Redefining Literacy in the Information Age - Part 2
Developing Quality Student Research Strategies

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Information Literacy is generally described as the ability to access, evaluate, organize, and use information from a variety of sources. In part 1 of this article (Spring/Summer 2004), the argument was presented for recognition of information literacy as a legitimate area of concern for educators. Part 2 of this article is focused on developing quality student research strategies using developed criteria for electronic information sources such as the internet.

An information literate population is a desirable thing in a democratic society. As our communication patterns have been changed by the universal and pervasive rise of various electronic media such as television and the Internet, our information sources, along with our social lives, have been shaped by this communication. Dewey (1916) states that “Not only is social life identical with communication...all communication is educative” (p.5). In our information-driven society, students increasingly utilize information gathered from electronic media as part of their social and educational activities. This demands an ability to be literate of these communication media is critical to the formal education of our society.

Eighty percent of the students and faculty members who responded to a 2002 national survey stated that the Internet has changed the way in which they use libraries. More than one-third of those that responded now use the library less than they did just two years ago. (Friedlander, 2002) This illustrates the rapid shift from print to electronic media. Less than 10 years ago, most students could expect to deal with some carefully selected collections of reference materials in academic and public libraries, as well as a fairly limited range of widely accepted authoritative texts in the classroom. The power and authority that has historically been afforded the printed word has been an enduring and widely held belief. With the advent of the Internet anyone can now make a Web page. How can you tell if the information on the Internet is reliable or not? A critical point about using the Internet is that individuals posting information aren’t required to pass through traditional editorial constraints or undergo any kind of fact-checking required in conventional published print media.

The realization that web resources, while convenient and fast, must also be subject to scrutiny, is reflected in further findings from the 2002 (Friedlander, 2002) national survey. With Internet resources, three-quarters of the respondents agreed with the following statements: “The Internet contains information that I use and cite,” “The Internet contains high-quality information,” and “The Internet contains information from credible sources.” Only about half, by contrast, agreed with the assertion that “the Internet contains information that I use and trust.” (Friedlander, 2002, para. 35)

As our schools work to prepare students to fully participate in our democratic society, it is critical for teachers to devise educational activities that engage the learner in research activities that require critical analysis of information gathered. Teachers must be prepared to teach students to become critical thinkers, intellectually curious observers, creators, and users of information. This requires the teacher to shift some of the responsibility of gaining knowledge from the teacher to the student and create learning experiences that allow students to develop questions, devise strategies to search for answers, and formulate conclusions.

Creating Research Activities

Research based projects employing Information Literacy strategies can serve as a transformational process in which the learner needs to find, understand, evaluate, and use information in various forms to create for personal, social or global purposes. Information Literacy shares a fundamental set of core thinking and problem-solving skills which include observation and inference, analysis of symbols and models, comparison of perspectives, and assessment of

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context that serve to develop in the learner a critical approach to information gathering.

Research activities adapted from a list by Abilock (2004) develop a information literate problem-solving process for:

- exploring and questioning
- defining an information need
- creating a plan to locate relevant information
- reading the medium
- synthesizing information to create knowledge
- applying insight to personal, social or global contexts to create wisdom
- self-evaluating the process and the product

I-Search Projects

The I-Search model for student research utilizing information literacy strategies has been developed by Macrorie (1988). This is a widely accepted model that focuses on four phases of instruction. The emphasis of this model is to stimulate the student interest in gathering information and then provide them with strategies for evaluating, analyzing, organizing and presenting their personal understanding of the information. What follows is a summary and explanation of the basic activities and products of a typical I-Search instructional activity.

PHASE I Activities: Teachers immerse students in the unit’s theme. Students engage in a variety of activities, not only to discover what they already know about this theme, but also to build background knowledge. These activities model a variety of ways for students to gather information. By the end of Phase I, each student poses an I-Search question or topic to guide his or her personally motivated inquiry. Examples of I-Search themes or projects may include such topics as the solar system and space travel, environmental issues, famous people, health issues, or any major historical or social events.

PHASE II Activities: Students develop a research plan that outlines how they will gather information through a variety of strategies such as: library research, searching web resources, watching videos, interviewing people or conducting surveys, carrying out experiments, doing simulations, or going on field trips.

PHASE III Activities: Students follow their research plans and gather information. They also analyze and synthesize information to construct knowledge. Part 3 of this article (Fall 2005?) provides strategies for analyzing electronic information.

PHASE IV Activities: Students draft, revise, edit, and publish an I-Search Report. The I-Search Report includes the following components: My Search Questions, My Search Process, What I Learned, What This Means To Me, and References. The report becomes the foundation for an oral presentation, skit, poster, experiment, or other exhibition of knowledge.

Five Components of the I-Search Report

MY QUESTIONS

In this section students will describe what they already knew about this question when they began their search and why they cared about or were interested in this question.

MY SEARCH PROCESS

In this section, students will describe the sequence of steps in the search. For example, students will describe what sources they began with, and how these led to further sources. Students will describe problems or breakthroughs in their search when they really got interesting. Students can also tell how their questions changed or expanded as a result of the search process, and they should acknowledge the help they received from others in obtaining valuable sources.
WHAT I HAVE LEARNED

Here students will focus on three or four major findings or conclusions and support them with examples, stories, or arguments that will help the reader understand how they arrived at those conclusions. They will try to connect their findings with their original questions. They might also suggest further questions to explore in the future. Students should include any analyses they did: cause and effect, pro/con, compare and contrast, or sequencing.

WHAT THIS MEANS TO ME

This section will give students a chance to describe how they have developed as a researcher. They will answer the question, "What do you now know about searching for information that you didn't know before?" To answer this question, students will describe those findings that meant the most to them. They might also discuss how their newly found knowledge will affect the way they act or think in the future. Finally, they might want to talk about the skills they have developed as a researcher and writer.

REFERENCES

This section will contain all of their references, in alphabetical order.

An I-Search Unit is an excellent context for alternative assessment, the inclusion of students with diverse learning abilities, technology integration, and critical analysis of information.

In Conclusion

In our current information based global society, the ability for a democratic population to access and interpret information is critical. Our teachers must devise educational activities that engage the learner in research activities requiring students to critically analyze information gathered. The I-Search Paper, which focuses on gathering and analyzing information, was presented as a research activity model that is easily adaptable to most educational settings.

Reference List


