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New Systems Require New Strategies: Helping Our Students Become Better Online Readers

Patrice Heinzman

Applying classroom strategies for online reading goes beyond simply transferring what we know about reading traditional hard copy print to that of the electronic medium. This is not to suggest all our closely held reading theories and practices become immediately obsolete. It is, however, important for us to review the expanding body of knowledge that incorporates relevant existing theory with the newest research regarding reading online. By doing so, we will be in a better position to help our students get the most from their online reading experiences. This article suggests five strategies to ease your transition—as teacher, as facilitator, as learner—into the online reading revolution.

Strategy #1 Creating a Satisfying Online Reading Environment

We arrange our classrooms to create the most conducive reading environments possible. Our bulletin boards are eye-catching, and our well-stocked book corners are inviting, often filled with colorful pillows, chairs, and rugs. Likewise, it's important to create a comfortable online reading environment, one that promotes a facility with the technology and makes computers work for the student.

As with any learning-oriented situation, we must first understand our working situations before we can make appropriate teaching adjustments. Our student readers act and react within a medium that features constantly changing screens, animation, and fonts, pop-up menus, and hypertext. It is up to us, as classroom facilitators, to ease their transition into this new medium. The payoff will be confident and knowledgeable online readers.

The initial steps are to monitor the physical arrangement of the equipment and to direct our attention to how our students are using technology. Fortunately, the current research into computer-related

ergonomics, an applied science concerned with a safe interaction between user and equipment, shows us how to set up an optimum online learning environment.

The following tips have been developed by ergonomic experts and serve as baseline information to help us arrange our computers and related technology most effectively:

- Use chairs that are comfortable to sit on and have good backrests. Make sure that your readers sit at the back of the chairs and their feet are flat on the floor.
- Place the computer monitor directly in front of the reader. Keep the top of the screen at eye level. The screen should be about 18 to 30 inches from the reader's eyes.
- Position the monitor at a 90 degree angle to windows and tilt away from ceiling lights.
- Adjust the keyboard to be as low as possible. Place the mouse right next to the keyboard on the same level.
- Urge your online readers to take eye breaks every 15 minutes, looking away from the screen for at least 1 to 2 minutes.
- Adjust brightness and contrast controls. Wipe screens often.

Just as you arrange your reading corner away from noises and distractions, it would be helpful to consider the best location for online reading. By anticipating the physical needs of our online readers, we will make their reading experiences easier and productive—not to mention more pleasurable.

Strategy #2 Helping Readers Adjust to the Realities of Online Technology

Depending on their level of experience, readers, comfortable with the linear form arrangement of traditional print, often find the adjustment to reading

online difficult. One explanation lies in the fact we are able to gauge immediately the format, organization, and length of traditional hard copy publications in ways that are impossible within the more free-wheeling online medium. At any given moment, we know exactly where we are in the text of a hard copy publication—which certainly is not the case when we are reading online. This general lack of spatial-contextual clues can be disconcerting and disorienting.

To overcome this situation, it is essential to teach students about commonly used organizational tools as soon as they begin to read online. These tools include online organizational markers such as headings, large type, bold, italic, and highlighted texts, bulleted lists, graphics, captions, and tables of contents. Also, readers who are familiar with flow charts, site maps, menus, and outlines will be better prepared to navigate through the online text in a purposeful way. Knowing about and using these tools will orient the online reader and offer needed direction. Another reason readers often find it problematic to adjust to the horizontal computer screen is one well known to artists and designers. The next time you sit in front of your computer, take a good look at the screen. One of the major differences between a sheet of paper and a computer screen is the orientation of material. Paper offers a linear orientation, whereas the computer screen presents a horizontal one. This becomes important when we understand a design truth: a horizontal orientation draws the reader's eyes into the realm of activity. It also helps explain why we become adept at quickly and efficiently accessing data and searching for information online.

Contrast this online horizontal orientation with that found in our traditional publications. Readers are used to a linear orientation, one that draws our eyes vertically, which happens to be the realm of contemplation. This fact sheds light on another online reality: readers, generally, are not given to contemplation or examination while online. We rarely pause to consider, to think, to formulate. Once online, we assume a less patient mindset. Our attitudes and expectations change accordingly. Online readers expect to experience variety, excitement, something different. With only a click of the mouse, the restless reader is off roaming from website to website, rejecting perceived visual impediments and obstructions.

As we plan classroom reading assignments, we need to consider if we are using the most appropriate medium for our desired outcomes. Conducting online research, with the proper critical thinking tools, is exciting and discovery oriented. However, if the assignment calls for giving thoughtful consideration to an idea or theory, or to formulate a carefully conceived perspective based on a careful reading of a passage, it may be better to direct students to more traditional reading approaches. It is important to choose the right medium for the right assignment and outcome.

Strategy #3

Using Effective Techniques for Gaining Online Information

In the beginning of this article, I mentioned that we need not prematurely discard well-regarded reading theories even in the face of this new technology. For example, we learned back in the 19th century from French ophthalmologist Emile Javal that the physical act of reading is not a continuous, systemic process. Our human brains do not process information by reading line after line in a smooth, uninterrupted flow. Our eyes move about the page, jumping every three or four seconds at a speed of about 200 degrees per second. It is during the brief pause between movements that the reader actually assimilates information. We also know the reader's perceptual span for semantic information is one or two words, which in Western cultures falls to the right.

What does 19th century research have to do with today's online reader? Plenty. This neurolinguistic research reinforces and extends what we are learning today about online reading habits and capacity. The fast-paced online medium that responds with a click of the mouse, scrolling down insistently and rapidly, encourages readers to scan to an even greater degree than does hard copy print.

Recent research about online reading reveals three interesting facts:

- Users do not read in the traditional sense on the web. Instead they scan the pages, trying to pick out a few sentences or even parts of sentences to get to the information they want. One online study showed that 79% of a test group scanned the material, with only 15% reading word by word.
- It takes 25% longer to read computer text than traditional hard copy print.
- Readers become frustrated after scrolling four screenfuls of text and tend to lose the meaning and context of the message.

This research clearly points out the need for strategies that: 1) recognize the reality of the fast moving online reading environment, and 2) encourage students to maximize their understanding of the online text.

When viewed from this time-imperative perspective, it becomes critical for our readers to see themselves as journalists, always looking to uncover the who, what, where, when, why, and how within a given online article. Like journalists, readers must recognize the value of well-written headlines and topic sentences and learn to search out news summaries and conclusions.

Readers should also know that an effective website writer conveys select information in the beginning of an online passage. Again, in the journalist's language, this creates an inverted pyramid with the most important information provided at the beginning of the online text. The writer does this to counteract the tendency of online readers to lose the context of a

lengthy online passage and to alleviate the possibility of information being lost at the bottom of a screen. By helping our online readers learn as much as possible about how online writers present their information, we are guiding students to a clearer understanding of the information. Our students will still scan to a great degree, but at least they will have formed useful tactics to get the most from their time online.

Strategy #4

Encouraging Students to Become Better Consumers of Online Information

Many of us are old enough to remember the '60's rallying cry, "Question Authority!" This sentiment, when viewed from the perspective of written information as a kind of visual authority, seems to me as valid today as then. The lines separating advertisements, editorial opinions, and real news continue to blur throughout various media, but nowhere more so than on the Internet, with its plethora of unchecked and unregulated websites.

As our societal pace quickens and the rush of information upon which students can make balanced and intelligent decisions increases, we need to help our online readers engage in basic critical thinking skills. These skills do not differ radically from ones we would ask of any source, whether online or not. But the very speed of available and often questionable information which presents itself on the Internet dictates that we urge our students to step back and pay careful attention to all website information. When considering information on a website, it is always a good habit to ask the following questions:

- How authoritative is the person or organization presenting the information?
- Are biases or prejudices creeping into the information?
- Are the main points supported by credible research?
- Are the supporting arguments reasonable?
- Is the information concise, timely, and well organized?
- Who, ultimately, benefits from the point of view?
- Is there a balance between form (website design) and substance? Do the two complement one another?
- What links to other sites are provided?
- What can we infer by these links?

Gaining the answers to these questions will go a long way to help our students become active online readers by reducing their level of passivity and increasing their critical thinking skills and confidence. "Question Authority?" As we approach the year 2000, I'd revise that maxim to "Question the Message!"

Strategy #5

Enriching Our Students' Experiences by Sharing Online Information

Perhaps nothing has the potential to change the world of today's readers than does hypertext, a mechanism which allows the reader to move layer by layer through an online text. The reader does so by electing to view additional text and images by clicking on certain words or graphics. Information is accessed in a multilinear, multisequential manner. The linearity of traditional hard print disappears as the reader chooses which paths to follow.

In a very real sense, the choices made by the reader transform him or her into a writer of the text, an exciting and heady prospect for our online readers—but one that carries implications for classroom teachers. Having chosen varying paths, no two readers, who already differ experientially, will arrive at the same place at the same time, making it challenging for teachers to help students formulate a sense of cohesion and coordinated meaning about the text.

While such diverse hypertext choices can provide enriching learning environments, without thoughtful intervention on our part, the reader could wander unescorted through the text, unsure where to focus attention. We would do well to consider with care our choices of websites, selecting those with links that add focus to the assignment and are based on readers' questions, knowledge, and needs. Often a minimal number of strategic, persuasive links will provide the maximum effectiveness since ineffectual detail tends to cloud information.

The theory of constructivism, as it relates to anticipating and adjusting modes of communication to coordinate meaning based on the perceptual level of the reader, will undoubtedly gain greater scrutiny in the coming years, largely due to the options now available through hypertext. But one thing is certain: the richness of our classroom learnings will increase exponentially, as students share varied and valuable online information with their peers, sparking interests and deepening understandings. These individually chosen paths will serve as gateways to even greater avenues of knowledge—if we offer a learning environment conducive to the online medium.

Life in cyberspace is anything but static. It evolves and transforms, and as it does our students will be expected to master what Cynthia Selfe calls a "multi-layered literacy." Students will become richer for the experience, providing we build a foundation based on a thorough understanding of the online medium. Regardless of their seeming familiarity and ease with technology, students still need guidance to ensure a worthwhile and satisfying reading experience. As educators, as learners, we are going through a transitional time—trying to build a bridge between one medium and another, trying to discover what will work for our students now and in the future. The bottom line is: new systems require new strategies, and we're all learning together in this brave new world.

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Ergonomic Web Sites:

- <http://www.lib.msu.edu/lucasn/macul98/index.htm>
<http://www.me.berkeley.edu/ergo/tips/post.html>
http://www.com.msu.edu/isa/news/n_letter/96-01.html
<http://ergo.human.cornell.edu/ergoguide.html>

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Patrice Heinzman is the Director of Public Information for Ingham Intermediate School District where she provides communication and public relations assistance to Ingham ISD and the local schools.