

## Searching for "Truth" in an IT World

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In the mid 1980s Naisbitt (1982) predicted "a mammoth communication revolution... an integrated information and communication system that transmits data and permits instantaneous interactions between persons and computers.... We have for the first time an economy based on a key resource that is not only renewable, but self-generating. Running out of it is not a problem, but drowning in it is (23-24)." Naisbitt further portended that this megatrend would cause us to re-examine our preconceptions and values, to drastically alter our lifestyles, and to re-conceive our educational institutions.

During the early 1980's, many of us were just beginning to explore personal computers. Ubiquitous, graphically enhanced Web sites were, for the most part, merely figments of select imaginations. Ten years later, multimedia communication technologies were being employed in instructional materials (Tannenbaum, 1998). By the year 2000, needless to say, Naisbitt's interconnected, global world had approached warp speed, whirling most of us wirelessly into a new frontier of communication, connection, and proliferation of information.

Today, interactive Web sites, CD-ROMs, DVDs, and numerous wireless hand-held devices that connect to the Web are used for entertainment, business communications/transactions, advertisements, educational materials, health information, simulations, virtual reality, research, the gathering and exchange of an array of information, the enabling of the disabled, and so forth. Applications for communication technologies continue to grow about as quickly as they can be conceived. During this unprecedented transformation in information technology, many of us have only partially undergone a comparable psychological transformation in our worldview and/or paradigm shift in how we approach teaching and learning. Observations about how to combine learning theories, instructional design, and specific communication technology to attain specific learning outcomes are not widely disseminated or replicated in educational settings.

John Seely Brown's (2000) observations about communication characteristics in the digital age can be employed and refined by faculty seeking to support the learning of students. Brown affirms that communication technologies are connecting us to the expertise of others (faculty, practitioners, etc.) The community mind is comprised of diverse groups of persons with diverse perspectives and diverse levels of knowledge. Individuals learn through dynamic dialogue. They share information, tell stories, critique each other, and monitor the dialogue of others based on their levels of understanding, perspectives, cultural backgrounds, and values. Fluid Web groups or special interest communities might be located in geographically different places. Solutions to problems or the development of new knowledge (e. g., a group of scientists or sociologists discussing cures or paradigms) commonly reflect conversations and collaborations from numerous individuals around the world. The global nature of these conversations and collaborations maximizes the benefits of knowledge in ways that would be nearly impossible without the communication technologies. As Naisbitt (1982) predicted networking is replacing hierarchical (and traditional) sources of knowledge. People are connecting to other people to solve problems and create solutions.

Within this framework, we argue that the digital age provides opportunities for faculty to expand the classroom conversations to include flexible learning environments with options that appeal to diverse learning styles and intelligences (Gardner, 1983). As we continue to learn more about how we learn, we will be able to employ an abundance of technological options in different curriculum areas from kindergarten to post baccalaureate instruction for specific learning outcomes. A combination of technological tools and knowledge about the learning process should improve traditional teaching and learning (such as individualizing instruction to appeal to numerous students' intelligences).

However, similar to the printed versions of texts like history, information transmitted through communication technologies is created from specific perspectives or frame of references that might not be apparent or easily examined. Even if faculty members do not employ technological tools for attaining student outcomes, digital age students will be progressively more inclined to seek, to exchange, and to be influenced by an abundance of information gathered quickly from the Web, the community mind, and other such sources. Faculty members are no longer, and will no longer be, the dominant sources of information;

students have, and will continue to have, easy access to information from kindergarten to post baccalaureate instruction.

Now for the not-so-good reality of the community mind and dissemination of information through the Web. In "Anatomy of an Urban Legend," Callahan (2001) aptly chronicles how incorrect information can be quickly disseminated through the Internet, without the scrutiny or critiques commonly associated with printed versions of "truth." Shortly after the September 11<sup>th</sup> attacks in the United States, a graduate student sent an e-mail from Brazil to a mailing list declaring that the television footage of Palestinians who appeared to be celebrating was old television footage shot nearly a decade earlier during the Persian Gulf War. The graduate student also shared a definite point of view about American foreign policy that did not seem to circulate with claims about the false footage. Twenty-four hours later, the contents of the graduate student's e-mail, with various embellishments, had circulated the world. Callahan affirms that the television footage was actually shot only hours after the attacks, but the story of the old footage continued to be circulated around the world, even after the author of the original e-mail retracted it. Because of its speed and the ability to connect millions, the Web makes it easier to spread unsubstantiated information and rumors, and it makes it more likely that the original authors (and their value systems) will be separated from subsequent transmittals. Callahan offers that recipients of e-mails could possibly connect their relationship with the sender to the trustworthiness of the contents of the e-mail.

The September 11<sup>th</sup> email event punctuates the need for paradigms focusing on the communication/analysis of information on the Web. We affirm that anyone who participates in the fluid community mind, need tools to analyze the wealth of information. Without these tools, our students (and our citizens) are in danger of being victims of uncorroborated truths, similar to the September 11<sup>th</sup> emails that generated a mass delusion. Even more subtly, our students could be steered by the perspectives of certain groups who gather and enhance information, tell their stories, critique information from their particular value perspectives, and disseminate solutions or innovations to solve problems. Likewise, students should acknowledge that their value systems influence their selection of preferred answers from numerous options. No matter how information is collected or disseminated, it is critical to note that it is not without an underlying point of view or implicit value system or systems. There are multiple and complex constructs involved in selecting and disseminating print and graphic information on the Web. We proffer that it is the responsibility of faculty to help students develop cognitive strategies to analyze complex information, judge its value, and to interpret it. Analysis, from some perspectives, assumes that there are reasons for seeking information (sometimes named objectives), pathways to pursuing objectives (sometimes called means or alternatives), uses for the information (sometimes called solutions to problems), and ways to communicate the results or observations (sometimes called findings and discoveries).

Observing students explore the Web for answers illuminates how susceptible many are in their searches . . . for value, for truth. Armed with unclear objectives and developing worldviews, they wander from site to site, vulnerable to the agendas of others. Similar to the need for analytical tools in analyzing problems and making choices (Nelson, 1977), analytical tools are needed to approach the abundant print and graphic information on the Web. Frameworks (possibly discipline specific ones) for analysis of information are needed to guide students as they maneuver the maze of information, searching for truth.

The development of any framework for analysis should possibly commence with a cognizance that a search for answers or solutions generally involves some preconceived notions or assumptions about what constitutes answers, where answers can be found, and the advantages and limitations involving the entire investigative process (Nelson, 1977). Thus, a student searching for information about oral communication theories might seek information on the Web because he/she believes that he/she can identify such information quickly (search through library and ERIC indices), and the information found will be current including research in progress, journals, and so forth.

An awareness that these preconceptions exist in an important first step in understanding the context in which information will be sought, reviewed, judged and ultimately adapted in a knowledge base. Fairhurst & Sarr (1996) affirm that the acceptance of preconceived mental models is essential in learning how to manage meaning and "frame" information when interpreting it to others. The Web provides abundant opportunities to compile information and interpret it to others. When framing information to communicate it to others the person communicating the information chooses a specific interpretation over another and thus "manages" how others receive the information. Of course, the act of framing information involves the preconceived notions and the worldview of the person(s) framing the information.

We believe that it is essential for faculty members in all disciplines to augment students' awareness as they interpret an enormous amount of graphic and print information and attempt to manage its meaning (Fairhurst & Sarr, 1996.) Faculty in media communications, for example, can highlight approaches to analyzing pictures and graphics employed on the Web. All faculty should demonstrate analytical tools for understanding and interpreting multiple and complex forms of communication made possible by the Web and other communication technologies (e. g. movies, pictures, graphics, print, and combinations, etc.). Successful students would use analytical tools to research, critique, associate new information with previous knowledge, and create new ideas/innovations. In our digital world, the ability to search, retrieve, make sense of information, consider it from diverse perspectives, interpret it to others, utilize it, manage its meaning, and evaluate its overall usefulness and accuracy will be an essential tool, possibly for maintaining our democracy.

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