Making Connections: Hypertext and Research in a Middle School Classroom

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It was the day before winter break, not usually the most serene of days in a middle school, but much to my surprise, my students were not obviously eyeing the clock or counting down the minutes before their two-week vacation. Instead, they were glued to their computer monitors, working on research projects. And what was so different about these projects that on the day before vacation a heterogeneous classroom full of vacation-hungry eighth graders would be so engaged in school work? Our new computer lab—thirty computers networked to a server and connected to the Internet. Thirty powerful tools that help students in my small rural school district explore a world that would ordinarily be beyond their scope.

It is not unusual to read how students are using the Internet to assist them in gathering information about a particular topic. Indeed, the Internet is a powerful, almost magical resource, but I wanted my students to do more than just search the Internet for information. I wanted them to create documents that would add to the information available. I wanted them to create hypertext webs.

Defined simply, hypertext is the electronic linking of text. When we click on a word on the Internet that is often underlined or in a different color, we have activated a hypertext link that takes us to a different document. This ability to electronically link text has dynamic implications for the English classroom, especially in terms of student research projects. What follows is a description of how hypertext and research came together in my eighth grade classroom.

It began with a collection of Native American poetry. In hopes of linking their eighth grade language arts studies with their history class, in a middle school that does not use a team approach, I asked students to look at the poetry of modern Native Americans. The collection of poems included such selections as “Punto Final” by Shirley Hill Witt and “New World” by N. Scott Momaday. After reading and discussing the poems in the collection, I asked students to team up and choose a poem they would like to investigate further. Students then underlined words and phrases they did not understand or wanted to know more about in the poems.

For example, two students working together selected the following underlined words and phrases in “Punto Final” for further investigation:

You Spaniards. You evil ones
Of the golden tongues and
Miraculous dreamweaving!
Once again a believing Malinche
Finds herself amputated
Hands, feet, heart—like Acoma

Once students identified points in the poems that they wanted to further investigate, they began gathering their information, and they began learning how to write hypertext documents.

We accept the fact that students learn by doing, and, just as young children spend class time learning to form letters and words as they create pieces of writing that are meaningful to them, students confronting computers need time to learn the technology through immersion in meaningful...
tasks. I expected my students to learn to use Storyspace, a hypertext writing program published by Eastgate Systems. Through the process of writing meaningful documents, Storyspace allows students to create a map of their documents and shows the ways in which each document links to another. (See Figure 1, Lisa and Bonnie’s map of their “Punto Final” web.)

Students began their projects by typing their selected poem into Storyspace. The poem, then, became the opening of their hypertext web and served as the focusing agent for their research. Over the next few weeks, students pored over information, and they allowed themselves to be pulled in whatever direction their curiosity took them. For example, if the poem they were researching talked about “evil Spaniards,” they first looked for information about the Spanish Conquest. In turn, that information sometimes led them to new topics such as Spanish galleons or Spanish weaponry. Other students found themselves searching for information about smallpox. Still others sought out Native American legends about wolves and thunderbirds. Their webs grew into a complex interrelationship of facts and ideas.

It is important to understand that hypertext challenges our sense of beginning and ending, so a hypertext web may have a “jumping off” point for a reader, in this case a poem. But from there, a reader can go in a number of different directions. Tennyson’s poem In Memoriam serves as just that sort of starting point in Brown University’s The In Memoriam Web, which reifies the internal and external allusions and references in the poem (Landow 55). I believe that allowing students to dig into the poems they choose will teach them a great deal about how colonization affected native people and how their sense of displacement and alienation continues today. Plus, students would be engaged in meaningful reading and writing.

When conducting their research, students used both traditional and online sources. It was interesting to watch them in the beginning because they relied heavily on library sources, partly because our access to the lab was limited, since technicians were still setting up some of the features.

Figure 1.
HyperText Web.

Lisa and Bonnie’s map shows the documents in their hypertext web. Each box in the web represents a document containing information that either defines a word, explains a historical event, provides information about a place or custom, or provides a personal response or interpretation of something mentioned in “Punto Final” by Shirley Witt Hill.
But even during the times we did have access, students did little research online. Once we could spend full class periods in the lab, however, they began searching for information, using the various search engines.

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They quickly learned to read the results of their searches. Students were surprised and dismayed at first that a simple search of “Navajos” would yield so many possibilities. At first, they believed they had to open every single entry that popped up on the search results pages; however, reading a search results page is just another skill, and they quickly began to get a feel for which pages would offer the kinds of information they were looking for. In other words, they learned to read a search results page much as they learned to read the table of contents of a magazine or the index of a reference book. Students also discovered that some information is either well hidden on the Internet or does not exist there at all. Some students found that information about Witt was quite scarce; however, other students were impressed with how much information was available on Momaday. Still others found that nila northSun, author of “moving camp too far,” one of the poems available to students, was on the Internet and, indeed, that she had written other poems.

Throughout the research project, students were allowed to use both traditional and online sources of information. As their webs grew, I had opportunities to show them how to copy and paste text from one program to another and to go over some of the standard research lessons such as citing references and paraphrasing. I also showed them some of the conventions of digital text—color, graphics, font styles, and sizes.

In addition, I showed students how to place documents on their screens so they could read something from one part of the screen and take notes on another part, using another program. Rather than keeping index cards or pages of notes, students kept notes on a disk. When they felt they had enough information to write a lexia, a “page” in their web, they simply edited their notes and copied the page into Storyspace. Students quickly realized they could organize their lexiads or pages using color. For example, some students decided to make all their lexiads dealing with Native American legends a single color, so that when they looked at a map of their documents, they could easily find the legend pages. Such organizing principles helped them see relationships between ideas.

This was one of the most important lessons students learned—how to see relationships between one piece of information and another. That is the real power of hypertext and the real goal of the hypertext research project. For example, not only were students learning who La Malinche was, they were finding similarities between La Malinche and Pocahontas and thinking about why La Malinche was stigmatized, while Pocahontas was romanticized.

By the time students were finished with their research, they had read dozens of online articles about historical events, as well as articles they found in library reference materials. They created an average of twenty pages (lexias) of information relating to some aspect of the poem they chose to work with. In the course of their research into the images and issues in “Punto Final,” for example, students not only learned about La Malinche, a young woman who served as an interpreter for Cortez, but they learned about the Anasazi, about Acoma and Chaco Canyons, about the Seven Cities of Gold, and about the Spanish Conquest and how devastating it was to the Native Americans who encountered the Spanish in their quest for gold and other riches.

Why Hypertext?

It would have been simple to ask students to do a traditional research paper on the Spanish Conquest or a particular group of Native Americans, or perhaps to read the collection of poetry and have students respond to it. However, I believe that
hypertext provides a means of reading and writing research that helps open students up to new ideas about what text is and how it can be manipulated. I wanted my students, even though they were only thirteen and fourteen years old, to experience text in a new way, as a network of links. Michel Foucault, in *The Archeology of Knowledge*, indicates that all text is bound in some way to other texts, that it is “caught up in a system of references to other books, other texts, other sentences; it is a node within a network” (23). I wanted my students to gain experience in the deliberate linking of text, to understand that there is more than one way to conceptualize text, and to begin to abandon the notion that text has to be linear. Indeed, some hypertext theorists like Jay Bolter claim that no text is really linear. Bolter maintains that we humans are intertextual, hypertextual creatures who constantly link one concept with another, who connect one piece of written or oral text with another (21–23).

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I wanted to give my students experience writing in a format that will no doubt be part of their writing lives from now on. The Internet is growing, and the more they know about the mechanics of writing hypertext documents, the more prepared they will be for a future that will use the Internet as a major means of supplying information to a word-hungry world.

**Would I Do This Again?**

This project took nine weeks to complete, and it was worth it. I’m not sure I have ever seen eighth graders so engaged in a task for so long. As a middle school teacher, I am very conscious of the ebb and flow of interest, and I try to keep the pace moving so that students do not tune out their tasks and become disengaged, but the computers held them easily. Students walked into my classroom, took their disks out of the storage box, and headed for the computer lab across the hall. There they quickly turned on their machines, booted up Storyspace, and launched themselves into their research.

In the beginning I spent much of my time digging individual students out of minor technical jams, but after a couple of weeks I was allowed the wonderful freedom of talking to them about text. I suggested areas for further research, helped them learn to read search engine results pages, and discussed issues they discovered through their research.

Not once did I have to remind someone to turn around, get to work, or sit still. That is why, on that last day before winter break, when my students were glued to their monitors, I was immersed in a serene classroom setting. Vacation may have been lurking in their brains, but the computers were connected, and so were they.
Works Cited


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