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Editor's Note:

This is the second special issue of *Communication Teacher* during my tenure as editor. The issue of using technologies in the wide range of communication courses is important. It seemed appropriate to devote an issue of *CT* to open a discussion of technologies in our classes and to have our colleagues share some of their innovative thoughts and approaches. There were too many activities to include in this issue of *CT*, so additional activities on technology will be included in the Winter 2001 issue. I hope you enjoy reading this special issue and I hope you discover some valuable ideas you can use in your classroom.

Larry Hugenberg

Incorporating Computer-Mediated Technology to Strategically Serve Pedagogy

Goal: To illustrate the advantages in increasing computer-mediated communication in enhancing pedagogy.

Every instructor strives to encourage active student-participation during class. The challenge of providing a stimulating learning environment has taken on a new dimension with rapidly changing technology. Mason (1994) argued that technology can be a beneficial tool to engage students in the traditional classroom and the distance education classroom. Just as traditional teaching methodologies must be evaluated and tested, selecting appropriate technologies is a critical part of its effective use in the classroom. One temptation is to rush in and adopt any technology. However, we suggest carefully considering technology as a tool to enhance learning. Technologies must accommodate pedagogy, not the reverse. We evaluate the application of selected technology tools into the cur-

riculum for two upper division communication courses. In the small group communication and the intercultural communication courses, students use technology to communicate with one another and the professor. In addition, the technology is used to disseminate information and to provide additional course information. While our data and observations have been with these two courses, our analysis and rationale is appropriate for a broader range of courses and applications. This paper briefly discusses the steps we took in deciding why and how to incorporate technology into our teaching.

The Pedagogical Rationale

Currently, many courses limit interaction in classrooms to face-to-face (FTF); however, the addition of computer-mediated communication (CMC) can enhance the students' experiences. The first goal is to use the technology medium to increase collaboration. Hillman, Willis, and Gunawardena (1994) suggested that technology can create a collaborative learning environment by encouraging students to interact with one another, the instructor, the course content, and the technology. As such, technology adds another avenue for students to actively engage in the learning process. Furthermore, technology can remove some of the social constraints that concern timid students by allowing them to interact on their own time schedule and only after thought and consideration.

A second goal in employing technology is to accommodate a variety of learning styles. Sarasin (1998) described three primary types of learners: auditory, visual, and

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Resource Availability. Most institutions are able to meet the minimum requirements in their existing academic computing facilities to incorporate CMC into course design (Olaniran, et al, 1996). This holds true for threaded discussion more than for synchronous discussion given the need for additional software requirement. Thus, the additional cost for setting up synchronous discussion may be a deterrent to some schools or instructor.

Implementation and Future Directions

Above, we identified that asynchronous technology would be most appropriate to use in the classroom. Thus, we created a web-based threaded discussion and required students to post questions and assignments. In order to assist students in embracing the technology, training was provided in how to access the course web pages, post messages, and reply to existing messages on the threaded discussion. Students practiced posting and reply during the training. Students were also taught about the aforementioned technologies available for electronic communication so that they could compare and contrast. Finally, we shared with students our reasoning behind selecting threaded discussion technology.

For both courses, the instructors built web pages that included personal information, course references, course materials, and the communication tools. Students were required to participate in weekly discussions as a regular assignment. The instructors awarded points for their participation. The instructors reviewed the discussions daily and responded when appropriate. Students were rewarded for timely and substantive responses and questions.

Over the course of the term, we have found that, compared to typical face-to-face classroom communication, student participation increased in the computer-mediated communication classes. For instance, we noted that students actively participated in a biracial child custody assignment and other culturally sensitive assignments. Traditionally students are often too sensitive to discuss these issues in a FTF forum. (See web page, <http://ww2.tlct.ttu.edu/Olaniran> for a transcript). Student perceptions about the technology were positive regarding increase participation and technology mastering. To add to our anecdotal evidence about the effectiveness of asynchronous technology in the classroom, we are currently quantifying student activity and measuring student perceptions with a pre-term evaluation and a post-term evaluation of the technologies used in the classroom.

As technologies become a viable teaching and learning tool, the authors encourage instructors to remember that pedagogy guide any technology enhancements to their teaching. In our project, we used asynchronous technology tools to enhance interaction and learning. In an information age, students are quick to embrace technologies that empower them to take responsibility and control of their learning process.

References

Anderson, A., Mayes, J. T., & Kibby, M. R. (1995). Small group

collaborative discovery learning from hypertext. In C. O'Malley (Ed.). *Computer supported collaborative learning* (pp. 23-38). New York: Springer-Verlag.

Davie, L., & Wells, R. (1991). Empowering the learner through computer-mediated communication. *The American Journal of Distance Education*, 5, 15-23.

Clawson, R. A., & Choate, J. (1999). Explaining participation on a class newsgroup. *Social Science Computer Review*, 17, 455-459.

Hillman, D., Willis, D., & Gunawardena, C. (1994). *American Journal of Distance Education*, 8[2], 30-42.

Mason, R. (1994). *Using Communications Media in Open and Flexible Learning*. London: Kogan.

Olaniran, B. A., Savage, G. T., & Sorenson, R. L. (1996). Experiential and experimental approaches to face-to-face and computer mediated communication in group discussion. *Communication Education*, 45, 244-259.

Sarasin, L. C. (1998). *Learning styles perspectives: Impact in the classroom*, 3-4.

Shedletsky, L. (1993). Minding computer mediated communication: CMC as experiential learning. *Educational Technology*, 33, 5-10.

Wilson, T., & Whitelock, D. (1998). What are the perceived benefits of participating in a computer-mediated communication (CMC) environment for distance learning computer science students? *Computer Education*, 30, 259-269.

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Getting the Most From Your Search Engine

Goal: To inform instructors about advances in search engine technology that allow for more effective searches, and to offer a classroom activity useful for teaching students how to use search engines more effectively.

The use of the World Wide Web in education has become as ubiquitous as the television. As FitzGerald and Spagnolia (1999) pointed out, "Internet traffic doubles every 100 days. While it took radio 38 years to establish 50 million listeners and television 13 years to attract 50 million viewers, in four years the internet acquired 50 million users" (p. 12). The latest generation of high school and college students have literally "grown-up" with the Web; and each year, incoming students are more sophisticated users (McCollum, 1998). Like it or not, the Web is here to stay.

Explanation

If the discussions of Webbed research found in our introductory college textbooks are any indication of the general understanding of Web searching by teachers, some things need to be explained. What many users of the Web do not realize is that the "average" (single-database) search engine (Alta Vista, Lycos, Yahoo, etc.) only searches from 2-16% of the Web at any given time (O'Reilly, 2000). That is merely 2-16% percent of the billions of Web pages out there (Dunn, 2000). By contrast, a "meta search engine" is capable of scouring two to five times as many Web pages

in a single search. Meta search engines are more successful because they search multiple (2-14 or more) databases at the same time, thus returning more comprehensive results. Three search engines considered among the best include <www.ixQuick.com>, <www.RedESearch.com>, and <www.Google.com>. For more detailed information about these and many other search sites visit Search IQ's Web site: <www.searchiq.com/directory/>.

The second area of importance to Web users interested in conducting more effective and efficient searches is Boolean logic. According to Uttenweiller (1999), "When more than one word is typed into a search engine, the program will typically assume that the user is looking for sites that contain any of the words" (p. 76). Most people conducting searches use only a few key words in their searches – rather than multiple key words. What users do not realize is that most search engines convert a search for "Government Regulation" into a search for Government or Regulation, rather than Government *and* Regulation, which is what most people really mean when they type such a phrase Uttenweiller, 1999, p. 2; cf., also, Corbitt, 1999). By using logical operators (AND, NOT, OR, and "quoted search phrases"), searches can be tailored to return more precise results and to exclude irrelevant information.

For example, if a user were searching for information on "dogs and cats," Boolean logic (AND/NOT/OR) allows a user to search for *both* dogs and cats (dogs AND cats), returning results from sites that contain both terms; "dogs OR cats," returns results to sites that contain either term (or both); or, by typing in "dogs NOT cats," results are returned for sites that contain only information pertaining to dogs (and making no reference to cats).

Another logical modifier worth understanding is the use of quotation marks to execute "phrase" searches. By putting words into quotation marks users are telling their search engines to look for the exact phrase entered and not some combination of the terms "AND/NOT/OR." An online search for the journal the *Communication Teacher* (without quote marks) will return 219,000 hits for sites that contain either (or both) "communication" and "teacher." However, by typing the journal name as a "phrase," "the *Communication Teacher*" (with quote marks), our search is narrowed to 399 hits, with only those sites that have all three terms combined in that exact way returned. Indeed, the "Speech Communication Teacher," the *Communication Teacher's* former name came up second in the list of 399 items.

A final point worth understanding is that when searching the Web, it is better to use more key words than fewer. Some information science experts suggest that it may be necessary to use as many as a dozen key words to effectively limit a search to a manageable amount of information. Corbitt (1999) explained why users should use plenty of keywords: "Most people only put in one or two [key words] for their search. If you put in several you will be a lot closer to getting the match you need. Each keyword cuts down the number of erroneous matches and if you use

enough you can cut out almost all of the irrelevant stuff (p. 52).

More information about the use of logical operators in conducting Web research can be found in Uttenweiller (1999), or visit the following Web sites: <www.askscott.com/tindex.html>, or <www.josts.net/tec3012/bool.htm>.

Once you have visited a few meta search sites and used the logical operators, you will come to appreciate their value. By using a more efficient search engine and logical operators, a search that might have taken hours and required combing through hundreds of sites can be narrowed down to a few dozen "key" sites and may take only minutes.

The Activity

To teach students the value of meta search engines and logical operators, and to have a little fun at the same time, students can be given a set of instructions for participating in an on-line "scavenger hunt." This activity also works very well for teaching novice students how to use search engines.

Depending upon how your class is structured, there are several options for conducting this assignment. The simplest method is to direct students to read the section(s) in their text about using search engines before lecturing on this topic. Few of the current introductory communication texts discuss meta search engines, logical operators, or the use of multiple key words. Once your students have read the information from their text, you are ready to inform them about meta search engines and demonstrate how to use them. Be sure to explain the use of logical operators to constrain searches and the value of multiple key words.

A good way to start this exercise, before you explain how to search more effectively, is to ask students how they would search for the answer to a question by having someone come forward and write in their search terms on the board in a big "search" box. Of course, if you have a "smart classroom" you can actually have a student come forward and conduct a search. A good question to use is one that involves some effort on the part of students to decide on key words. A question I have used for this activity is: "You have a friend who told you about a bed and breakfast in Farmington, New Mexico, built into the side of a mountain in a cave. What is the name of the bed and breakfast and where can you learn more about this place?" Many students will choose "Farmington, New Mexico" as their key words (returning 14,300 hits). Others might choose "Farmington New Mexico cave" (returning 684 hits). Still others might try "Farmington New Mexico bed and breakfast" (returning 406 hits). Each word narrows the search and proves more productive. Using "Farmington, New Mexico bed and breakfast cave" we receive 70 hits. And finally, adding "cliff" to the list brings the list down to a manageable 22 hits. With a little advance planning you can give your students a rough estimate of how many hits they would get on your search by coming to class with different search variations.

For a more communication oriented example – as part of a public speaking, communication theory, or rhetorical theory class – students could be asked how to locate information about some historic communication figure with a question like: "You have been asked in one of your classes to find out more about the life of Ivy Ledbetter Lee, one of the founding fathers of public relations. What words will you use for your search?" Using "Ivy Lee" alone (without quote marks) will yield 28,000 hits. Adding Lee's middle name will narrow the search down to 332 hits. By quoting Lee's name ("Ivy Ledbetter Lee") the search will be narrowed down to 30 sites. Finally, by adding "history" to the search ("Ivy Ledbetter Lee" history), results can be narrowed down from the original 28,000 sites to a more manageable 16 sites.

After explaining how to conduct more effective searches, give students a handout with several very specific facts that they are directed to find on the Web. Items to search for might include:

- the number of college teachers in the United States
- the cost of a slave in the Sudan
- the number of pets killed in shelters in the U.S. each year
- the top ranked family friendly companies in the U.S.
- the last person executed in the Texas electric chair
- the most popular breed of dog according to the AKA
- the most watched television show in the "world."

My scavenger hunt includes the following questions:

1. *In Farmington, New Mexico there is a bed and breakfast built into a cave in the wall of a cliff. What is the name of the bed and breakfast and where can I learn more about this place?*
2. *Which University in Ohio was the site of the famous 1993 "Sexual Offense Policy," and what was the first clause of the policy?*
3. *What is Naproxen Sodium and how/where is it used?*
4. *When was the role playing game "Dungeons and Dragons" invented, where, and by whom?*
5. *Here are the names of three reported viruses: Red Alert, Walker, and Death69. Two of them are hoaxes and one of them is real. Which one is real and what can it do?*
6. *The University of Alaska holds a yearly winter festival called "Starvation Gulch." When is it held?*
7. *How many Greek organizations are there nationwide and how many are on the campus of Purdue University?*
8. *How many rows of whiskers does a cat have (don't peek at your cats!)?*

A list of seven to ten items is more than sufficient. I prefer to phrase scavenger hunt items as questions and have students find the answers to the questions as well as providing URLs for the sites. Other questions can be used to teach students how to be more creative when conducting their searches. For example, when I asked my students to find "how many rows of whiskers does a cat have?" the

answer can be easily found by locating a picture of a cat on the Web and counting them. Teachers should probably pilot test their own scavenger hunt questions before they give them out to students to be sure that all information can be found. My list took me 30 minutes to complete.

Keep in mind that any search engine might find the items you select if logical operators and multiple key words are used. However, the meta search engines will prove to be more useful because most eliminate redundant responses and are better at sorting results. Similarly, a meta search engine used with only one or two key words is not likely to be any more successful at finding what you are looking for than a single-database search engine. Although the results will be sorted better and redundancy eliminated, the search engine used will still generate a lot of results. The key to effective searches lies in the use of logical operators and multiple key words.

It is advisable to limit students to an hour on this activity so that they do not get frustrated as they learn to conduct more effective searches. During the class following the distribution of your scavenger hunt, have students submit their findings in writing (on the handout) and report their results orally to the class. At this time you might now (depending on how you structured the activity) offer a reward to the student(s) who found the most items on the list (prizes can be awarded the following class pending confirmation of the results). What is important in this activity is to select scavenger hunt items that are fairly specific and require the use of logical operators (AND [+], NOT [-], OR, and "phrase") to constrain results.

Alternatives to this assignment include (1) finding out how much students already know about meta search engines and logical operators and conducting a discussion in class; (2) to have students do the scavenger hunt twice: once before you have described the techniques of effective Web searching, and once after you have explained it; (3) to ask a group of students who claim to already know how to use search engines to simply use the library (just books, magazines, databases, etc.) to find the information and discuss both sets of results (WWW and library) in the next class – this alternative works best with up-to-date and centralized libraries; (4) to offer students a chance to "teach the class" about meta search engines and logical operators by offering them readings and suitable Web addresses and having them give speeches on the subjects; or (5) to instruct students to explore one of the many search engines available and assign an informative speech explaining the strengths and weaknesses of their particular search engine. Obviously there are many more possibilities but all are designed to give students more insight into a research tool they will likely be using for many years to come.

After conducting one of these activities, all students (and the teacher) should have more insight into how to more effectively exploit the Web's potential. As noted, this assignment can be conducted as a homework activity, as a contest, or as part of class participation. However, making

the assignment worth points, or offering a reward, can increase the chances that all students will learn the value of meta search sites and logical operators.

Student Debriefing

The essential features to explain to students through this activity include clarifying the difference between a single database search engine and a meta search engine -- meta search engines are more efficient in many cases. Students should also be able to explain in class how to limit searches by using Boolean logic (AND/OR/NOT) to include/exclude particular terms, and how to conduct phrase searches by surrounding terms with quote marks.

Other issues not covered by this activity but worth mentioning in class might include: discussing the different logical structures that drive search engines-hierarchical categorizer, indexer, natural language, etc. (Briones, 1999; Cohen, 1999); discussing alternative databases such as those that are useful for locating "people" rather than "facts" (<www.four11.com>, <www.phonebooke.com>); or discussing how students can create their own personal link files of links to useful databases and informational sites with programs like Netscape.

Appraisal

As an instructor I often hear colleagues lamenting the under utilization of the library by students and the overuse of the WWW. I am sure many of you have heard this from one of your colleagues or said this yourself. Of course, many instructors are coming to rely on the Web more and more. Although there are obvious reasons for limiting student use of the Web as the primary or only source of research for essays or speeches, there are also important reasons for teaching students how to be more critical Internet consumers. I believe that a step in the right direction involves teaching students how to get the most from the resources that they do rely on.

As a final note, it is necessary to remind readers that technology is moving very fast. What works well now, may not work the same in a few years. Although it is likely that the skills learned here and passed along to students as a result of this essay will apply for many years to come, search engines continue to evolve. As teachers, if we cannot lead the pack in the area of new technology -- and few can -- then we should at least try to follow a few years behind the pack. Teaching students to be more critical consumers of Webbed information, and teaching students how to use the tools available are steps in the right direction.

References

- Briones, M. G. (1999). Found on the information superhighway. *Marketing News*, 33(13), 1 ff.
- Cohen, E. E. (1999). No more hide and seek - Part II. *CA Magazine*, 123(5), 36-38.
- Corbitt, T. (1999). Searching the net. *Management Accounting-London*, 77(8), 52-53.
- Dunn, A. (2000, January 20). It's a very wide Web: 1 billion pages worth. *Los Angeles Times*, business, part c, page 7, financial desk.
- FitzGerald, S. S., & Spagnolia, N. (1999). Four predictions for

PR practitioners in the new millennium. *Public Relations Quarterly*, 44(3), 12-14.

McCollum, K. (1998, November 25). High-school students use the Web intelligently for research, survey finds. *The Chronicle of Higher Education Online*.

O'Reilly, F. (2000). Where the guides are lost too: Searching: Finbarr, O'Reilly on the growing difficulty of finding what you want on the Web. *The Irish Times*, City Edition, Computimes, p. 12.

Uttenweiller, W. L. (1999). Working the web. *Security Management*, 43(10), 75-78.

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Engaging Students in Interactive On-line Teaching

Goal: To provide students an opportunity for increased interaction in on-line communication course assignments.

Universities and colleges around the world are incorporating new technologies in education. Universities are able to retain traditional students while offering distance learning courses that attract nontraditional students (Ludlow, 1994). By 2002, four of every five colleges and universities are expected to offer some form of distance learning (Steinberg & Wyatt, 2000). As the population becomes increasingly more diverse and pressured by the new economic and competency realities, educational institutions become the primary sources for addressing academic challenges related to these changes (Sims & Sims, 1995). Offering courses on-line can provide students who might not otherwise attend college with the opportunity for a college education.

In on-line course environments, the process of student learning tends to be more complex for several reasons (Willis, 1994). First, students are separated from the teacher and other students. Students need to be highly motivated to complete on-line courses because of the lack of face-to-face contact. second, the use of educational technologies may be unfamiliar for teachers and/or students. Students must adapt quickly to the technology and nature of teaching and learning on-line. finally, many distance learners are older, have jobs, and families. They have to coordinate the different areas of their lives with each other -- their families, jobs, recreational time, and study time (Schuemer, 1993).

This article presents some examples of class assignments that were created for increasing student interaction in on-line communication courses. The changing role of teachers necessitated by these technologies, causes dramatic changes in instructional strategies. Instructors no longer have a traditional, familiar classroom, a relatively homogeneous group of students, face-to-face feedback during class, control over the delivery system, or opportunities to talk to students individually (Willis, 1994). Teachers of on-line courses must consider these issues more seriously than traditional educational programs since they are at a