Deception and misinformation may be as old as humankind, but the Internet is increasing the potential for harm to larger numbers of people. Consumer education has a new role to play in helping people develop the skills needed to deal with the challenges of the Information Age. This Brief describes some of these challenges and presents teaching and learning strategies to prepare people to be savvy cyberconsumers.

The Willing Suspension of Disbelief

Some of the most attractive features of the Internet—speed, lack of restriction, ease of manipulation of data—make it relatively easy to find masses of information. Unfortunately, these same features help those who are so inclined to violate privacy, commit fraud, and proliferate misinformation. The numbers of people accessing the Internet increase every day. Two of the most common reasons are to purchase goods and to search for health, financial, and legal information and advice. In 1998, online sales nearly doubled compared to 1997, from $5 billion to $9 billion (Dorsey 1999); 17.5 million Internet users search for health-related subjects, but a 1997 survey found that 41% reached health sites via search engines that have no quality filters (McKenzie 1999). At the same time, Internet fraud complaints have increased 600% since 1997, most commonly about auctions, general sales, business opportunities, credit cards, and employment (National Fraud Information Center 1999b). One of its regular ‘Net sweeps, the Federal Trade Commission found 800 sites making fraudulent health claims (Larkin 1999).

The transparency of the interface, the ease of access, and the aesthetic attractions of the Web can lull even normally skeptical people into letting their guard down, and less critical people are even more at risk. Researchers have found a correlation between enjoyment in using the Internet and belief in the trustworthiness of information. “It was generally assumed that whatever was found on the WWW was indeed fact” (Morrison, Kim, and Kydd 1998, p. 267). “Students are not innately skeptical of information. They are inclined to believe something if it has the right packaging” (Marcovitz 1997, p. 29). “People seem highly vulnerable to the manipulation of superficial presentation characteristics” (Fitzgerald 1997, p. 40). Lacking time and overwhelmed by quantity, people do not evaluate all incoming information (ibid.). Ronau, Ryan, and Stroble (1998) found that 50% of students believed that Web information is accurate, whereas only 35% felt the same about newspapers and television.

More people are becoming technically adept at the mechanics of Internet use. Children and teenagers especially feel comfort and familiarity with accessing electronic information sources (Labaree 1998; Watson 1998). However, many tend to believe such sources are more current because they are online. Because electronic sources are so easy to acquire, print sources are frequently ignored (Labaree 1998).

Much online information is not filtered, organized, or rated by such traditional gatekeepers as publishers, indexers, and librarians. “Excellent resources reside alongside the most dubious. The Internet epitomizes the concept of ‘Caveat lector: Let the reader beware’” (Kirk 1999). Search engines and websites that review and rate other excellent resources reside alongside the most dubious. The Internet epitomizes the concept of ‘Caveat lector: Let the reader beware” (Tillman 1998). Search engine ranking systems differ, and few people can or will take time to learn them (Cooke, McNab, and Anagnostelis 1996). Some search engines use unspecified or vague rating criteria and anonymous evaluators (Sorapure, Inglesby, and Yatchisin 1998). Selection criteria may depend only on accessibility of a site; relevance may be determined by mere repetition of terms (Kirk 1999). Some search engines “sell” top space to advertisers. Even respected search engines such as Northern Lights and AltaVista index only a fraction of all websites (Williams 1998) Thus, search results represent only a subset of all information on the Web, let alone of the “known body of knowledge and information” (Schwartz 1997, p. 263), an imbalance that is itself a type of bias.

Developing Critically Literate Consumers

In this information environment, consumers need the blend of skills and abilities that goes by several names: information literacy, critical literacy, media literacy, or digital literacy (Kellner 1998; Sorapure et al. 1998). This form of literacy combines the skills of locating, selecting, organizing, and synthesizing information with critical analysis, interpretation, and application of the results to solve problems and make decisions. These skills and abilities have long been a part of consumer education, defined as development of the knowledge and skills needed to manage resources and make decisions (National Institute for Consumer Education 1996).

Just as many Internet frauds are the same old scams practiced in a new playing field (ibid.), the time-tested skills of critical consumer literacy still apply in the Information Age. However, they need to be recast and broadened for the new context. In the virtual world of the Web, multimedia affect the message: images and graphic design can be manipulated to achieve developers’ aims, and the associative logic of hypertext may illustrate how ideas connect but they can also lead users to false connections and disguise hidden agendas (Sorapure et al. 1998).

Beyond the mechanics of searching the Internet and downloading information, what people of all ages from kindergarten to adult need is the ability to evaluate the quality of information and information sources. Alexander, Powell, and Tate (1999) recognize the importance of evaluation in their “teaching pyramid” for the World Wide Web. This eight-step modular approach to teaching the Web includes (1) basic concepts; (2) using the web for research; (3) basic web searching; (4) comparing web subject directories; (5) comparing web search engines; (6) advanced web search techniques; (7) evaluating web resources; and (8) synthesizing web research strategies. The evaluation module contains checklists for assessing the content of specific types of websites: advocacy, business/marketing, news, information, and personal. Many other types of guidelines and checklists are available for educators to use in helping learners critically approach information resources for consumer decision making. A synthesis of these guidelines is provided here.

1. Who. Is the author, site owner, publisher identified? Point of view or bias? Contact information (e-mail, postal addresses) provided? Lack of credibility may be indicated by anonymity, no quality control. (Hammert 1999; Harris 1997; Kirk 1999)

2. What. Does the content match the purpose? Are the criteria for inclusion explicit? Is the content accurate and verifiable? Is it reasonable (fair, balanced, objective)? Does it display external consistency (i.e., how does it compare with similar sources)? Does the information have integrity—reference to reputable sources, respect for copyright, does it overemphasize digital images?
In the Information Age, critical thinking skills are vital in both the sources—and their associated pitfalls and dangers—offline as well. However, it should not be forgotten that there are still information empowerment strategies that are especially suitable for use with adults: (1) Navigating around a Webpage; (2) Is It Fools’ Gold or the Real Thing?; (3) Using E-mail; and (4) Searching for Information. Among the activities is a health information lesson that presents learners with a health problem scenario and has them research and assess the variety of answers to health questions that may be found on the Web. Cowles and others (Labaree 1998; Morrison, Kim, and Kydd 1998) suggest that problem-based or project-based learning such as this embeds skill development in a context of real-life interest to learners. Cowles also advises using specific, guided lessons rather than wide-ranging searches and teaching evaluation before teaching searching because it can help learners sharpen the focus of a search and prevent them from being overwhelmed by massive results.

The following sources provide detailed checklists for teaching information source evaluation: Alexander and Tate (1999), Ferrell (1997), Hammett (1999), Harris (1997), Kirk (1999), and Williams (1998). A number of reputable sites have useful consumer guides to the Web. Cowles and others (Labaree 1998; Morrison, Kim, and Kydd 1998) suggest that problem-based or project-based learning such as this embeds skill development in a context of real-life interest to learners. Cowles also advises using specific, guided lessons rather than wide-ranging searches and teaching evaluation before teaching searching because it can help learners sharpen the focus of a search and prevent them from being overwhelmed by massive results.

The combination of critical literacy and consumer education can empower individuals to use the Internet confidenently and intelligently. However, it should not be forgotten that there are still information sources—and their associated pitfalls and dangers—offline as well. In the Information Age, critical thinking skills are vital in both the “real” as well as the “virtual” world.

**References**


This project has been funded at least in part with Federal funds from the U.S. Department of Education under Contract No. ED-99-CO-2013. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. *Practice Application Briefs* may be freely reproduced and are available at <http://cete.org/ace/pab.asp>.