Amrita, who felt particularly excited about her research, to share with the class the article she had chosen on her former high school, a well-known public institution on the West Coast. One statement she doubted related to the information regarding the school's demographics; she believed the percentage of African American students to have been much higher than the Wikipedia article claimed. Why was she convinced, I asked, that the number was different from what the Web site claimed? At first she mentioned only her casual observations; but when questioned further by her classmates, she made a mental count of the students from a particular class. The ratios deduced from that count, she explained, did not match the article data.

What, I wondered, did the other students think of that? No one had attended the same school, although one student was from the same city and also thought the percentage on the Web site could very well be inaccurate. No one else defended the article, but no one seemed convinced by Amrita's mental count. One student wondered where we could search to find out the "actual" statistics. The question, to me, implied that he did not think that the information on the Web site necessarily reflected reality. Another classmate asked whether Wikipedia had mentioned where the numbers came from. This marked the first attempt to investigate the authority of the text. Initially no one paid attention to this point, so I also chose not to press the issue of sources until it generated more interest. Just as the discussion seemed to be dissipating, the same student again raised the idea of checking the source of the information. This time Amrita picked up on the suggestion.

I told my students about the small numbers they sometimes find in the main body of the text and said that they refer to sources listed at the bottom of the page. Amrita noticed that the little numbers, which were blue, were in fact hyperlinks, and she found that by clicking on the number next to the

demographic information she found her way to the exact citation she needed. All the demographic information for the school had apparently been taken from a single source, which turned out to be the school's official Web site.

Was this, I asked of my students, acceptable? Amrita was not convinced. The Wikipedia article, she argued, could have been written by someone within the school who may have been either mistaken or harboring an agenda that encouraged falsifying numbers. The student who originally made the suggestion looked for a Web site providing the relevant census data and found some numbers he could trust. The rest of us moved on to the second part of the activity, which entailed returning to the articles and now reading for statements they found accurate but believed others might doubt. This was my way of addressing the impersonal aspect of controversy and redeeming my previous, incomplete question.

The homework I assigned was to repeat this practice, reflecting on and writing about a few puzzles that may arise in studying a Wikipedia article of their choosing: What statements do they find controversial? How does the article address the controversy? Are the sources cited reliable, and what makes them so? One reason students are able to address these complex ideas is that they deal with topics with which they have direct or prolonged exposure. We have a feel for our schools, we know what we saw in a particular film, we are quick to doubt—if we play the piano, for example—whether a certain artist is the “most brilliant pianist” of our times. Once this personal relationship is established, analysis of the descriptors of the subject will be informed and, therefore, critical. Of the twenty-four homework papers I collected from my students, most attempted a careful evaluation of the statements and sources used in their respective Wikipedia articles. The other papers grappled with the idea of what makes a statement “controversial,” a significant question that also defies simple algorithmic formulations.¹⁰

The critical reasoning displayed in some papers actually surpassed the rules. One student pointed out that the article he had studied was controversial not because of what it included but because of what it omitted. Furthermore, he discovered two distinct types of omissions: Some piece of information is left out and it is up to the reader to fill in the blanks; and the voice of a group is left out and never heard. This distinction, simple as it may seem, mirrors the discourse in critical literacy regarding “gaps” and “silences” (Pope, 2002). This student's paper illustrated for me that my long-trusted rules of research were incomplete at best.

Linking Critical Literacy and Critical Research Skills: Judging a Book by Its First Sentence

The discussion regarding Wikipedia, research, and sources of information cannot be reasonably separated from the discourse on critical media literacy. A researcher must be able to analyze her sources for various degrees and types of bias. My experience with teaching Wikipedia, however, has convinced me that teaching critical research skills requires its own niche in curriculum design. As a social studies teacher, I am familiar with a wealth of curricula planned to promote critical media literacy through fostering an awareness of bias in popular culture (see, for example, George & Trimbur, 2004). These curricula often invite learners to question through analysis the motives that define the choices made by media producers. Two concerns, however, have kept me from utilizing these curricula when working with my students on cultivating skills required for academic research.

First, the language of academic texts and secondary sources, in general, differs from that of popular culture and news media. Both would like to appear neutral, but academic texts also have a claim to authoritativeness that invokes a very particular use of language. The language of academic texts is further shaped by specific disciplines and intellectual discourse. To understand academic research, my students need to work specifically with academic sources.

My second concern is that the films, advertisements, news programs, etc., analyzed in media literacy lessons are selected as a result of the particular political leanings of the curriculum designers. This selection can itself become the subject of analysis, though it is extremely difficult for any curriculum to reach that level of self-reflexivity and transparency. Teachers can also expand their selection of mediums to include pieces that reflect different biases. Here, too, the student must become aware of the selection process, or she may find it difficult to trust the process of exploration or expand it to what she encounters outside the classroom. Prior to observing my students' research habits with Wikipedia, I had attempted to reconcile the premises of critical literacy with these curriculum concerns. That experience is useful in this context, as it helps make the connection between critical literacy and research skills.

In preparation for one of my first sessions with my eleventh-grade U.S. history class, I searched the school library for American history texts and found five, some more than twenty years old. I brought the books to class and placed them side by side on a table so that everyone could see the covers and read the titles. On a handout, I had typed the first sentences of all five books, along with the titles and the names of the authors. The randomness of the selection of these two texts, which I described to my students, was an attempt to somewhat remove my agenda from the choice of materials.¹¹ Also, the language used in these books is the watered-down, accessible version of academic writing familiar to the students.

I asked the students what, if anything, they could tell about the authors or the books by reading these first sentences. The initial response was skeptical, ranging from "it's just a sentence" to "I don't know" and "nothing." These were legitimate answers. Perhaps you cannot tell anything about a book by its first sentence. I nodded my head, acknowledging these responses, but nonetheless persisted with the exercise.

Finally, one student offhandedly said, "Well, you can tell what the *title* of the book is." This became the entry point for the discussion. The title in this case was *The American Pageant* (Bailey, Cohen, & Kennedy, 1987).

I asked, "Can anything be inferred from the title?"

The student thought about it and asked in response, "Doesn't 'pageant' mean parade or carnival?"

"It probably does," I answered.

"Maybe, then, the book thinks American history is like a big parade, you know? With music and dancers and flags!" The class laughed and someone else immediately added, "And maybe a parade master, you know, an official?" As it became clear that a book's title could possibly say something about the rest of the book, the students grew more interested in the sentences.

It would be beyond the scope of this article to discuss the entire progression of the discussion in detail, but please compare for yourselves these two sentences from the handout. The first from Howard Zinn's monograph (1999) *A People's History of the United States* and the second from *The American Pageant*, a classroom textbook:

Arawak men and women, naked, tawny, and full of wonder, emerged from their villages onto the island's beaches and swam out to get a closer look at the strange, big boat. (Zinn, 1999, p. 1)

The European explorers who followed Christopher Columbus to North America in the 16th Century had no notion of founding a new nation. (Bailey, Cohen, & Kennedy, 1987, p. 1)

In comparing these two passages, the students decided that the sentences signaled the authors' position in relationship to the historical event they described. They noted that the first word of the Zinn sentence was "Arawak," while the Bailey and Kennedy book began with "The European." Some students described an author's point of view as "the camera." In the Zinn sentence, students believed that the camera began recording in the Arawak village, followed the villagers (decidedly Native Americans) to the shore, tracked them hitting the water and swimming, and only then panned to reveal a "strange, big boat." This perspective had very important implications for my students, more than a third of whom were first- or second-generation immigrants from Latin America, most with some native heritage. It does not matter if the students' interpretations were right or wrong. The point was not to challenge or confirm their assumptions, which were many and contradictory. Instead, the purpose was to help them develop a sensitive ear for the deep impact of a person's point of view on his writing, on his ordering and representation of facts or ideas. I do not recount the experience as a teaching innovation; this exercise (with the Zinn quotation in particular) is quite commonly used by teachers as a lesson on the subject of evaluating author perspective. I suggest that even this engaging and useful exercise requires reevaluation if we are to take developing research skills into account.

Once I began observing my students actually conducting their research online, I could see clearly that this exercise, though successful in some ways, by no means provided enough practice to familiarize students with reading for the author's point of view. For example, once the students had delved into the Zinn and Bailey, Cohen, and Kennedy quotes, they were confronted with another sentence that they found in an online source, which proved much more difficult to "decode": "Scientists think that thousands of years ago, no people lived in North America and South America; birds and animals roamed freely among the trees, bushes, and tall grasses."¹²

To an experienced reader, the sentence could imply an attempt to avoid beginning a history with the uncomfortable issues surrounding the encounter between Europeans and Native Americans. The word "scientists" has implications for the perceived authority of the text. My students, however, found the sentence confusing, and their confusion was not significantly abated even after we dedicated a session to discussing issues surrounding the passage. However, this more challenging sentence is much closer to the language students need to be able to decode and understand in the documents used for their research. Ambiguous in its political stance, the sentence reflects its author's wholehearted attempt to appear neutral and authoritative. For students to have a concept of various biases, particularly sublimated biases, they must have a well-rounded understanding of the particular topic at hand. But

expecting a more expansive knowledge of history from our students is an elitist notion, given the state of education (Davis, 1995). Throughout my teaching, I have repeatedly confronted that reality.

Research Beyond the First Sentence

Weeks after I tried the “first sentence” exercise with my learners, one of my students, as part of a research project, looked up an online article on the Soviet Union. He reported to me that he found the article to be strongly biased against the Soviet government. He had his justifications carefully collected on a note card so he could bring them up in class. His evaluation included the conclusion that the author of the article must be a “capitalist” because the article had a negative view of the Soviet Union. If the writer were a capitalist, he further argued, his writings about the Soviet Union could not be trusted. A more experienced reader of history would consider that the author could also be a Trotskyite, a Maoist, a victim of Soviet oppression, one sympathetic to such a person, or one simply informed of the many troubles of that system. Enumerating these possibilities, however, would not have helped my student understand their subtle differences; first, he would have to know who Stalin, Trotsky, Mao, and the kulaks were and how they related to one another in history. He may also want to gain a better grasp of the communist-capitalist debate and the meaning of each term in various contexts. This event highlighted for me the isolated nature of the activity in which I had students analyze first sentences. Although the student had expanded his learning to include new sources, he was not yet ready to admit enough complexity into his research process. That readiness is achieved only when one has some complex knowledge of the particular topic being studied.

It was primarily to address this issue that I turned to Wikipedia in my curriculum for critical literacy. First, the language of Wikipedia is a more accessible version of academic writing. Second, as mentioned, its wide range of topics allows my students to look at subjects that tap into their already existing cultural capital.

Another singular attribute of Wikipedia is its transparency—here is a source that openly demands that its users be aware of the possibility of bias in information (Wikipedia, 2008a). This is rarely (if ever) the case with textbooks, television programs, newspapers, or journals. The editors of Wikipedia offer a list of pages that, in particular, are deemed to have questionable neutrality (Wikipedia, 2008b). Readers are warned, and registered users are asked to take time to balance the perspectives. From the list I chose a short article that concerned a religious issue and asked what students thought of the “neutrality warning.” This particular article was so heavily weighted in favor of a particular view that on reading it, my students could quickly point out parts of the text that justified the warning of potential bias. The questions raised during our class discussion concerned the criteria used for gauging neutrality and the process by which the warning might be deleted or reinstated.

My purpose, however, was for my students to learn to grapple with the less obvious issues of bias in documents that have made a professional attempt at appearing neutral or authoritative. Therefore, once we had entered the topic of neutrality and its criteria, I opted not to spend too much time on this particular article and instead introduced my students to the list of articles that appeared biased to editors. Students were to select an article on a somewhat familiar topic and write a brief essay, with clear references to the text, in which they offered suggestions for improving the piece such that the neutrality warning would no longer be needed.

As we worked on these papers, I understood that paying close attention to the students' critical approach to sources had altered the way I assessed their work. My concern with oversimplified evaluations such as the Soviet Union example had brought me to better appreciate the questions posed in the papers rather than merely rewarding the answers. Approaching the theme of critical reading through different activities, on various topics and at different times of the semester (by that time this particular group of students and I had worked together for over eighteen months), had also reassured my students that uncertainty and complexity are a natural and necessary part of this learning process. The papers I received for this assignment were especially memorable, as they were the first in which the majority of my learners used their formal writing not just to provide answers that they thought I would find appropriate but to pose questions and grapple with problems that they found important.

Contributing As an Author

I do not intend to overemphasize the learning value of students editing online articles. For my students, the result of working with Wikipedia this way has not necessarily increased enthusiasm for using the Web site. The opposite is true for between one-third to one-half of my students, who instead began to feel increasingly uncomfortable relying on Wikipedia. Asking a student who, through critical analysis, has become a skeptic of the Web site as a research tool to take part in expanding the Wikipedia project does not play into the student's enthusiasm but, rather, into his educated resistance. I am also wary of the fact that the mechanics of editing Wikipedia pages are time consuming to learn (Broughton, 2008), and learning them has little direct bearing on the concerns of social studies. I cannot imagine dedicating classroom time to teach my students, for example, how to use the Wikipedia text-editor.

Nonetheless, there is significant value in authoring for a medium one has used and studied. The global readership of the Web site and the awareness that its articles are regularly among the first listed on search engines could inspire the detailed attention of the students. It is an empowering experience to act as the producer and presenter of knowledge, rather than merely its consumer.

To provide this learning opportunity, I chose to offer contributing to Wikipedia as one option for a midterm research project, as an alternative to writing a traditional research paper. This option was not a preplanned part of my curriculum; it was suggested by one of my students and seemed to generate some support among his classmates. I proposed that the group of interested students meet with me during our homework period to talk about the rubric and requirements of the project; after all, the idea was new for all of us. The discussion that led to the formalization of the rules for this first group was so fruitful that it has now become a regular part of my curriculum.

The students writing a regular paper were expected to turn in a proposal after two weeks, so I asked the Wikipedia group what their proposal might look like. The initial response was that the proposal would be identical to what was required for the paper assignment: a summary listing the topic, the material to be explored, points of interest for the student, and a few possible sources. Some members of the group, however, had already begun seriously thinking about adding a subsection to an existing article. Their proposal, they understood, could not be the same as that of a paper, as their input would have to tie into another text. It took some time to articulate this idea clearly, but once that was achieved, they brought new ideas to the table. One student thought that the project could also involve editing a poor article on Wikipedia and raising its quality. The final assessment, he suggested, could

be determined by whether the editorial warning about the quality of the article disappeared. It was a good idea, I agreed. We eventually decided that the proposal should include a summary of the reasons a Wikipedia article needed to be enhanced, edited, or added.

The most significant difference between the projects submitted on paper and those submitted through Wikipedia became apparent after I collected them. Whereas the papers were static, seemingly altogether finished once submitted, the Wikipedia pieces regularly attracted the attention and work of the students, even when our class was not in session. Moreover, these publications were dynamic beyond the classroom, undergoing edits, comments, and discussions by anonymous Wikipedia editors. Parts of the articles could be deleted and new parts could be added between the previous lines, frustrating or surprising my students. At one point, one student who was tired of negative comments on his work deleted the section he had added to an article. A week or so later, he noticed that another editor had undone his deletion, considering at least part of the text essential to the value of the article. In this process, my students learned something about research that I had not considered teaching them: any published research represents a submission to a community of peers for further discussion, and the researcher must remain humble regarding the material he has collected or uncovered.

Conclusion: Valuing Uncertainty

As we advanced through the curriculum, I observed my learners as they searched for a topic and sifted through the search results to choose a site as a source of information. I would ask them why they chose to take notes from one source and discard another. I noted three different types of evaluation that, previous to our Wikipedia lessons, they either did not perform or did not articulate. First, they tended to show preference for articles that clearly indicated the author's full name. Second, they preferred to cite from more comprehensive articles, rather than pages that provided short, summarized texts on a topic. These texts were consulted or studied, but the students did not seem to rely on their content for building their projects. Third, students would check the tone of the articles for any observable bias. None of these three skills are inherent to simple, mechanical literacy. Furthermore, active application of these three criteria is not the same as "feeling" the legitimacy of a page or choosing between one page and another based on the look or format of the page, which the students were able to perform at a rudimentary level prior to our shared learning experiences. Using these three criteria, the student is applying a self-formulated methodology that addresses the issues of authorship, reliability, and neutrality of a text.

It is also significant to the students' future learning that they are able to articulate the thinking behind their choices. In this case, their articulation indicates a basic understanding of the issues concerned. All three tendencies I have mentioned require extra time and effort on the part of students. Their application, particularly in the absence of any clear rubric requirements, signals some personal investment in ensuring the integrity of their work. For me, as their teacher, it represents a triumph in establishing a classroom culture that values careful and critical research. Although it is not all that is required of a critical researcher, acquiring these skills is a step in the proper direction.

Beyond a singular venture in curriculum design, this experience has led me to certain conclusions regarding my teaching of social studies in general. I now understand that whatever research strategies students use in their day-to-day lives, which no doubt will vary depending on who the learners are, must be investigated and taken into account by their teacher. Neither this goal nor the goal of

improving these strategies can be attained unless students have time to engage in research while they are in the classroom. And inviting students to the computer lab and remaining attentive to their interaction with online sources are as important as accompanying students to the library. Habits and skills leading to good research require the student to invest time and effort in the process, and it is unreasonable to expect any student to make this investment without some degree of personal engagement. In teaching critical literacy for research, I have had to separate research from its dry, academic context and consider it as an everyday practice of becoming informed about issues that have an impact on the students' lives. I must value not answers but instead questions that represent the continued renewal of the search. I must value uncertainty and admit complexity in the study of all things.

Notes

1. On critical competence in literacy, see Freebody and Luke (1990). While teaching this class, I had a minimal knowledge of work done by Eleanor Duckworth (2001) and her colleagues at the Harvard Graduate School of Education. As I have become more familiar with Duckworth's work, her conception of critical literacy has informed my thinking and teaching.
2. For examples of the discussion of Wikipedia's role as a resource, see, in popular media, "Will Wikipedia Mean the End of Traditional Encyclopedias?" (2006), featuring a debate between Jim Wales, the founder of Wikipedia, and Dale Hoiberg, editor-in-chief of Encyclopedia Britannica. For a slightly more one-sided view, see Poe (2006). For examples in academia, see Miller (2007), Read (2006), and Rosenzweig (2006).
3. An IP address scanner at the site's server revealed information tampering by computers belonging to the Vatican, the CIA, the U.S. Democratic Party, and even Diebold, a company that manufactures electronic voting machines (Elsworth, 2007).
4. The *Nature* report (Giles, 2005) indicates that Wikipedia articles are generally as accurate as those of Encyclopedia Britannica. The study was disputed by Andrew Orłowski (2006), who held that the Britannica articles sampled by the study were compilations that included text from the youth section of the encyclopedia. *Nature* acknowledged the compiled nature of some of the Britannica extracts but disputed the claim that this invalidated the conclusions of the study.
5. Importantly, my current teaching context provided some key support for my work. This is an independent high school that enjoys corporate sponsorship. Full tuition, at the beginning of the experience recorded here, cost \$8,000 per student per year. More than 70 percent of the students received substantial financial aid, and just over one-third of my students were English-language learners.
6. The classroom experiences recounted in this article took place over a period of two years. Here I have ordered them according to theme rather than chronology.
7. Research has already shown that college freshmen, despite their very poor research skills, generally consider themselves "experts" at Internet research (Wilder, 2005).
8. To protect identities, I have used pseudonyms for all students.

9. I generated this set of rules for my classes specifically. More extensive (and similarly problematic) versions of these guidelines can be found in Engeldinger (1988) and also in Ormondroyd (2004).
10. The problem of teaching complex mathematical concepts through algorithms and formulae has been explored by Kamii (1985) and Kamii and Dominick (1998). The problems are strikingly similar to those encountered in my example.
11. The selection process, however, did not necessarily address the potential agendas of the school librarians.
12. A student found this quote at <http://www.redcomet.org/Preview/Hus3aPrv.html>, a site that offers online history courses to high school students.

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