



Rethinking comprehension strategies to better prepare students for critically evaluating content on the Internet

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Good readers use a variety of strategies to solve comprehension problems or deepen their understanding of a text. Reading critically means being able to construct, extend and examine the meaning of what is read. Critical readers demonstrate the ability to investigate sources, recognize an author's purpose, distinguish opinion from fact, make inferences, form judgments and detect propaganda devices (Spache, 1964). Langer (1991) outlined four levels of behaviors that all readers should exhibit, including the ability to take a critical stance by thinking about a text from the perspective of how and why it was developed the way it was by the author. This is a highly reflective skill that requires read-

to promote products and services, directly or indirectly." Similarly, one can now easily locate entire websites devoted to keeping up with the ever-growing collections of informational hoaxes that appear on the Internet (e.g., Current Netlore at <<http://urbanlegends.about.com/library/blhoax.htm>>; The Museum of Hoaxes at <<http://www.museumofhoaxes.com>>; and Kathy Shrock's compilation at <<http://school.discovery.com/schrockguide/eval.html>>). These examples clearly demonstrate the incredibly complex challenges for educators struggling to prepare students to analyze, evaluate and interact with informational texts on the

Critical literacy experts and professional organizations have developed numerous evaluation guides and checklists to aid teachers and students as they read on the Internet (e.g., see examples listed at http://www2.vuw.ac.nz/staff/alastair_smith/evaln/evaln.htm). Although many include questions about content, most educators attend to variables that are more about graphic design and usability rather than the actual content of the message itself (Cottrell, 2001). Similarly, a recent poll of 1,500 adult Internet users found that “the average consumer paid far more attention to the superficial aspects of a site, such as visual cues” like layout, font size and color scheme, rather than focusing on the “breadth, depth, and quality of a site’s information” (Stanford Persuasive Technology Lab, 2002). As a result, teachers and students are often distracted by their focus on the glitz of web design and the workability of links and are not spending enough time focusing on evaluating the explicit content or the implicit messages contained within information on the Internet for the purpose of building comprehension and critical reading skills.

My work with teachers in professional development sessions supports this notion. Often, using these checklists to evaluate a parody website such as The Onion <http://www.theonion.com> or HotAir <http://www.improbable.com>, teachers will notice that each of these websites is very current, has contact information about the author, loads quickly, is well organized

lums (Kinzer & Leander, in press; Leu, 2002). Thus, the purpose of this article is two-fold: first, to explore the nature of information on the Internet and the implications related to critical reading and comprehension instruction; and second, to highlight a few instructional models that can help shape a broader critical comprehension curriculum. My hope is to provide a link between research and practice for educators attempting to integrate research-based reading practices with new technologies in their classrooms. This two-tiered format is also intended to illustrate how the Internet functions both as the source of new challenges for literacy educators as well as the source of excellent instructional solutions.

THE NATURE OF INFORMATION ON THE INTERNET: IMPLICATIONS FOR COMPREHENSION INSTRUCTION

When exploring the nature of informational texts on the Internet, there are at least six features that should impact our thinking about reading comprehension instruction that encompasses new information and communication technologies.

**There is little consistency
in the multimedia formatting
of information on the Internet.**

The Internet is growing by leaps and bounds and information is commonly communicated in multiple media formats (Brunner & Tally, 1999; Reinking & ChanLin, 1994) with little uniformity

There is little in the way of quality control of the information that is constructed and communicated on the Internet.

Anyone with access to the Internet can easily compose and publish informational text, graphical images, and video clips without going through the processes of peer-review or screening; likewise, anyone can claim to be an authority on a particular subject. Consequently, several researchers and media experts (e.g., Burbules, 1999; Ciolek, 1996; Harris, 1997) have questioned the credibility of information on the Internet. These scholars strongly encourage readers to actively assume responsibilities once given to editors and publishing companies. On the Internet, young readers are now expected to identify authors, investigate their qualifications, pay attention to their sponsors and verify contact information in case of questions, comments or problems. Similarly, readers should be able to make judgments about the overall quality and richness of the content available by a web author.

The amount of information available on the Internet can be overwhelming.

Free and easy access to the proliferation of information on the Internet has led some to issue warnings of there being “more information available than we can possibly digest or consume or fathom. We have passed from a smokestack age which was information lean to an age of info-glut and info-garbage” (Mackenzie, 1997, <<http://www.fno.org/mar97/deep.html>>) Several

Internet webpages and the constant change of service providers, it is quite difficult even for web authors with good intentions to keep the links on their website working and current. In fact, many web authors include a clause on their page indicating that they cannot be held responsible for broken links or changing information appearing at these links. Moreover, just because a page was recently updated does not mean that the information is up-to-date. As a result, readers need to be taught how to read deeply within the context of the topic itself while looking for clues that might help determine the date of the information provided and then, how to locate more current information if the original source is indeed out-of-date.

Digital manipulation has become a popular form of deception on the Internet.

Media literacy experts are wrestling with the issues arising from an increasing number of electronically altered images that are shared via the Internet (read more from The Center for Media Literacy’s “Is Seeing Believing?” project at <<http://www.med.sc.edu:1081/isb.htm>>). In the beginning of the PBS video *Media Matters* featured from their accompanying Newseum website <<http://www.newseum.org/>>, the narrator explains, “In the traditional process of news photography over the decades, the image itself was rarely tinkered with. But things are now different. Today’s computer tech-

Information on the Internet is often intertwined with hidden social, economic, and political agendas.

These forces have the potential to influence and bias unsuspecting, non-critical readers (Kalantzis & Cope, 2000; Kinzer & Leander, in press; Leu & Kinzer, 2002). Personal information is regularly solicited, website visitors who stay long or share the website with friends are rewarded with special prizes and gimmicks, and “barely disguised product marketing surveys” populate many websites designed for young readers (Aufderheide, 2001). Advertisements, interactive games, search functions, informational passages, related links and consumer surveys at popular children’s websites like American Girl <<http://www.americangirl.com/>>, LegoLand <<http://www.legoland.com/>> and Scholastic <<http://www.scholastic.com/>> are often intertwined within the same web page, causing confusion about the author’s underlying intentions. This has prompted media literacy experts to integrate critical literacy strategies into classroom instruction to help students approach and process both traditional and new media with a sense of informed skepticism and critical “habits of mind” (Brunner & Tally, 1999; Jones & Falanga, 2000). Critical questions outlined by Brunner & Tally encourage students to consider the following questions when viewing any type of media: “What particular perspective of reality is presented? What explicit or hidden values underlie this text? What media conventions are

more aware of these differences and how and when to appropriately apply traditional comprehension strategies or develop new ones to comprehend what they read on the Internet.

INSTRUCTIONAL MODELS FOR CRITICAL COMPREHENSION INSTRUCTION

Paradoxically, educators can turn to the same Internet that poses such challenges to access models of instructional resources that inspire us in our attempts to meet the needs of readers and writers developing new literacy skills. I’ve discovered several categories of websites that address critical reading and thinking within Internet text environments; I’ll briefly mention three here including (1) developmentally appropriate interactive test-drives through comprehension tasks influenced by Internet issues; (2) efforts to share lessons that integrate media and visual literacy skills with more traditional critical reading strategies; and (3) online repositories designed to elicit and store critical evaluations. Let’s explore just a few online resources in each area.

Several hands-on interactive environments have been designed to engage students in developing an awareness of important Internet issues. Students of any age can be introduced to differences in critical reading on the Internet as they earn their very own Internet driver’s license. Elementary readers learn the “rules of the road” as they earn an official PBS Kid’s Web License at <<http://pbskids.org/bts/license/>>, middle school read-

lum from Cybersmart <http://www.cybersmartcurriculum.org/curr_over/> supports the transition of critical thinking to Internet environments. Educators cognizant of new Internet literacies have designed lessons to help students appreciate the complexities of online advertising <http://www.education-world.com/a_lesson/lesson158.shtml>; use Internet resources to validate simple facts [with some surprising results] <<http://www.classroomtools.com/facts.htm>>; interpret propaganda <<http://www.classroomtools.com/prop.htm>>; recognize digital manipulation <<http://www.fakeorfoto.com/>>, understand the impact of visual design <<http://www.kn.pacbell.com/wired/21stcent/principles.html>> and view primary document sources with a critical eye <<http://memory.loc.gov/ammem/ndlpedu/index.html>>.

Finally, this sharing of effective resources and strategies on the Internet has inspired some to offer their services in managing online projects geared toward eliciting and storing student products of critical evaluation tasks. Students from around the world are collaborating with teachers Susan Silverman and Melissa McMullen at <<http://comsewogue.k12.ny.us/~ssilverman/documents/index.htm>> to locate historical documents and generate critical evaluation questions that are published online for others to answer. Similarly, middle school students in the state of Wisconsin have joined forces as Internet Detectives at <<http://www.madison.k12.wi.us/>

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