

## PROVIDING GUIDANCE FOR INTERNET USE

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More and more faculty are finding the Internet to be a valuable teaching tool and are incorporating its use in their courses. This tool is a vast resource for obtaining and exchanging information, but it is unrestricted and unregulated. Unlike traditional resources which are reviewed and edited by professionals, anyone with HTML skills can create and upload a home page. Many students are not discriminating users of Internet resources because they lack the experience or training to make qualitative judgments about available online information. Also, many faculty and students are not aware of their legal responsibilities regarding use of information on the Internet. If students' practices are to meet expectations, it is helpful for instructors to provide/model evaluative and legal guidelines for Internet resources. The purpose of this article is to describe those guidelines.

### Guidelines for Evaluating Internet Resources

Online information is distinguished from traditional classroom materials by three characteristics. Information on the Internet is extensive, dynamic, and readily accessible. It is provided by individuals and organizations from all countries and on every topic; it is modified, revised, or deleted with relative ease; it is obtained immediately, inexpensively, and without a great deal of effort. However, the infinite number of reputable sites can be located right beside limitless unreliable sites. Because teachers and students have a greater responsibility in determining the quality and usefulness of Internet resources, it is necessary to provide strategies for: a) making decisions as to what information should be used, b) for selecting that information, and c) for limiting the flow of information to accomplish instructional goals.

The three main categories of criteria for determining a site that is reputable, reliable, and easy to use are content, design, and access. Content is the most important of the three and involves the validity and reliability of the information. Design refers to the overall appearance and manner in which the site is presented. Access refers to the retrieval mechanisms allowing full and appropriate access to the available information. Below are a few guiding questions in each of these categories for evaluating Web sites.

#### Content

*Purpose* - What is the intent of the information? Why is it being communicated? Is it clear who is sponsoring the

page? Is there a link to a page describing the purpose of the sponsor? Is there a way to verify the legitimacy of the sponsor? Is there a phone number or postal address to contact for more information?

*Authority* - Who wrote the site? Is the author qualified in the field? Are the author's credentials clearly stated? Is contact information for the author included in the Web site? What does the URL tell you about the site? Is it an educational institution or government or commercial? If it is a commercial site, is it a source you can trust?

*Accuracy* - How well researched is the presented information? Is the information based on research or unsupported generalizations and personal opinions? Does the site contain documentation and references? Are the sources clearly listed so they can be verified in another source? Is there a reliance on secondary source material over primary sources? Is it clear who has the ultimate responsibility for the accuracy of the material?

*Objectivity* - Is the information presented in a manner free from bias, propaganda, or misinformation? Does it contain the personal agenda of the author or a specific group? Is the information provided as a public service? Is the information free of advertising? Is any advertising on the page clearly differentiated from the informational content?

*Currency* - When was the page first placed on the Web? When was the information written? Is the creation date posted directly on the site? Is the information up-to-date? When was it last revised? Are there clear indications that the material is kept current? If the material is presented in graphs/charts, is it clearly stated when the data was gathered?

*Scope* - Are descriptions of the scope and criteria for inclusion provided? What is the breadth and detail of the information? Is coverage a complete or partial picture of the subject? How useful is the information for the user's purposes? Are there links to additional information?

*Design-Layout/Presentation* - How is the information presented? Are headers, mixed font sizes, and white space used appropriately? Can the information be easily interpreted?

*Graphics* - What is the quality of graphics? Are the images attractive? Do they enhance the information? Are the number and size of the images appropriate? Do graphics support ease of navigation? Does the user have an option to examine the graphic and not download a large file?

Do images load quickly? Are the graphics so extensive that the content of the site is lost in download time?

*Structure* - Is organization of the content evident and convenient? Is there an overview that precedes the contents? Does the user obtain a sense of the breadth and diversity of the content covered? Are there options to link directly with each distinct section of the content?

*Writing Style* - Is the text well-written? Is the content age-appropriate? Is the writing free of grammatical, spelling, and other typographical errors? Are charts/graphs clearly labeled and easy to read?

*Interactivity* - Does the design provide for active user involvement?

*Multimedia* - Do the graphics, text, sound, and video compliment each other? Do the additional channels add to the information or could the same result be accomplished with text only?

*Access - Stability* - Can you rely on the site staying there? Is the technical performance level consistent?

*Speed* - Is what you need to see easy to download? Is the speed of connection to links appropriate?

*Navigation* - Is it easy to find your way around the site? Does the user have a consistent sense of context at any given time?

*Connectivity* - Are links described in a way that avoids unproductive browsing? Do all pages allow the user to return to the home page or to another part of the site?

*Searchable* - Are the key words logical? Do they allow a variety of entry points?

*Cost* - Is the information you need free, or does it link to a section that requires access fees?

## Guidelines for Legal Internet Resource Use

Ethics is one obvious reason that faculty should know and follow guidelines for legal use of Internet resources. Professionals respect the intellectual property of others and expect to receive acknowledgment and credit for their scholarly/creative work. Because instructors want to promote intellectual growth and to discourage plagiarism, they should provide students with information about their ethical/legal responsibilities and give opportunities to practice those behaviors. The process by which students learn, internalize, and consistently exhibit ethical/legal behavior requires knowledge, practice, and observation of the behavior performed by an admired person. Modeling is one of the most influential factors in establishing or changing attitudes and behavior; so it is important for instructors to overtly set the example for ethical/legal attitudes and practices when using Internet resources. If these noble reasons are not convincing, self preservation might be the deciding factor. Illegal use of Internet re-

sources has been made a felony and faculty can be found liable in court judgments.

The principle of fair use for educational purposes in the 1978 copyright law is considered when determining legal use. Because of new technologies, "fair use" guidelines have been modified many times and additional modifications are expected to be finalized in 1998. These new amendments include rather conservative interpretations of "fair use" in the areas of multimedia, digital images, and distance education. Generally, students have leeway to use material from other sources in their productions for class assignments; but they cannot use those productions for other purposes.

Each Internet site should indicate its policy for reproducing information contained at that site. Educators should make certain that if a site allows reproduction of its materials for educational purposes that a copy of that statement is placed on file and included in any copies that may be distributed. If the site's policy is not evident, permission should be secured from the copyright holder. Documented permission can give instructors confidence that they are in compliance.

Below are brief descriptions of the general fair use principle (Heinich, et al, 1996) and some examples of the specific rights of authors (Talab, 1998).

*Fair Use* - 1. Purpose and character of the use - Use must be for nonprofit educational purposes. 2. Nature of the copyrighted work - The format and intent of the work must not be altered. 3. Amount and substantiality of portion used - Specified limitations on the number, amount, and circumstances of the copying must be followed. 4. Effect of use on the potential market - Copying must not substitute for purchasing the original.

*Author's Rights* - 1. Reproduction - The right to prevent copying. Downloading to RAM, ROM, or disk would be considered copying if viewing is longer than "a very brief period." According to Oliver (As reported in Talab, 1998), it is permissible for students to copy and print out the HTML of a web site, but not the content. 2. Distribution - The right to prevent dissemination. Transmitting a downloaded work to a listserv or from one network to another is considered unauthorized distribution of multiple copies. 3. Derivative work - The right to prevent changes to the original work. Putting an altered image, article, or song on a Web site would be considered a violation. 4. Performance - The right to prevent public performance. Using CD music or video clips to develop a production made available for listening/viewing through a computer would be considered a public performance. 5. Public display - The right to pre-

vent public display of still images. Putting a graphic or photograph online would be considered a violation.

The extensive, dynamic, and accessible nature of information on the Internet presents new challenges to teachers and learners. Without adequate tools and strategies, students may become overloaded with information or disoriented in countless links. They may be unable to differentiate materials written at different levels of complexity. Assistance from faculty in dealing with online information can help students. Cyberpolice are not restricting unreliable sites nor regulating illegal practices, YET! \*

## References

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## STUDENT VIEWS OF AN ELECTRONIC CLASSROOM

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Encouraged by various faculty development initiatives, many professors have adopted instructional technologies to enhance learning and meet instructional goals. In a previous paper (Davis 1997), I discussed the transformation of an introductory biology course (Biol. 112) from a traditional setting to a "new chalk" environment. Since then, I have also placed course materials for this class on the World Wide Web.

I became interested in student attitudes towards multimedia after a colleague informed me that few studies have addressed the impact of instructional technology from a student's perspective. Because written comments included in standard course evaluations are often anecdotal and difficult to assess, I developed a survey instrument that permitted me to quantify student attitudes about instructional technology (IT). Gathering ideas from previous studies (Avila et al. 1995, Flora and Logan 1996, Fox 1996, Pridemore and Klein 1995), I created a Likert-type survey which queried students about: the multimedia approach to teaching; the impact of IT on learning; their preference for IT-enhanced classes; their present computer skills; the importance of computer skills in future classes and in the work force, as well as their perception of the opportunity to develop computer skills as an undergraduate.

Students completed the survey anonymously during the last week of class and received two bonus points on the final exam as an incentive for returning the completed form. Seventy-seven of the eighty-one students (95%) surveyed returned completed forms. Here I present an overview of survey results from three academic quarters (Winter 97, Summer 97 and Winter 98). The complete survey and student responses to each survey item can be accessed via the electronic journal *Online In-*