

The Search for High-Quality Online Content for Low-Income and Underserved Communities

EVALUATING AND PRODUCING
WHAT'S NEEDED

**An Issue Brief and Action Plan
With Research Appendices**

*A Publication of The Children's Partnership
October 2003*



**The Children's
Partnership**

The Children's Partnership At A Glance

Research and development applied to improve the lives of America's children
1993-2003

Mission and Program Summary

The Children's Partnership (TCP) is a national, nonprofit organization working to ensure that all children, especially those at risk of being left behind, have the resources and opportunities they need to grow up healthy and lead productive lives. With input from its highly respected advisors, TCP researches new trends and emerging issues that affect large numbers of children and provides early analysis and strategies for action. In the fields of health care and technology, TCP helps build successful social innovation models in communities, and then takes these proven strategies to a larger audience through policy advocacy and public and private partnerships.

The Children's Partnership has been working on issues of children and the digital media since 1994, when TCP published the first comprehensive look at how the digital society impacts children (*America's Children and the Information Superhighway*). In 1996, TCP released the award-winning *Parents' Guide to the Information Superhighway: Rules and Tools for Families Online*, a first-of-its-kind guide providing parents with the information necessary to help children in the new age of information technology. The Children's Partnership also has an extensive program in extending health insurance to uninsured children. See www.childrenspartnership.org and www.expresslane.info for more information about our health program.

Current Technology Programs

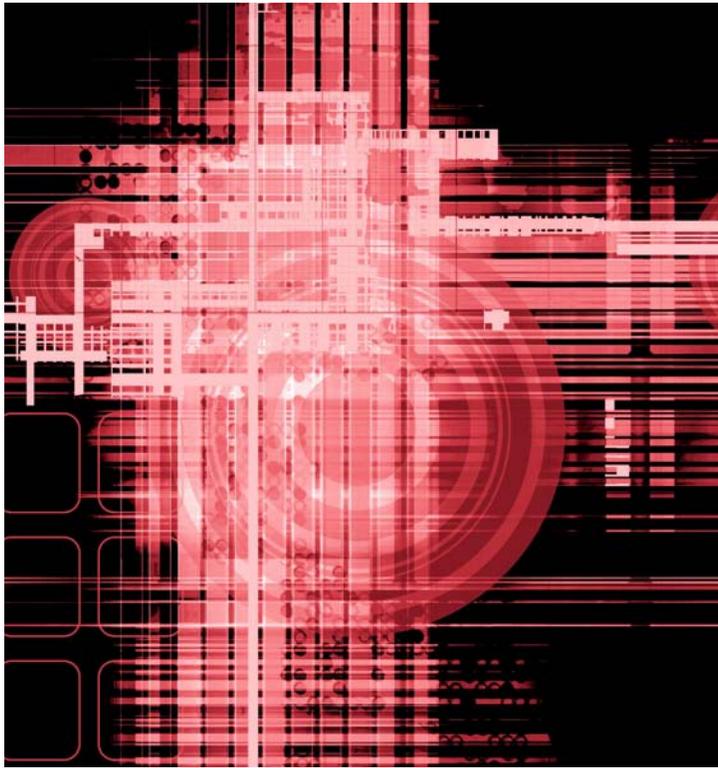
Online Content for Low-income and Underserved Communities – A research, Web publishing, and advocacy program to promote the development of content for and by underserved communities. See **Contentbank.org**.

Young Americans and the Digital Future – A multiyear program to promote state and local policies that increase young people's access to the benefits of information technologies. See **Techpolicybank.org**.

California Advocacy Program – A state-based model program to effect public policy changes that increase access to and use of technology in low-income communities, in partnership with the **California Community Technology Policy Group**. See **www.cctpg.org**.

Research and Publications

- ◆ *Online Content for Low-Income and Underserved Americans: Issue Brief*
<http://www.contentbank.org/TCP-OnlineContent.pdf>
- ◆ *Online Content for Low-Income and Underserved Americans: The Digital Divide's New Frontier*
http://www.childrenspartnership.org/pub/low_income/index.html
- ◆ *State Fact Sheets on the Technology Gap*
<http://www.childrenspartnership.org/youngamericans/statefacts.html>
- ◆ *Recommendations: Ideas for Cities and States Getting Started in Tight Fiscal Times*
<http://www.techpolicybank.org/recommendations.html>
- ◆ *Pathways to Our Future: A Multimedia Training Program That Works for Youth*
<http://www.cctpg.org/workforce/ciof-pathways-report.pdf>
- ◆ *21st Century Literacy in the United States: Youth & Technology Literacy Today*
<http://www.childrenspartnership.org/youngamericans/factsheet.html>



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**A Publication of
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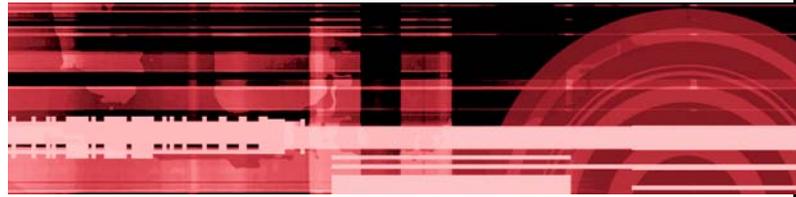


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I. EXECUTIVE SUMMARY

Today, opportunity and success are increasingly tied to the digital world. If you want to get a driver's license, apply for a job, reserve a library book, or buy a home, you will probably be directed to the Web. **Yet despite this explosive growth, more than 50 million Americans are unable to find or use the online information and services they need most. For those with low incomes, limited-literacy or English skills, or one or more disabilities, a persistent “content gap” leaves the promise of the Web unfulfilled.**

We can narrow the online content gap by creating more relevant, high-quality content, and by making it easier for everyone to find what they need online. For low-income users, that means information about local jobs, housing, and other services, in easy-to-read English as well as other languages. But what defines high-quality content? What are the technical, language, and other barriers facing underserved users? What are the best solutions for lowering those barriers? How can producers, researchers, investors, policy-makers, community leaders, and users themselves help close the gap? And where do we go from here?

To help answer these important questions, The Children's Partnership (TCP) looked to the emerging field of online content evaluation. We examined a wide range of efforts to identify, sort, and/or create online information for different audiences — from health care consumers to teachers to non-English speakers — and found useful lessons and examples. We drew on the best thinking in the field to build a set of “starter guidelines” for finding and creating high-quality, low-barrier content. And we developed a set of specific recommendations for narrowing the content gap over the next few years.

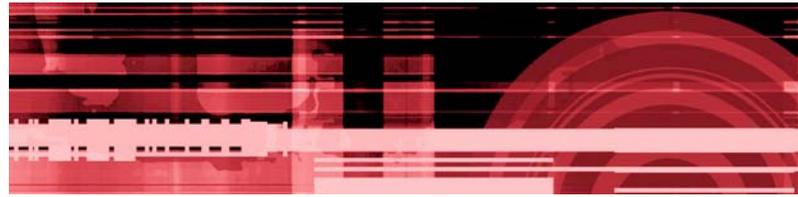
Key Findings

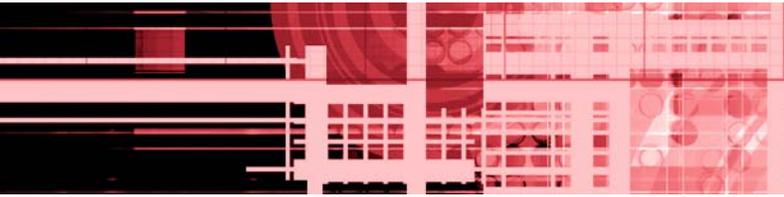
- ◆ **Consensus is Emerging on a Set of Evaluation Criteria:** Some criteria for creating or identifying high-quality content arise consistently in research across many fields. Our sampling of 100 sets of guidelines in use today revealed six commonly used criteria that were included in at least half of all of the guidelines we reviewed. (See Research Appendices, Tab 1 for a complete list of guidelines included in our analysis.) This emerging consensus forms the basis of TCP's new “Guidelines for Content Creation and Evaluation, Version 1.0.” (See Chapter IV and Research Appendices, Tab 3.)
- ◆ **Standards and Public Awareness Are Both Crucial to Effective Content Evaluation:** Research reveals that while standards for defining high-quality, low-barrier content are essential, they must be combined with public education efforts so that users know what to look for online.
- ◆ **The Health Field Has Made Significant Contributions to Content Evaluation Research and Application:** The health field is at the forefront in identifying standards for high-quality content and developing related consumer tools and education strategies.
- ◆ **The Education Field Has Contributed Valuable Evaluation and Media Literacy Tools:** Important advances in the education field include evaluating content for different grade levels and developing guidelines to help teachers and others assess content.
- ◆ **Content Evaluation Efforts Have Rarely Focused on Underserved Communities, Except for People with Disabilities:** There are few content evaluation tools for people with limited-literacy or English skills. However, guidelines have been developed for people with a range of physical and cognitive disabilities.
- ◆ **The Plain Language Movement and Adult Education Offer Valuable Approaches Related to Literacy:** By encouraging clear writing and recognizing literacy limitations, these fields are starting to develop tools that hold considerable promise.

- ◆ **Content in Multiple Languages Remains Difficult to Evaluate:** There is little research on the effectiveness of translation technologies, and there are few tools for evaluating or producing multilingual content. In fact, fewer than 10% of the guidelines we reviewed address criteria related to language.
- ◆ **Very Little Work is Currently Underway to Evaluate Cultural Content:** Despite our nation's cultural diversity, few researchers or producers have focused on evaluating the cultural relevance of online content.
- ◆ **Local Communities Are in the Lead:** A handful of community-based programs are beginning to demonstrate how to aggregate and create the rich variety of content, including local information, that underserved users are seeking.
- ◆ **Usability Research Offers Valuable Tools:** Usability researchers have developed a range of valuable tools for making Web sites easier for everyone to understand and use.
- ◆ **Early “Intersections” Hold Promise for Integrating Standards for the Underserved into Existing Evaluation Efforts:** Some fields, such as health care, are beginning to incorporate key criteria, such as literacy levels, into their own evaluation frameworks.

Recommendations

1. **Accelerate the Development and Promotion of Comprehensive Guidelines:** By setting clear standards, comprehensive guidelines for high-quality, low-barrier content could be a powerful tool for closing the content gap — but only if they are widely used. We urge researchers and others in both the public and private sectors to accelerate the development of such guidelines, and to vigorously promote their use in all relevant fields.
2. **Make Content Evaluation and Creation Guidelines Easy to Use:** Guidelines should be translated into easy-to-apply formats to encourage better identification, cataloguing, and rating of the relevant content already online.
3. **Develop Specific Guidelines and Tools for Local Content:** Community-based organizations and other producers need guidelines and evaluation tools designed to address underserved users' interest in highly local content.
4. **Develop Web-Oriented Media Literacy Tools and Conduct Public Education for Underserved Users and Those Who Work with Them:** To benefit from the Internet, users of all ages and abilities must know how to recognize reliable, high-quality content. Web-oriented media literacy training should be integrated into schools, community activities, and after-school and adult education programs.
5. **Encourage and Highlight Relevant Models:** Nonprofits and public and private content developers should showcase successful efforts to identify and create low-barrier content, and share information to encourage replication among and across fields.
6. **Build a Broad-Based Effort to Forge Consensus on Evaluation Criteria and Press for Low-Barrier Content:** Nonprofit organizations and others working in the public interest can increase their influence with large content producers by joining forces and promoting a consistent set of standards for low-barrier content.
7. **Expand the Audience for Both Public and Private Content to Include the Underserved:** Government, commercial, and nonprofit content producers should include the very large market of underserved Americans in their intended audience, and adapt or develop content that meets their needs.
8. **Promote E-Government Solutions:** We urge policy-makers to promote investments in e-government that improve everyone's access to essential public information and services.





- 9. Ensure that Underserved Communities Benefit from Broadband Expansion:** We urge policy-makers to ensure that high-speed Internet connections, needed to quickly transmit low-barrier content using video, audio, and graphical elements, reach rural and other underserved communities, and to track access over time.
- 10. Support Content Development within Direct Service Programs:** When policy-makers allocate funds for workforce development, community technology, youth development, and after-school programs, they should include support for online content development.
- 11. Increase Strategic Investments in this Emerging Field:** Strategic investments by social venture capitalists and philanthropists are critical now, while the field of content evaluation is still taking shape, to ensure that the digital revolution leads to real opportunities for all.

As a whole, this Issue Brief provides a practical blueprint for extending the digital ladder of opportunity to all Americans. TCP hopes that researchers, community technology and other nonprofit leaders, librarians, content producers, policy-makers, philanthropists and investors, and others with important roles to play will join us in making this blueprint a reality.

II. INTRODUCTION

The Increasingly Digital Ladder of Opportunity

For today's students and workers, parents and teachers, consumers and taxpayers, opportunities for success are increasingly tied to the digital world. For those struggling to achieve the American dream, computers and the Internet are becoming as essential as hard work and perseverance have always been. Four key rungs on the increasingly digital ladder of opportunity are:

- ◆ **Success in School:** As computers and the Internet play an increasingly vital role in how and what students learn, educational success depends on Web-oriented media literacy skills, such as the ability to find, organize, and create online information;
- ◆ **Work Preparation:** Familiarity with information technology is expected in more and more workplaces, and advanced information and Web skills help increase the odds of finding and getting higher paying jobs;
- ◆ **Adult Basic and Continuing Education:** Online courses and other forms of "distance learning" may offer students of all ages new opportunities to complete high school, continue their education, or train for better jobs; and
- ◆ **Crucial Information and Services:** The Internet is a key source for crucial information, from clinic hours to scholarship opportunities to neighborhood watch schedules. It is also increasingly important for transacting business or receiving services, like filing taxes or getting a business license.

Growing Interest and Demand for Relevant Internet Content for Low-Income Americans

As more and more opportunities are tied to the Internet, more Americans from every socioeconomic group are going online. Between 1997 and 2001 (the latest year for which numbers are available), the overall number of Americans using the Internet increased two and a half times, from 56.7 to 142.8 million; low-income Internet users more than doubled, from 7.8 to 16.7 million.

Not surprisingly, the amount of information developed for the Web and placed online has also exploded.



Although the World Wide Web is barely 10 years old, it holds an estimated 40 million sites, with hundreds of thousands of pages added each day. (NetCraft's "April 2003 Web Server Survey," http://news.netcraft.com/archives/web_server_survey.html).

Finally, there has been significant expansion in the distribution outlets for Internet content. In addition to rising home-based access, public libraries, after-school and youth development programs, community colleges, and many other neighborhood-based organizations have incorporated computers and the Internet into their offerings.

However, despite significant growth in Internet access and content, much of the information that low-income and other underserved communities want and need is still not available online. In 2000, The Children's Partnership released the first research to document this "content gap": *Online Content for Low-Income and Underserved Americans: The Digital Divide's New Frontier* (available at http://www.childrenspartnership.org/pub/low_income/index.html). Among our key findings:

- ◆ The content gap affects an estimated 50 million Americans, including those with low incomes, limited-literacy or English skills, or one or more disabilities;
- ◆ Low-income users turn to the Internet for self-improvement, and are more likely than other users to seek information about employment and education;
- ◆ Low-income and other underserved users want very local content, available in a variety of languages, and at levels accessible to users with limited-literacy skills, or for whom English is not their first language; and
- ◆ Even when relevant, high-quality content exists, it is difficult for users to find.

Our research found that very few Web sites provide this needed content. The following list is the percentage



of sites we examined that addressed key gaps in online content.

◆ Local information, including jobs and/or housing	6%
◆ Information about local jobs	1%
◆ Information about local housing	1%
◆ Information for people with limited-literacy skills	1%
◆ Information for people with limited English-language skills	2%

In June 2002, we updated this research and found that despite a steady increase in the number of low-income Americans going online, the content gap had not significantly changed. (See *Online Content for Low-Income and Underserved Americans: Issue Brief* at <http://www.contentbank.org/TCP-OnlineContent.pdf>.)

Crucial Moment in the Evolution of Online Content for Underserved Communities

As the number of low-income Internet users continues to rise, so does the urgency to find and create content and tools that meet their needs. Millions of hard-working people are looking online for educational, employment, and other resources to better their own lives as well as those of their families and communities. What they find online will determine whether the digital ladder of opportunity extends to all Americans, or further disadvantages those already left out.

Content Evaluation: A High-Leverage Strategy for Building an Opportunity-for-All Internet

Efforts to evaluate online content hold tremendous power to influence whether the Internet will indeed become a source of opportunity for all. Standards or guidelines can help those working directly with underserved users sort through vast amounts of online information and zero in

Why Content Matters: A Story from a Single Mother

Anna Bautista*, a young single mother in El Centro, California, felt it was time for a change for her and her young son. She enrolled in a CalWorks job readiness class at the Computers in Our Future (CIOF) center at Desert Oasis High School. After learning technology skills and developing her resume, Anna soon found employment using the CalJobs site on the Internet. Realizing she also needed to improve her living situation, Anna once again surfed the Web and found an apartment close to school and work. As she left the CIOF program, Anna said she was both scared and excited about her new job and new life, and determined to make it with what she now had. (Source: Fowells, Linda and Wendy Lazarus. *Computers in Our Future: What Works in Closing the Technology Gap?* (2001) <http://www.ciof.org/policy/summary-report.html>)

* Not her real name.

on what is reliable, useful, and accessible. Equally important, content evaluation guidelines can help content producers — public, private, and community-based — ensure their content is relevant to and usable by all Americans. At this time of tremendous online growth, it is especially important that content evaluation tools that ensure inclusiveness be developed, disseminated widely, and used.

III. THE CHILDREN'S PARTNERSHIP'S RESEARCH ON CONTENT EVALUATION

Our Goals and Approach

The main goal of The Children's Partnership's research on content evaluation is to help guide the Internet's evolution in ways that benefit the 50 million Americans who are not well served by what is currently online. To encourage the identification and creation of online content that is both relevant and accessible for people with low incomes, limited-literacy or English skills, or disabilities, we examined a wide range of content evaluation efforts. This Issue Brief has four specific goals:

- ◆ To summarize what is known about content evaluation activities now underway;
- ◆ To assess the current "state of the art" in content evaluation and determine how it can be applied to meet the needs of the underserved;
- ◆ To provide "starter" guidelines for evaluating available content and informing the creation of new content; and
- ◆ To recommend ways that researchers, community technology and other nonprofit leaders, content producers, policy-makers, philanthropists and other investors, and others with important roles to play can help ensure that the opportunities tied to the online world benefit all Americans.

We spent six months researching ongoing and cutting-edge efforts to evaluate Internet resources and guide online content development. We reviewed relevant literature and studies, sampled and examined many existing guidelines and projects of note, and tapped some of the most thoughtful experts in the country for their advice and leads. (For further information about our research methods and scope, see Research Appendices, Tab 1.) This Issue Brief and its in-depth Research Appendices summarize what we learned.

Our Key Findings

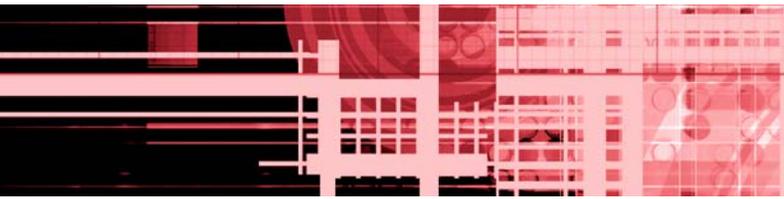
We found a growing, global community of leaders who recognize the importance of content evaluation tools, and a significant body of content evaluation work is now



underway. These pioneering efforts, the earliest of which were led by librarians and university researchers, are now taking place in various fields and subject areas, from usability and accessibility to education and health care. We also found early experiments in equipping online consumers to assess and deploy Web-based information.

On the cutting edge of consumer-oriented research, groups like the Stanford Persuasive Technology Lab (SPTL) are examining what elements are most effective in grabbing and holding users' attention and trust — and how they compare to criteria for determining reliable content. For example, SPTL is looking at the factors that lead users to believe (or disbelieve) what they find online. Its study, *How Do People Evaluate a Web Site's Credibility? Results from a Large Study*, commissioned by Consumer WebWatch and published in October 2002, provides insight into the aspects of Web sites to which consumers pay most attention (http://www.consumerwebwatch.org/news/report3_credibilityresearch/stanfordPTL_abstract.htm). The study found that less than 10% of consumers focused on the identity of the site or site's sponsor, and less than 1% the site's privacy policy. Instead, over 46% mentioned more superficial features, like overall design, layout, and use of color and fonts.

These diverse efforts are producing valuable building blocks for informing and guiding the selection and development of online content across fields, and for helping consumers better understand what they find online. To date, however, this work tends to be compartmentalized by subject (e.g., health or education) or by field (e.g., usability or privacy). Little if any work has been done to pull from all of these sources and create a comprehensive, integrated set of guidelines that works across fields and addresses the special needs of the 50 million Americans now underserved by online content.



More specifically, we found the following:

I. Consensus is Emerging on a Set of

Evaluation Criteria: There is growing consensus that certain features of online content are essential to make it useful and reliable for consumers. Based on our examination of more than 100 examples of content evaluation guidelines from several different fields, it is clear that baseline requirements are beginning to emerge. While different guidelines vary in terminology and emphasis, we found that certain of these criteria appeared in more than half of the guidelines we reviewed, demonstrating this emerging consensus. (However, literacy, language, or culture were each addressed by less than 10% of the guidelines we reviewed. (See Findings 6, 7, and 8.)) (See Research Appendices, Tab I for the methodology behind this analysis and a complete list of guidelines reviewed.)

Results of The Children’s Partnership Survey of 100 Sets of Content Evaluation Guidelines	
CRITERIA	% OF GUIDELINES MEETING THAT CRITERIA
Source	91%
Currency	86%
Accuracy of content	71%
Usability	64%
Technical aspects	60%
Contact information	55%
Design	41%
Clear distinction between advertising and editorial information	27%
Accessible to those with disabilities	24%
Cost	22%
Privacy	20%
Ability to contribute to the site’s content	9%
Multilingual	8%
Accessible to limited-literacy audiences	6%
Cultural inclusiveness and relevance	6%

An example of how these criteria are starting to be applied is in e-government sites. Increasingly, Internet users are turning to federal, state, and local e-government sites to both find information and access government services. A study released in April 2002 by the Pew Internet & American Life Project determined that 68 million American adults have used e-government Web sites (http://www.pewinternet.org/reports/pdfs/PIP_Govt_Website_Rpt.pdf). In response, more government agencies are trying to create high-quality sites that satisfy users’ needs, particularly in areas of accessibility and usability. Recognizing that users want to find information with as few “clicks” as possible, many agencies are working to design and redesign their sites with this consideration in mind.

The City of Seattle, for example, has made considerable effort to design a high-quality site that offers a range of benefits to visitors (<http://www.ci.seattle.wa.us>). Seattle’s site ranked in the top five of Brown University’s Darrell M. West’s analysis of over 1,500 e-government sites from the country’s 70 largest metropolitan areas (<http://www.OutsidePolitics.org/egovt02city.html>). West’s evaluation criteria included a wide range of features that would be helpful to site visitors. The study also points to other localities, such as Houston and Syracuse, that have taken extra steps to accommodate the special needs of their diverse online constituents.

E-government efforts like these are beginning to translate into positive experiences and increasing expectations. A December 2002 report from the Pew Internet & American Life Project found that people generally had positive experiences using e-government sites: 71% of Internet users said they were able to find the information they were looking for either “always” or “most of the time” (<http://www.pewinternet.org/reports/toc.asp?Report=80>). Pew’s research also indicates that Internet users have high expectations for e-government, with 80% saying that they expect government-related information to be available online.

Like e-government, other sectors have made considerable strides towards applying agreed upon criteria about what defines high-quality online content. The fact that a consensus is emerging around certain

important and useful criteria is very encouraging. However, other crucial features that matter a great deal to underserved communities, such as literacy levels, language, and cultural relevance, are still not generally considered. (See Findings 6, 7, and 8.)

2. Standards and Public Awareness Are Both Crucial to Effective Content Evaluation:

Research reveals that there are two essential and interdependent aspects of content evaluation. One is the development of guidelines or criteria to evaluate and shape content. The other is the dissemination and application of such guidelines, including efforts to inform the public that these tools exist and how to use them.

It is clear that the creation of standards or guidelines is the essential starting point for sorting out useful content and guiding producers in developing credible content, especially in the absence of the editorial processes built into the publication of books and other print products. However, educating consumers about content evaluation is equally crucial. Public information campaigns have worked to inform consumers about safety innovations such as seat belts in cars, and self-education tools like nutrition labels on food products. Similarly, consumers must be aware of and able to apply online content guidelines for them to be of any benefit. Our research surfaced several promising approaches to integrating these two aspects of content evaluation.

Promising Approaches from the Health Field

The health field has done the most thorough experimentation with integrating the two aspects of content evaluation. Researchers and content producers have made considerable investments in developing standards and guidelines. In addition, health leaders have developed and tested a range of evaluation tools, from user-guidance tools, to quality seals, to more complex approaches like the use of meta-information, which involves augmenting Web pages with additional information that can be read by a user's browser. (For more about advances in the health field, see Finding 3.) Other fields, although less advanced overall, have also begun to consider ways to implement content evaluation criteria.

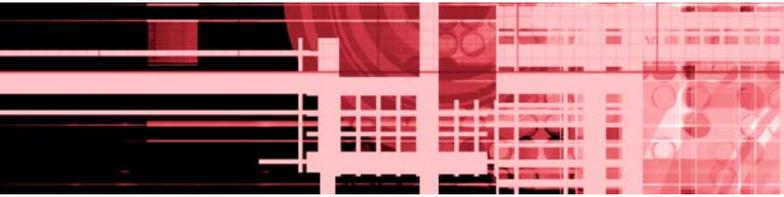
Promising Approaches from Consumer Education Groups

In the field of consumer involvement and education, the Better Business Bureau, through *BBBOnline*, has developed a Privacy Seal Program and a Reliability Seal Program (<http://www.BBBOnline.org>). With the Privacy Seal Program, e-commerce sites can submit a Web page to *BBBOnline* for review. If it meets their criteria, the site is allowed to display the *BBBOnline's* Privacy Seal. Similarly, if an e-commerce site adheres to the BBB's principles for trustworthiness, it may display the *BBBOnline's* Reliability Seal.

Both of these seals, and other quality seals or hallmarks, are designed to send a message to consumers that particular sites can be trusted. However, for such tools to be effective, users must be aware of them (in this case, they must be able to recognize the seal). As new content evaluation criteria are developed, building consumer awareness and skills presents a difficult challenge.

Promising Approaches from Media Literacy

Media literacy efforts, though historically focused on print and electronic media rather than online media, provide relevant experience in how to educate consumers to identify and use high-quality information resources. Also called "information literacy," training in how to find, assess, and apply reliable information has been a growing concern of librarians and teachers alike. For example, Reforma, an organization focused on libraries, literacy, and technology, emphasizes the important role libraries must play in "instructing users how to critically evaluate the information they find on the Internet" (<http://clnet.ucr.edu/library/reforma/>). The American Library Association has published nine standards for information literacy which, in turn, have provided the basis for states like Colorado and Delaware to develop their own standards (http://www.ala.org/aaslTemplate.cfm?Section=Information_Power&Template=/ContentManagement/ContentDisplay.cfm&ContentID=19937).



3. The Health Field Has Made Significant Contributions to Content Evaluation

Research and Application: The health field is out front in attempts to develop and apply content quality standards, though most of the work has focused on general populations rather than the underserved. These early efforts suggest a variety of strategies for identifying “good content.” They also make clear, again, that if consumers are not educated to recognize available content evaluation tools like a quality seal, or if consumers do not know that a pre-screened database exists, these tools will not have their intended impact.

The tremendous potential for enhancing health care, the widespread use of online health information, the high stakes for consumers and practitioners, and significant resources and market incentives have all accelerated health-related work on content evaluation.

Numerous groups have developed standards of quality and integrity for health-related Web sites, and there is considerable consistency among the various criteria. A study published in the *BMJ* (formerly *British Medical Journal*) in 1999 reviewed 29 sets of criteria or guidelines for evaluating online health information (<http://bmj.com/cgi/content/full/318/7184/647>). Researchers determined that these criteria fell into 12 main categories, with the most often cited categories including authority, content, disclosure, ease of use, currency, design, accessibility, and availability.

There is much less consensus, however, on how these criteria should be applied. One strategy several sites have chosen to adopt is *codes of conduct*. The Web site of the American Medical Association (AMA), for example, provides guidelines for content, advertising and sponsorship, privacy and confidentiality, and e-commerce policies and practices on all Web sites associated with the AMA’s name in any way (beyond having a simple link to an AMA site) (<http://www.ama-assn.org/ama/pub/category/1905.html>).

The Internet Healthcare Coalition, which advocates for a self-regulated Internet, is another example of this strategy. This membership organization promotes its eHealth Code of Ethics, a set of standards designed to guide content providers in assessing their own Web sites (<http://www.ihealthcoalition.org/ethics/ethics.html>). Although these codes of conduct are especially cost-effective strategies, critics point out that since they are not binding, there is no means for enforcing the standards and ensuring compliance.

Others in the health care field argue for the use of *quality seals*, in which sites that comply with a set of criteria (established by a third party) are allowed to display a “seal of quality.” The American Accreditation HealthCare Commission (URAC) offers a Health Web Site Accreditation program, whereby health-related sites can apply to have their sites reviewed (<http://webapps.urac.org/websiteaccreditation/default.htm>). Sites that satisfy URAC’s criteria may display a seal to advertise their standards of quality to consumers. Still, enforcement presents a challenge for some quality seal programs, as cost constraints require many third-party reviewers to depend on users to pro-actively identify and report instances of non-compliance. Furthermore, the volatility of the Web itself makes ensuring a site’s compliance over time difficult.

The challenges of monitoring the quality of ever-changing, Web-based content is one reason some in the field are promoting *user-guidance tools*. These are often sets of questions that consumers themselves answer about a site they have encountered. The UK-based DISCERN Instrument, designed to help consumers evaluate the information on health sites, takes consumers through a series of questions and includes “hints” to help them along the way (http://www.discern.org.uk/discern_instrument.htm). However, some members of the health field note that this method places too large a burden on consumers, for whom complex or unfamiliar medical information and terminology already pose challenges.

In addition to the strategies above, the health field has begun looking at other methods for evaluating content. For example, initiatives such as the European Union-sponsored MedCIRCLE project have begun to consider ways in which technology

can assist in the evaluation process (<http://www.medcircle.org>). More specifically, humans (including content producers, medical experts, and non-medical reviewers) can upload meta-information about a Web site using a vocabulary called HIDDEN (Health Information Disclosure, Description and Evaluation Language). This information is then translated into code readable by users' browsers and then used to provide consumers with aggregated information about the site presented in a standardized way. For example, a consumer could see the site's source and contact information, its level of accessibility to users with disabilities, how the site has fared in third-party evaluations, its privacy policy, and much more.

While some aspects of evaluating online content are unique to the health field, others might be applied more widely. These include recognizing consumer education as essential, as well as adapting meta-information and other technology-based methods to make content evaluation cheaper and more standardized with less of a burden on the consumer.

Additional Health Resources

◆ **Health On the Net Foundation**

<http://www.hon.ch>

The Health On the Net Foundation (HON) developed the HON Code of Conduct, which outlines basic ethical standards for providing health information online. HON also offers a site-checker tool to evaluate how sites measure up against its quality standards.

◆ **Hi Quality: Guidelines on Health Information Quality**

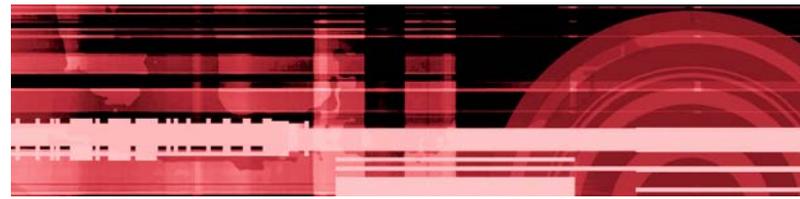
<http://www.hiquality.org.uk>

Hi Quality is a Web-based resource aimed at raising the quality of health information. The site features standards and guidelines, a health information glossary, and links to related resources.

◆ **QUICK: The Quality Information Checklist**

<http://www.quick.org.uk>

This resource helps young people evaluate online information. The site's emphasis is on evaluating health information and includes a teachers' guide.



4. The Education Field Has Contributed Valuable Evaluation and Media Literacy Tools:

The education field has had a pressing need to develop content evaluation guidelines, as teachers must sort through the vast supply of online educational material to decide what to use with their students. A unique contribution from the education field is the development of guidelines designed for students themselves to use in conducting online content evaluation. Many of these tools take the students' ages and grade levels into account.

For educational purposes, certain aspects of content evaluation deserve special focus. Examples include ascertaining an author's credibility or content's accuracy and objectivity. Furthermore, if teachers want to use a Web site in a classroom activity, they must be able to ensure that it will download quickly, have active links, and be easy for students to navigate.

Ed's Oasis, an online resource for K-12 teachers, features an Evaluation Center (<http://www.classroom.com/edsoasis/evaluation.html>). Here, teachers can use the Web Site Evaluation for Educators, a Web-based form that helps teachers label sites as either Resource, Project, or Supplemental Sites, and then determine whether a site would be good to use with students. The tool prompts teachers to consider the content's grade level, how well it relates to the curriculum, and whether teachers' aids are available. Based on the teacher's responses, the tool then calculates a score and offers a recommendation on whether the site should be used. This is one of several models for criteria and tools designed to help educators find, evaluate, and use high-quality online content.

Educators and librarians have also developed curricula for teaching content evaluation, as well as sets of guidelines that students can use to conduct their own evaluations. There is an increasing recognition that learning how to evaluate online content specifically



should be part of the critical thinking skills that schools and libraries teach. For example, Kathy Schrock's "Guide for Educators," part of DiscoverySchool.com, offers elementary, middle, or secondary school students three separate surveys for evaluating Web pages (<http://school.discovery.com/schrockguide/eval.html>). Each survey is tailored to the abilities and needs of each age range.

Additional Education Resources

◆ The ABCs of Web Site Evaluation

http://school.discovery.com/schrockguide/pdf/weval_02.pdf

This list of 26 tips (with explanations) advises both teachers and students about how to effectively evaluate Web sites.

◆ WWW CyberGuides

<http://www.cyberbee.com/guides.html>

The WWW CyberGuides are evaluation forms that aid teachers in evaluating the curriculum content on a site as well as the site's design. There is also an evaluation tool designed for use with elementary school children, called "Website Investigator."

◆ Yahoooligans! Teachers' Guide: "Evaluating Websites" <http://www.yahoooligans.com/tg/evaluatingwebsites.html>

This guide for teachers emphasizes the importance of using quality sites in Internet-based lessons and suggests the "Four A's" as a method to evaluate sites for educational use: Accessible, Accurate, Appropriate, and Appealing.

- 5. Content Evaluation Efforts Have Rarely Focused on Underserved Communities, Except for People with Disabilities:** In our sampling, we found that literacy, language, or culture were each addressed by less than 10% of the 100 sets of guidelines we reviewed. (See Finding 1.) Whereas

there have been considerable advances in certain subject-specific areas, content evaluation tools that address the needs of most underserved groups have been slow to develop. Examples include those with limited-literacy skills, a primary language other than English, or unique cultural backgrounds. Only when measures like these are widely applied will it be possible to point underserved users to "low-barrier" sites that meet their needs.

One exception is people with disabilities. Fairly detailed and widely applicable standards of accessibility have been developed for people with hearing, vision, motor, or other physical and cognitive disabilities. It should be noted that the availability of these tools in the disability field has not meant that the needed content is fully available.

Internet users with disabilities still encounter numerous barriers to being able to effectively access online content. However, there is substantial research on what makes Web sites most accessible to those with certain disabilities, and there are criteria and other tools that site developers can use to guide them when creating sites. Among the most frequently cited criteria for helping content producers create accessible sites are those developed by the World Wide Web Consortium's Web Accessibility Initiative (<http://www.w3.org/WAI>). These criteria are divided into three levels of priority: checkpoints a developer *must* satisfy, checkpoints a developer *should* satisfy, and checkpoints a developer *may* choose to address. Examples of specific tools that help users with disabilities access online content are screen readers (which use a speech synthesizer to read aloud what is shown on a computer screen) for the visually impaired and closed captions for the hearing impaired.

There are also tools for evaluating the accessibility of existing sites and helping content producers identify gaps and make adjustments. One example is Bobby™, a Watchfire™ software product that can test a site's accessibility to those with disabilities and creates a report identifying areas of inaccessibility. Watchfire also offers a free online Bobby service, where users can test one Web page at a time (<http://bobby.watchfire.com/bobby/html/en/index.jsp>). Other such tools are also being developed. (See Research Appendices, Tab 2.)

Accessibility of Web content has also received significant attention from the public sector. Section 508 of the Rehabilitation Act requires the federal government's electronic and information technologies, including Web sites, to be accessible to people with disabilities. Many state and city government agencies have begun implementing accessibility guidelines for their own sites. Connecticut, for example, is a standout at the state level, working to make more than 158 state-operated sites accessible by applying a set of guidelines and a checklist of design requirements developed by state staff (<http://www.cmac.state.ct.us/access/news/hbj/hbjarticle.htm>). Other states like New York, Texas, Washington, and Illinois have also made considerable strides in ensuring accessibility on their sites.

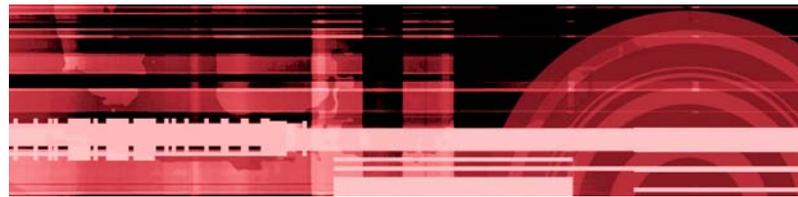
6. The Plain Language Movement and Adult Education Offer Valuable Approaches

Related to Literacy: The work is very “young” in the area of improving accessibility for people with limited-literacy skills, but two approaches offer promising building blocks. The first is the set of standards developed by the plain language movement. Advocates of plain language focus on presenting content in a way that makes it understandable by all audiences. The second is the adult education/adult literacy field, which is experimenting with approaches that would be relevant for early readers specifically.

Plain language is a style of writing that aims to be very clear and easily understood by a wide variety of audiences. It is characterized by active verbs; short, simple sentences; concrete, familiar vocabulary; and other specific writing techniques. Much of the plain language effort focuses on print materials, but online content has begun to receive some attention as well.

The Plain English Campaign, for example, a UK-based organization, addresses Web-based information (<http://www.plainenglish.co.uk/index.html>). This campaign developed the Internet Crystal Mark, a “seal of approval” given to Web sites that apply for and meet their criteria. They also offer a “Plain English Guide to Designing Clear Websites,” which addresses issues such as navigation, text, color, and page design.

Adult literacy practitioners are also beginning to consider how to find and evaluate online content for adult learners. For example, the National Institute for



Literacy (NIFL) has published the selection criteria for its LINC database of online resources for literacy practitioners and adult learners (http://www.nifl.gov/lincs/selection_criteria.html). This extensive set of criteria includes Web publishing guidelines that dictate font sizes, as well as searchability and accessibility standards. There are criteria for general inclusion in the database, plus specific criteria for inclusion in their Special Collections, like “Health and Literacy” or “English as a Second Language.” NIFL’s commitment to making their selection criteria available online is a valuable contribution to the field.

Because content evaluation strategies for limited-literacy users are still emerging and evolving, sharing current tools and evaluation models is essential to building the field.

Additional Limited-Literacy Resources

- ◆ **Surfing for Substance: A Professional Development Guide to Integrating the World Wide Web into Adult Literacy Instruction** <http://literacytech.worlded.org/docs/surfing/index.htm>

Section Four of this guide is devoted to selecting and evaluating Web resources for use with adult learners; it includes a “Web Site Evaluation Questionnaire” for selecting the best sites to use with lessons.

- ◆ **Teaching and Learning with Internet-Based Resources: A Set of Lesson Plans and Activities** <http://www.nifl.gov/nifl/fellowship/reports/susanc/inthome.htm>

The “Starting Block” section of this short course has content evaluation guidelines that can be used by adult learners as well as two activities about Web evaluation.



7. Content in Multiple Languages Remains

Difficult to Evaluate: We found virtually no research on content evaluation tools that assure high-quality translation of English content into other languages. There is, however, early work that could have implications for this field.

With regard to the translation of information into multiple languages, several issues emerged from our research and interviews with key informants. *First* is the question of what information on a site ought to be translated. Early thinking from a handful of experts suggests that it is neither necessary nor appropriate to translate every site in its entirety. Given the difficulty and expense of high-quality language translations, what is most important is that the portions of a site most relevant to consumers whose primary language is not English be available in the needed language(s).

Secondly, several tools on the content development side may, over time, help make it easier to provide language translations when appropriate. For example, databases of translated phrases can save re-translating costs and foster consistency. In addition, the Beehive, a Web site developed by the One Economy Corporation, is demonstrating how multilingual content for local use can be developed. The Beehive is producing customized content in English, Spanish, Russian, Haitian Creole, and Urdu for cities across the country (<http://www.thebeehive.org>).

The *third* issue has to do with the quality of the translation, which is closely tied to the way in which the translation is produced. The principal techniques used to translate online content into other languages are human translators and machine-based translators (or some combination of the two).

Translation by a qualified human translator who has knowledge of nuances and other elements of both languages generally leads to the highest quality

translation. This option, though, is costly, and conducting quality assessments can be difficult. However, university-based researchers and linguists are exploring standardized quality assessment guidelines, which could hold promise for those developing multilingual content for underserved communities. (For examples, see Research Appendices, Tab 5.)

The other approach is through machine translations. Research into machine-based translation began over 50 years ago, but there is still much to be done before the promise of completely automated, high-quality language translation is fulfilled — something some experts believe is impossible due to the idiosyncrasies of language. At this time, purely machine-based translation can lead to inadequate translations, although the use of “controlled” language (limited vocabulary and grammatical structures) can lead to better results.

Assisted machine translation, where a human translator “cleans up” the text before and/or after it is translated, can produce higher-quality results than machine translation alone. While the improvement in quality is desirable, barriers of cost and the challenges of quality control remain. A number of researchers are working to reduce these barriers, propelled by the growing commercial and communications needs of an increasingly global Internet and economy.

As a *fourth* issue, discussions are beginning to take place about how U.S.-based consumers of non-English content can most appropriately be involved in reviewing or producing translations. There is growing interest in working with members of the target communities to do translations or review them. This strategy would help assure that the translation actually works for its intended audience and would direct financial resources into the communities that need them.

Within the U.S., the need for multilingual content will likely continue to grow as the number of foreign-born Americans continues to grow. (For more information, see page six of *Online Content for Low-Income and Underserved Americans: Issue Brief* <http://www.contentbank.org/TCPOnlineContent.pdf>.)

8. Very Little Work is Currently Underway to Evaluate Cultural Content: Educators, health care providers, and others serving diverse populations have found that cultural differences can play a significant role in the way people respond to information. Cultural factors such as ethnicity, race, national origin, and primary language may affect users' trust or mistrust of a particular source, tone of language, or visual style. For example, if a sample menu for diabetics assumes that everyone eats a typical Western diet, those from Asian and other cultures with different food preferences are likely to ignore it. As the U.S. population becomes increasingly diverse, the need for culturally relevant and accessible content will only continue to grow.

Our definition of "cultural content" includes information about or from a particular minority ethnic or cultural group; general information tailored to the specific beliefs of a cultural or ethnic group; and multicultural information designed for use by more than one group. However, we found that very little work is currently underway to address the need for such online content. Of the early attempts we identified, most focus either on multicultural standards or on the cultural authenticity of sources.

There are some promising efforts to help educators select multicultural resources for use in the classroom, specifically, content that is free of stereotypes and bias and includes a diversity of perspectives. Dr. Paul Gorski, founder of the Multicultural Pavilion Web site, emphasizes the Web's tremendous potential for facilitating multicultural, interactive teaching, although most of the available content evaluation criteria do not consider how well this potential is being fulfilled. He therefore developed "A Multicultural Model for Evaluating Educational Web Sites," a set of criteria designed to aid educators in assessing online resources from a multicultural perspective (<http://www.edchange.org/multicultural/net/comps/model.html>). The model includes categories such as Relevance and Appropriateness, Credibility, Bias Identification, Accuracy, Accessibility, Navigability, and Multiculturality.

Knowledge Network Explorer, the Web site of SBC's education program, dedicates a section of its site to four areas of 21st century literacy: Information,



Media, Multicultural, and Visual. The multicultural area, created by Clara Chu, Associate Professor in the Department of Information Studies at UCLA, offers strategies educators can use to incorporate multiculturalism into their curricula and introduces several ideas with significance for evaluating culturally relevant online content (<http://www.kn.sbc.com/wired/21stcent/cultural.html>).

In addition to these significant contributions from researchers applying a multicultural lens to content evaluation, those interested in evaluating online information written about or intended for a particular ethnic or cultural group are also doing promising work. The World Wide Web allows content producers a degree of anonymity that is generally not available in other media, like magazines or newspapers. Some warn that this anonymity allows the identity and culture of certain groups to be appropriated by non-group members, whether intentionally or unintentionally. This can present a challenge to Internet users who need to be able to determine the authenticity of a culturally oriented site.

Such concerns, specifically over the misrepresentation and exploitation of Native American culture online, were the impetus behind Elaine Cubbins' developing a set of guidelines for evaluating Native American Web sites, which are widely referenced online by other Native American sites (<http://www.u.arizona.edu/~ecubbins/webcrit.html>). Her criteria look to cues such as whether the site's images are accurate and respectful or are caricatures, and whether sacred objects or knowledge related to Native American spirituality are offered for sale. These cues help determine whether the site is an authentic source of cultural information. Additionally, experts in the field note that knowing whether the source of information represents an insider or an outsider perspective is important in evaluating content. Although both perspectives can be valuable and accurate, only a member of a particular cultural group can speak with



authority on what it is like to actually be a member of that group. Some therefore argue that visitors to a Web site should be provided that information.

Additional Cultural Resource

◆ **Culturally Competent Web Design**

<http://zerodivide.org/ccwebdesign/>

This tool, developed by Amanda Navarro at the Community Technology Foundation of California, was designed to raise questions regarding cultural competence for those designing or redesigning Web sites. The tool guides content producers in identifying their audiences, then asks questions about content, language, usability, and more to provide direction.

- 9. Local Communities Are in the Lead:** A handful of local efforts are beginning to demonstrate how to aggregate and create the rich variety of content that community groups are ideally suited to find and produce. In these valuable, pioneering efforts, librarians and others are developing and applying ways to assess the value of community information and creating content around these guidelines. These efforts to evaluate, select, and, in some cases, produce locally relevant information are particularly important building blocks as other communities look for models to aggregate or create local content.

To illustrate the potential of these on-the-ground efforts in content evaluation, we have profiled two initiatives: firstfind, a project of New York-area libraries; and Community Corner, a project of Computers for Youth. These examples demonstrate how local content evaluation efforts can have real impact in low-income communities.

Public libraries are well suited to be leaders in evaluating and generating locally aggregated and created content. They are often the first points of contact for individuals seeking access to online resources, and librarians are all too familiar with the barriers many patrons face in finding information they can understand and use. Not only are libraries familiar with their community users' needs, they also are guided by the principle that individuals, regardless of their reading skills or English language proficiency, need and want information on a full range of subjects, including such high-priority areas as health, education, employment, parenting, and citizenship.

To make quality information accessible to more users, the Westchester Library System (WLS), New York Public Library (NYPL), Brooklyn Public Library (BPL), Queens Borough Public Library (QBPL), and the American Library Association's (ALA's) Office of Literacy and Outreach Services (OLOS), with funding from the New York State Library, developed firstfind (www.firstfind.info). firstfind is a "virtual library that provides general and local information to low-level readers and adults with limited-English skills." This Web resource contains both national and local information, selected and evaluated according to specially developed criteria, and systematically catalogued and organized for users.

The firstfind project focuses primarily on identifying and evaluating existing online resources, and presenting them in the most accessible format for users with limited-literacy skills.

**Examples of Evaluation Criteria
Developed by firstfind**

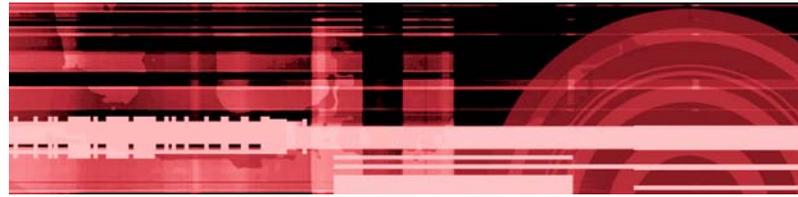
The web site:

- Has content which is of high interest to and suitable for adults;
- Provides accurate, complete, reliable, current information;
- Is easy and efficient to navigate;
- Is easy to read;
- Has good graphic design for adults;
- Makes its bias clear if it has one, or is fair in presentation of points of view;
- Does not have as its primary purpose advertising commercial products;
- Loads reasonably fast; and
- Takes into consideration the needs of differently-abled students.

For firstfind's complete evaluation criteria, see page 18 at <http://www.ala.org/Content/Navigation/Menu/Our Association/Offices/Literacy and Outreach Services/Outreach Resources/firstfind compilation.pdf>.

Community Corner (www.communitycorner.org) is a project of Computers for Youth (CFY), an organization that helps low-income middle school students become engaged learners by using technology to improve their home learning environments. CFY works with a select number of public middle schools in poor neighborhoods in the New York metropolitan area. Each family and teacher receives a home computer and other services, including training, email accounts, Internet access, technical support, and tailored Web content at their Community Corner Web site.

Community Corner contains content in both English and Spanish that is geared toward the audience it serves: low-income youth and adults who



may be first-time computer and Internet users. The Community Corner site includes the following sections: Home, School, Playground, Money Center, Health Center, Job Center, Community Center, Tech Support Center, and Internet Safety. This project is an example of applied research: selecting and aggregating online content based on guidelines developed with and by the community. These guidelines are also helping to shape new content, created specifically for the community.

To ensure that Community Corner is useful to its intended audience, CFY involves community members in all aspects of its design and construction. The site is developed and maintained by low-income and minority interns, who are chosen to design graphics and content that reflect their communities. CFY also conducts informal user tests of the Community Corner Web site at least 15 times per year. Project staff and interns observe how members of their target audience interact with the site and assess its appeal, comprehensibility, and usability. They modify the site's design and content based on that feedback.

Community Corner and firstfind are examples of how local groups, by applying content evaluation research and creating their own content, are making an important contribution. These community-level efforts are important complements to research that is national or international in scope.



Examples of Evaluation Criteria Developed by Community Corner

In its selection of resources for Community Corner and its development of the site itself, CFY takes into account barriers that typically prevent individuals with low incomes and limited-literacy skills from engaging with existing material on the Web. Here are their guidelines, in their own words.

- ✓ **Age:** We design Community Corner primarily for middle school students (ages 11-14).
- ✓ **Readability:** We compose text (for the most part) at a sixth-grade reading level and provide it in relatively large fonts.
- ✓ **Language:** We provide content in both English and Spanish.
- ✓ **Technical:** We design the site for lower-end computers with low-bandwidth access to the Internet.
- ✓ **Visual Appeal:** We design content to be inviting — we use colors, characters and familiar visual metaphors.
- ✓ **Culture:** We design characters and situations to be ethnically and economically representative of the children, families, and neighborhoods that CFY serves.
- ✓ **Education:** We provide opportunities for remediation and game-like interfaces to reduce intimidation.

10. Usability Research Offers Valuable Tools: The field of content evaluation has greatly benefited from the contributions of usability research, which offers strategies for how Web sites should be designed for general users as well as specific audiences, like those with limited-literacy skills, children, or seniors. The issue of

usability cuts across all subject areas and fields, and is a key component of any content evaluation strategy.

Even in the early days of the Web, attention was paid to designing Web sites so that visitors could find information quickly and easily. The field has grown and developed considerably over the last decade, producing a substantial body of work on what types of navigation, font size, page layout, content organization, labeling, graphics, etc., make sites usable. Numerous groups — from corporations wanting to boost sales on their e-commerce sites, to university-based researchers wanting to understand how human psychology should inform Web design, to government agencies wanting to communicate with the public — have an interest in usability. Such groups have carried out extensive user testing and research to develop recommendations for how to make Web sites as usable as possible.

For example, the National Cancer Institute (NCI), after doing extensive research and user testing to improve the various cancer-related sites it operates, has created www.usability.gov. This virtual clearinghouse, which features guidelines, research, statistics, resources, and more, aims to inform NCI staff and designers, as well as the general public, about usability. NCI's "Research-Based Web Design and Usability Guidelines" include recommendations for designing usable sites and provide research to back up the recommendations. Usability.gov also has information about Web site accessibility for users with disabilities.

One recent study, "Unweaving the Web: An Exploratory Study of Low-Literate Adults' Navigation Skills on the World Wide Web," examined this issue of usability for users with limited-literacy skills. In the study, 24 adults with literacy skills between fifth- and seventh-grade levels were interviewed and observed. Barriers to effective usability included busy pages overloaded with graphics and text, the need for accurate spelling in URLs and searches, graphic links, and poor translations for users whose primary language was not English. Based on their research, the authors outlined nine recommendations for improving usability. They stressed that many of the barriers encountered by adults with limited-literacy skills could be overcome with relatively simple changes in a site's use of design and language. (Zarcadoolas, Christina, et al. "Unweaving the Web: An Exploratory Study of Low-

Literate Adults' Navigation Skills on the World Wide Web." *Journal of Health Communication*, Volume 7, pp. 309-324, 2002.)

A wealth of information from usability research is widely available and should be more widely used by content producers and evaluators concerned with underserved communities.

Additional Usability Resources

◆ Useit.com: Jakob Nielsen's Website

<http://www.useit.com>

This rich site includes articles, papers, guidelines, and the popular "Alertbox" columns by usability expert Jakob Nielsen.

◆ Web Style Guide, 2nd Edition

<http://www.webstyleguide.com/index.html>

This extensive guide offers information about many aspects of Web site development, including how to create highly usable interfaces and page designs.

◆ The Training Foundation's Web site usability standards <http://www.trainingfoundation.com/standards/default.asp?PageID=409>

This site outlines the various items that should be considered when designing a Web site, including making the site readable, navigable, and accessible.

II. Early "Intersections" Hold Promise for Integrating Standards for the Underserved into Existing Evaluation Efforts:

Content evaluation efforts focused on subject areas, like health, are beginning to incorporate criteria, like literacy levels, that have particular significance for underserved communities. These "intersections" may point the way towards more comprehensive content evaluation strategies that address the needs of low-income and underserved users.

For example, RAND conducted a study evaluating health-related Web sites in both English and Spanish, and considered, along with other factors, the readability of the sites' content (<http://www.rand.org/publications/documents/interneteval>). The study discovered that all 18 of the reviewed English-language sites required a 10th-grade reading level, with more than half of the sites requiring a college reading level.



Yet, studies estimate that one half of the U.S. population reads at or below a ninth-grade level. Of the seven Spanish language sites reviewed by the study, four were written at a ninth-grade level or higher.

Such findings are behind the development of new criteria and tools that take reading levels into consideration. For example, the Plain English Campaign offers the guide "How to Write Medical Information in Plain English" (<http://www.plainenglish.co.uk/medicalguide.pdf>). Although this guide does not directly address online content, many of its suggestions are applicable and could help inform the development of tools specifically for the Web. The National Institutes of Health (NIH), as part of a federal initiative encouraging the use of plain language, maintains a Web site designed to guide the agency in developing readable information (<http://execsec.od.nihgov/plainlang/guidelines/index.html>). Although this resource is not specifically designed for Web-based information, again, it suggests ways that online information might also be developed.

Another example from a different field is NOLO, a Web site that aims to make the legal system understandable and accessible by providing legal information in plain English (<http://www.nolo.com>). For example, the site has clearly written information about preparing a will, dealing with an eviction, and writing a business plan.

Although research and program initiatives around these intersections are new and still developing, they represent important steps toward integrating the needs of low-income and underserved users into more general content evaluation criteria.

These 11 findings and the research initiatives on which they are based are wide-ranging and somewhat disconnected. However, taken together, they suggest a set of priorities for action over the next few years.



IV. THE CHILDREN'S PARTNERSHIP'S GUIDELINES FOR CONTENT CREATION AND EVALUATION

Overview

To help address the gaps identified in our research, The Children's Partnership has developed a set of "starter guidelines" for online content creation and evaluation. These guidelines take a comprehensive, integrated approach to addressing the needs of the 50 million Americans now underserved by the Web, and build on the growing consensus about how to make online information more useful and reliable. We hope that our Guidelines for Content Creation and Evaluation prove helpful across many subject areas and technical fields, and for the following groups in particular:

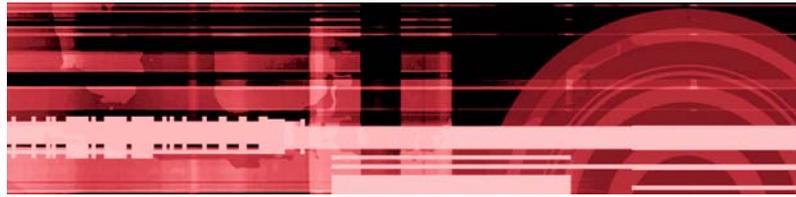
- ◆ Staff members of community-based organizations who want to identify the very best online resources for their clients and/or educate their clients about how to identify reliable online information;
- ◆ Staff and clients of community-based organizations who want to create new online resources for their community;
- ◆ Content producers from the private, public, and non-profit sectors who want to develop the very best low-barrier content; and
- ◆ Policy-makers, philanthropists, researchers, and advocates who want to better understand the characteristics of low-barrier Internet content and the consequences when it is not available.

Our goal was to understand the range of content evaluation guidelines currently in use and to pull together the best and most relevant features. To that end, our guidelines grew out of:

- ◆ Interviews with librarians, university-based researchers, foundation staff, community technology leaders, and individuals who have developed credible content evaluation systems of their own;
- ◆ An extensive review of studies, reports, and articles on the qualitative aspects of Web-based information; and
- ◆ Our analysis of over 100 existing content evaluation guidelines from the fields of education, online privacy, usability, consumer rights, accessibility, health, limited literacy, and cultural content.

We realize that different kinds of online information must be evaluated and presented in different ways, and that a single Web site will rarely satisfy every guideline. We also expect that standards will and should evolve with changes in technology and the way people use the Internet.

TCP created these guidelines as a first step for others to build on. We hope these guidelines help spur further work in the evaluation of online content, the development of relevant content for those currently underserved, and the establishment of generally accepted standards for high-quality, low-barrier content.



Summary of The Children's Partnership's Guidelines for Content Creation and Evaluation, Version 1.0

1. Baseline Requirements

Is the author or sponsor clearly identified?

Is the site **related to the following topics:** education, health, housing, jobs, legal services, cultural perspectives, local content, or other topics of interest to underserved communities?

2. Requirements for Low-Barrier Web Sites

The Web site:

Is **written in plain language** and easy for individuals with limited-literacy or English skills to read and understand. This could include short sentences, familiar words, "active" verbs, and avoidance of busy or distracting graphics and animation;

Is **available in one or more languages in addition to English;**

Is **accessible to individuals with a range of physical or cognitive disabilities**, and makes an accessibility policy available to its users;

Reflects ethnic/cultural diversity in conveying information and/or is sponsored by members of the ethnic/cultural group represented in the content;

Is **free or low-cost;** and

Provides geographically specific information, is maintained by an organization or agency in that locale, and offers practical resources such as information about local jobs, housing, schools and community events.

3. Requirements for High-Quality Web Sites

The Web site:

Clearly states its source and sponsorship, and makes the sponsor's credentials clear and contact information easy to find;

Protects the privacy of its users, as evident from an easy-to-find privacy policy that explains how personal information is handled;

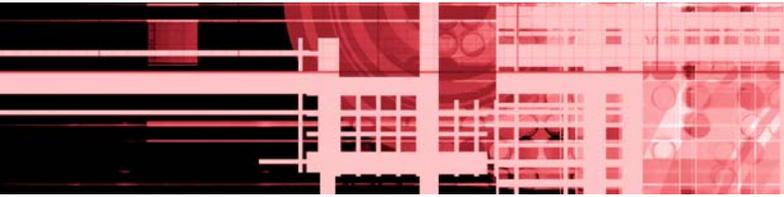
Is of **high quality**, characterized by a clear purpose and audience, grammatically correct text, current information, disclosure of specific biases, etc.;

Is **easy to navigate and understand**, as indicated by a clear and informative homepage, clearly named site sections, an easy-to-find site map, readable font, etc.;

Is **easy and safe to interact with**, providing user-friendly search capabilities, secure financial transactions, simple registration forms (if registration is essential), and opportunities for users' feedback and contributions; and

Is **technically well-developed and easy to use**, characterized by being viewable with popular browsers loading quickly, containing working hyperlinks, etc.

For the full set of guidelines in a worksheet format, see Research Appendices, Tab 3.



V. A BLUEPRINT FOR ACTION: RECOMMENDATIONS FOR KEY PLAYERS

The progress now underway needs to be strengthened and expanded. Early work in the field of content development suggests that researchers, community technology leaders, other nonprofit leaders, content developers, librarians, policy-makers, philanthropists, and private-sector investors all have important roles to play. We offer the following recommendations for converting the promise of information technology into real opportunities for all Americans.

- 1. Accelerate the Development and Promotion of Comprehensive Guidelines:** Clear, research-based standards and guidelines are essential to identifying and creating high-quality content for low-income and other underserved populations. TCP's "starter guidelines" are just the first step towards this goal. (See Chapter IV and Research Appendices, Tab 3). We urge researchers to synthesize the standards emerging from different fields — whether education, disability, usability, or health — and combine them with criteria that address literacy, language, and culture. The result would be a comprehensive, inclusive set of guidelines for evaluating and creating content. While different fields will continue to have different requirements, the job ahead is to identify common needs, standards, and solutions. As researchers across fields collaborate to develop such guidelines, they can also help inject awareness of the needs of the underserved into the creation of traditional health, education, and other relevant content.
- 2. Make Content Creation and Evaluation Guidelines Easy to Use:** Once developed, these guidelines should be built into tools that are easy and intuitive to use, and can be applied to a variety of content. User-friendly tools will encourage better and more extensive identification, cataloguing, and rating of the content currently available to low-income residents.

- 3. Develop Specific Guidelines and Tools for Local Content:** Our ongoing research has found that low-income and other underserved Americans want and need online information about their own local communities. We urge leaders in this field to develop content evaluation and creation guidelines that incorporate the knowledge and experience of low-income users. It is especially important that the resulting tools be easy to use in a community or home setting.
- 4. Develop Web-Oriented Media Literacy Tools and Conduct Public Education for Underserved Users and Those Who Work with Them:** Efforts to create guidelines and tools must be supported by vigorous public education so consumers know they exist and how to use them. Content evaluation guidelines should be translated into materials that teach underserved users (and those who work with them) to evaluate online information. With this knowledge, users can make their own informed choices and increase demand for the kind of content they want and need online. These materials should be developed in conjunction with community-based organizations and with the participation of low-income residents.
- 5. Encourage and Highlight Relevant Models:** Nonprofit and public and private content producers should point their online visitors toward content with particular relevance for underserved communities. Where appropriate, producers should also make their own selection guidelines available to the public. "Pioneer" content producers that focus on underserved communities — like firstfind, the Beehive, and Community Corner (see Findings 7 and 9) — could articulate and post their content selection and creation criteria to help others undertake similar efforts. We also urge community leaders — whether librarians, technology programs, after-school programs, or organizations like United Way — to use available models to create or spur the development of content by or for their constituents.

6. Build a Broad-Based Effort to Forge Consensus on Evaluation Criteria and Press for Low-Barrier Content: Most of the online content used by low-income communities is created by large public- and private-sector developers that, to date, have generally not created low-barrier content. However, there are many nonprofit organizations serving or advocating for underserved populations that could join others concerned with literacy and education to develop widely accepted content creation and evaluation guidelines. Such a broad-based coalition could be more influential than groups acting in isolation, and could press large content developers to use their guidelines and create more useful content for the underserved.

7. Expand the Audience for Both Public and Private Content to Include the Underserved: We urge producers of government, community, and commercial Web-based information to pay special attention to the content needs of underserved Americans. They should consider these needs when they evaluate currently available content and develop new content, so that more online information is relevant and accessible to underserved users. Such efforts are not only a valuable public service, but also help content providers reach a much broader audience.

Specific recommendations for content developers include:

Private Sector: Reach out to trade associations, standard-setting groups, and industry leaders and urge them to incorporate criteria, applications, and packaging that make content useful to underserved audiences. Help create or adapt innovative software and presentation formats to better connect low-income users to the benefits of the Internet.

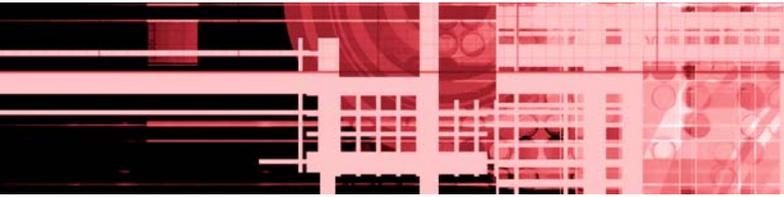
Public Sector: Adopt and then apply standards and guidelines to ensure that content at every level of government is accessible to residents with limited-literacy or English-language skills and from diverse ethnic/cultural backgrounds. Public information that everyone can use and understand is essential to ensure equal opportunity in a digital society, especially as more public obligations, such as paying taxes or obtaining professional licenses, can be fulfilled online.



8. Promote E-Government Solutions: We urge policy-makers to help underserved populations tap e-government's potential to provide assistance and information in a convenient and efficient way. In addition to user-friendly government content, policy-makers should support the places and people who help residents use the Internet to find important public information: technology access centers in low-income neighborhoods and staff who can coach residents.

9. Ensure that Underserved Communities Benefit from Broadband Expansion: Even when low-barrier content becomes more widely available, low-income communities will not be able to access it unless they have the high-speed connections required to quickly transmit video, audio, and graphical elements. As states and localities work to upgrade and expand their information infrastructure, we urge that they track access and assure that high-speed Internet connections reach rural and other underserved communities. In addition, high-speed Internet networks that now connect many universities and schools with rich educational resources should be expanded to include neighborhood-based organizations serving low-income residents.

10. Support Content Development within Direct Service Programs: Experience has shown that relevant online content can help direct service programs achieve their mission more effectively. For example, when young people build an online database of summer internships and training opportunities in their own community, the experience both helps prepare them for employment and creates a resource for other youth. We, therefore, urge that when policy-makers allocate funds for workforce development, community technology, youth development, or after-school programming, they include support for creating and maintaining online information and applications for underserved communities.



II. Increase Strategic Investments in this

Emerging Field: Strategic investments by social venture capitalists and philanthropists are especially crucial now, while the content development field overall is still taking shape. By attending early on to making the Internet work for everyone, we can link the digital revolution to real improvements in living conditions for low-income individuals and communities. In addition to supporting the recommendations above, we urge funders to directly support content creation and evaluation at the local level. We urge investors to support the development of guidelines that incorporate the knowledge and experience of low-income users, and to support community organizations in creating needed content based on these guidelines. Group collaborations, particularly those with the potential to become models and standards for the entire field, should also be encouraged and supported.

Additional Resources for Content Developers

- ◆ **Stanford Guidelines for Web Credibility**
<http://credibility.stanford.edu/guidelines/index.html>

Based on the Stanford Persuasive Technology Lab's extensive research into what leads people to believe information they find online, these 10 recommendations give developers strategies for increasing their sites' credibility.

- ◆ **Hi Quality's Producing Health Information** <http://www.hiquality.org.uk/produce.htm>

This section of the Hi Quality site is dedicated to giving producers of health content practical advice on ensuring quality. The site includes guidelines for content producers, as well as a training portal with information about numerous courses on producing high-quality information.

- ◆ **HTML Writers Guild's AWARE Center**
<http://aware.hwg.org/>

The AWARE Center is a resource to help developers create sites that are accessible to users with disabilities. The site features information on classes and learning opportunities, design tips and techniques, and case studies.

VI. IN CLOSING

The findings and recommendations in this report provide a research-based, practical blueprint for extending the digital ladder of opportunity to all Americans. The Children's Partnership looks forward to working with leaders from across sectors to make this blueprint become a reality over the next few years.

We are often asked what specific work TCP will undertake to advance the content creation and evaluation agenda. We plan to focus on the following areas:

Research: TCP will continue to undertake research on the subject of online content for low-income and other underserved populations.

Web Resource and Advocacy Program: We will continue to grow Contentbank (www.contentbank.org), a TCP Web site designed for the staff of community-based organizations and decision-makers at many levels. It provides resources, best practices, technological tools, and discussion forums to fulfill the following goals:

1. To identify what online content low-income users need, examples of what exists, and what still needs to be created;
2. To make it easier for community-based organizations and the individuals they serve to create their own content; and
3. To encourage the public and private sectors to develop usable content for low-income and other underserved Americans.

Collaborations: TCP is building collaborations with leading groups looking to create content collections and software applications of benefit to organizations that serve low-income communities. We enter these partnerships as a way both to provide practical tools for the field and to press the case for additional content creation.

Policy Development: With our partners in the California Community Technology Policy Group, and with select allies in other states and local communities, we are identifying and promoting public policies designed to assure that online content works for all Americans — whether through e-government, telecommunications, workforce development, or after-school programs.



Acknowledgements

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David Rosen, Adult Literacy Resource Institute

Jorge Schement, Institute for Information Policy, Pennsylvania State University

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Ryan Turner, OMB Watch

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RESEARCH APPENDICES

TAB I – Research Methods and Scope of This Report

Purposes and Scope

The Children’s Partnership set out in this Issue Brief to provide a baseline picture of how online content is or could be evaluated, with particular emphasis on the needs and interests of low-income and other underserved Internet users. Because this territory is largely uncharted, one of our primary goals was to identify and then make connections between the various content evaluation efforts that are being carried out independently across several fields.

Through this research, we hoped to create a beginning framework for this new and emerging area and to highlight promising practices. We did not set out to provide a comprehensive picture of either content evaluation in general or of the content evaluation work underway in any specific arena. Additionally, we chose to examine select subject areas and fields, those that we felt had particular relevance to underserved communities. No doubt, other fields that are not addressed in this Issue Brief are also carrying out valuable content evaluation efforts.

Finally, the research for this Issue Brief focuses on the topic of content evaluation. Content evaluation is closely tied to other issues, like content development, and, in some instances, these related issues emerged in our research and are referenced in this report and its recommendations. However, these and other related topics, although valuable and deserving of thorough examination, are outside the primary scope of this project.

Research Methods

Our research included four elements:

1. Interviews with Key Informants: We conducted wide-ranging interviews with a carefully selected group of key informants who helped guide our

research and the development of our evaluation guidelines. This group of experts included librarians, university-based researchers, foundation staff, community technology leaders, and individuals who have developed credible content evaluation systems of their own.

2. Review of Relevant Literature: Conducting a review of the current literature allowed us to better understand the state of the field and build upon existing research in the content evaluation arena. We searched widely to find studies, reports, and articles related to the qualitative aspects of Web-based information. We used a multifaceted strategy to uncover the most relevant articles, Web sites, and other resources. More specifically:

- ◆ We reviewed over 100 Web sites addressing content evaluation in general;
- ◆ We reviewed over 500 Web sites addressing the evaluation of content in specific subjects or fields;
- ◆ We examined numerous sources listed in bibliographies of online and offline content evaluation resources; and
- ◆ We investigated leads suggested by our key informants.

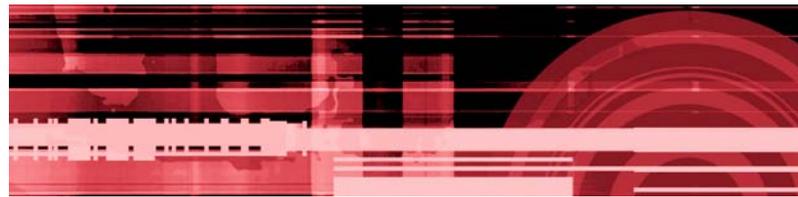
3. Analysis of 100 Sets of Content Evaluation Guidelines: In The Children’s Partnership’s early review of guidelines for evaluating Internet content, we observed a certain amount of consensus about which features of online content are indicators of high quality. Criteria that frequently appeared included source, accuracy, and currency of the information. In addition, it appeared that very few of the guidelines addressed certain other aspects of content, particularly those that make content accessible to underserved users, like being available in multiple languages, or accessible to those with limited-literacy skills.

Based on these initial findings, we decided to undertake an analysis of existing guidelines to better understand the degree to which there is consensus among evaluation criteria and to determine the extent to which criteria most relevant to the underserved were included in existing guidelines.

To provide a framework for the analysis, we used our extensive research into content evaluation and our interviews with experts in the field to develop a list of criteria that are addressed relatively frequently in existing evaluation guidelines. These criteria and a general explanation of their meanings are as follows:

- ◆ **Accuracy of content**
Is the site's information correct and objective?
- ◆ **Source**
Is the sponsor or creator of the site identified?
- ◆ **Currency**
Is it clear when the site was last updated or how old the content is?
- ◆ **Usability**
Is it easy and intuitive to navigate the site? Is it well organized?
- ◆ **Technical aspects**
Are the links working, is the site free of code errors, and does the site download fast?
- ◆ **Design**
Is the overall design appealing, with appropriate use of color, graphics, and readable fonts?
- ◆ **Contact information**
Is there a way to contact the site's sponsor via email or other ways?
- ◆ **Distinction between advertising and editorial information**
Are there clear distinctions between advertising and editorial information?
- ◆ **Privacy**
Is there a privacy notice that outlines how personally identifiable information is used?

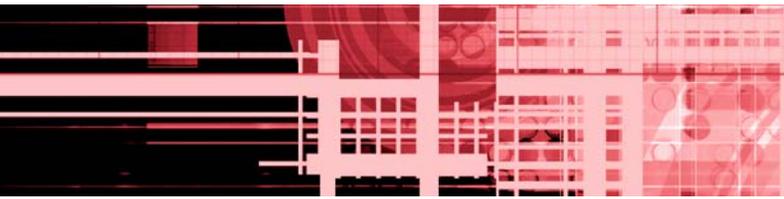
To this list, we added additional criteria that appeared less often, if ever, on evaluation criteria checklists, but which our research showed held particular relevance and importance for underserved audiences. (For more information on this research, see http://www.childrenspartnership.org/pub/low_income/index.html.) These additional criteria, along with general explanations, are as follows:



- ◆ **Multilingual**
Is the content available in a language(s) other than English?
- ◆ **Accessible to limited-literacy audiences**
Is the information presented in a way that can be easily understood by users with limited-literacy skills?
- ◆ **Cultural inclusiveness and relevance**
Is the site intended for or relevant to a particular cultural or ethnic group, or does it reflect cultural and ethnic diversity?
- ◆ **Accessible to those with disabilities**
Is the site's content accessible to persons with physical or cognitive disabilities?
- ◆ **Ability to contribute to the site's content**
Is there a way for users to contribute to the site's content, as through a message board, feedback area, or rating system?
- ◆ **Cost**
Is there a cost associated with the site's content?

The Children's Partnership then applied this carefully developed list of 15 content quality indicators to a sampling of evaluation guidelines to see which criteria each set used. We decided to review 100 sets of guidelines in order to get a meaningful picture of available guidelines. (A complete list of the guidelines included in our review follows.) Our sampling of guidelines includes some of the best examples of evaluation criteria and includes a broad cross-section of available guidelines across many fields. Many were developed by university and public libraries across the country to provide general guidance in identifying quality online resources, and others have a particular focus, like health, education, accessibility, usability, or literacy.

From this research, we were able identify and quantify the areas of greatest consistency among the



various sets of content evaluation criteria. We were also able to get a baseline picture of the degree to which existing guidelines address criteria of importance to the underserved.

4. Early Beta Testing of Our Findings and

Conclusions: While we expect that the most valuable feedback will come from our colleagues as they digest and apply our research findings, we wanted to vet our conclusions and recommendations with a small review panel before issuing this report. Our Guidelines for Content Creation and Evaluation, Version 1.0, were reviewed in draft form by a handful of advisors. In addition, the first draft of our findings and recommendations had the benefit of an outside review by leaders in this field. (See Acknowledgements.) We look forward to receiving feedback from colleagues as they review this report and continue their work. We hope such “data” from a wide variety of communities can provide the vital research base for taking these ideas to the next level of relevance and usefulness.

Guidelines Included in The Children’s Partnership’s Analysis of Existing Guidelines

ALA

Great Web Sites for Kids Selection Criteria

http://www.ala.org/Content/NavigationMenu/ALSC/Great_Web_Sites_for_Kids/Great_Web_Sites_for_Kids_Selection_Criteria/Great_Web_Sites_for_Kids_Selection_Criteria.htm

AMA

Guidelines for Medical and Health Information Sites on the Internet

<http://www.ama-assn.org/ama/pub/category/1905.html>

American Society of Magazine Editors

Best Practices for Digital Media: Guidelines

http://asme.magazine.org/guidelines/new_media.html

Baylor University Libraries - Billy Peterson

Checklist for the Evaluation of Information

http://www3.baylor.edu/~Billie_Peterson/checklist.html

BBBOnline

Privacy Program Eligibility Requirements

<http://www.bbbonline.org/privacy/threshold.asp#2>

BBBOnline

Code of Online Business Practices

<http://www.bbbonline.org/reliability/code/principle.asp>

Biome

How to evaluate an Internet-based Information Source

<http://biome.ac.uk/guidelines/eval/howto.html>

Cabrillo College Library

Evaluating Internet Sites

<http://libwww.cabrillo.edu/about/jsworksheet-3.html>

Center for Instructional Technology

Evaluating Web Sites for Educational Uses

<http://www.unc.edu/cit/guides/irg-49.html>

The Centre for Health Information Quality

Guidelines for Producing Health Information

http://www.hfht.org/chiq/producers_guidelines.htm

CMANet

Health Care Links: How to Evaluate Medical Information Found on the Internet

<http://new.cmanet.org/publicdoc.cfm/60/0/GENER/99>

Colorado State University Libraries

How to Evaluate a Web Page

<http://manta.library.colostate.edu/howto/evalweb.html>

Community Technology Foundation of California

Culturally Competent Web Design

<http://zerodivide.org/ccwebdesign/>

Consumer Reports

e-ratings: A Guide to Online Shopping, Services, and Information

http://www.consumerreports.org/main/detailv2.jsp?WebLogicSession=Pw6tfoFncHS9i8H9xEm7R25Ke12S9rfoRRJLWOZVGFapt3xinQy0|4010912627954718967169937909/6/7005/7005/7002/7002/7005/-1|8943443699163114990/169937913/6/7005/7005/7002/7002/7005/1&CONTENT%3C%3Ecnt_id=871&FOLDER%3C%3Efolder_id=735&bmUID=1057926526352#credibility

Consumer WebWatch

Consumer WebWatch Guidelines

<http://www.consumerwebwatch.org/bestpractices/index.html>

Cornell University Library

Five Criteria for Evaluating Web Pages

<http://www.library.cornell.edu/okuref/webcrit.html>

Cyberbee

WWW Cyberguide Ratings for Content Evaluation

<http://www.cyberbee.com/content.pdf>

Cyberbee

WWW Cyberguide Ratings for Web Site Design

<http://www.cyberbee.com/design.pdf>

Dalhousie University Health Sciences Library

Evaluation of Health Information on the Internet

<http://www.library.dal.ca/kellogg/internet/evaluate.htm>

DISCERN

The DISCERN Instrument

http://www.discern.org.uk/discern__instrument.htm

Ed's Oasis

Web Site Evaluation for Educators

<http://www.classroom.com/edsoasis/2guide3.html;jsessionid=UGHR4DQS4RBWNQFICQFC2SQ>

Education Network Australia

EdNA Online Content Standards and Contributions

http://www.edna.edu.au/aboutus/policy/cont_standards.html#intro

ERIC Clearinghouse on Information and Technology

Evaluating Online Educational Materials for Use in Instruction

<http://ericit.org/digests/EDO-IR-1999-07.shtml>

FDA

Health Information On-Line

http://www.fda.gov/fdac/features/596_info.html

firstfind

firstfind.info: easy to find...easy to use websites...in plain and simple English

http://www.ala.org/Content/NavigationMenu/Our_Association/Office_s/Literacy_and_Outreach_Services/Outreach_Resources/firstfind_compilation.pdf

FTC

How to Comply with the Children's Online Privacy Protection Rule

<http://www.ftc.gov/bcp/online/pubs/buspubs/coppa.htm>

Global SchoolNet Foundation (Adapted from original by Al Rogers)

Web Page Evaluation Criteria

<http://www.ux1.eiu.edu/~cfmgmb/web.htm>

Gorski, Paul - Multicultural Pavilion

A Multicultural Model for Evaluating Educational Web Sites

<http://www.edchange.org/multicultural/net/comps/model.html>

Harris, Robert – Virtual Salt

Evaluating Internet Research Sources

<http://www.virtualsalt.com/evalu8it.htm>

Health on the Net Foundation

HONCode Principles

<http://www.hon.ch/HONcode/Conduct.html>

Healthfinder

Content Selection Policy and Procedures

<http://www.healthfinder.gov/aboutus/selectionpolicy.htm>

HTML Writers Guild

Web Accessibility Standards

<http://www.hwg.org/opcenter/policy/access.html>

Indiana University Bloomington Libraries

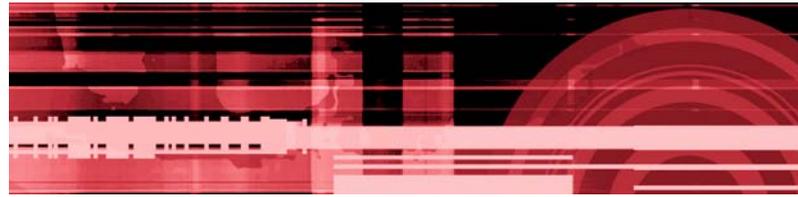
Critical Thinking and the World Wide Web

<http://www.indiana.edu/%7Elibrcsd/eval/checklist.html>

Infopeople Project

Evaluating Internet Resources: A Checklist

<http://www.infopeople.org/howto/bkmk/select.html>



Internet Healthcare Coalition

eHealth Ethics Initiative

<http://www.ihealthcoalition.org/ethics/ethics.html>

Iona College Libraries

Evaluating World Wide Web Sites

<http://www.iona.edu/library/resins/evalfrm2.htm>

Ithaca College Library

ICYouSee: T is for Thinking

<http://www.ithaca.edu/library/Training/hott.html>

Jacob Hespeler Library, Jacob Hespeler Secondary School

Evaluating Information

<http://jhss.wrdsb.on.ca/library/html/evaluate/evalinfo.htm>

Johns Hopkins University - the Sheridan Libraries

Evaluating Information Found on the Internet

<http://www.library.jhu.edu/elp/useit/evaluate/index.html>

Journal of Medical Internet Research

eEurope 2002: Quality Criteria for Health Related Websites

<http://www.jmir.org/2002/3/e15/>

Lake Forest College Library

Evaluating Web Sites

<http://www.lib.lfc.edu/internetsearch/evalweb.html>

Lesley University - Ludcke Library

Evaluating Web Sites: Criteria for the Classroom

http://www.lesley.edu/library/guides/research/evaluating_web.html

Library Instruction Tutorials - Baylor University

Web Site Evaluation Criteria

<http://www3.baylor.edu/LIRT/lirtcrit.html>

LiteracyTech (from World Education)

Evaluating Sites

<http://hub1.worlded.org/nelrctech/webpub/evaluating.html>

Lynch, Patrick J. and Sarah Horton

Web Style Guide

<http://info.med.yale.edu/caim/manual/contents.html>

Madison (WI) Metropolitan School District - Ron Goral and Joanne Lenburg

Internet Detectives Evaluation Form

http://www.madison.k12.wi.us/tnl/detectives/eval_form.txt

Maricopa Community Colleges - Maricopa Center for Learning and Instruction (MCLI)

General Questions for Reviewing any Web Site

<http://www.mcli.dist.maricopa.edu/show/what/eval-gen.html>



MEDLINEplus
MEDLINEplus Selection Guidelines
<http://www.nlm.nih.gov/medlineplus/criteria.html>

Mitretek Systems
Criteria for Assessing the Quality of Health Information on the Internet
<http://hitiweb.mitretek.org/docs/policy.html>

MSN Usability Research – MSDN Library
Improving Web Site Usability and Appeal
<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnsiteplan/html/IMPROVINGSITEUSA.asp>

Multnomah County Library
Evaluating Web Sites: What Makes a Web Site Good?
<http://www.multcolib.org/homework/webeval.html>

National Federation of the Blind
Criteria for Nonvisual Accessibility Certification
<http://www.nfb.org/seal/criteria.htm>

National Institute for Literacy/LINCS
LINCS Selection Criteria
http://www.nifl.gov/lincs/selection_criteria.html

National Network of Libraries of Medicine – Jana Allcock
Evaluating Health Web Sites
<http://nmlm.gov/scr/conhlth/evalsite.htm>

Net Scoring
Criteria to Assess the Quality of Health Internet Information
<http://www.chu-rouen.fr/netscoring/netscoringeng.html>

Neutral Bay Public Schools
Elementary CCs for Evaluating Internet Sites
<http://www.neutralbay-p.schools.nsw.edu.au/library/infoeval.htm>

New Mexico State University Library – Reference and Research Services Department – Susan E. Beck
Evaluation Criteria
<http://lib.nmsu.edu/instruction/evalcrit.html>

Niagra County Community College – Library Learning Center – Gail Staines
Evaluating Internet Based Information
<http://www.lme.mankato.msus.edu/class/629/Cred.html>

Nielsen, Jakob – Useit.com
Top Ten Guidelines for Homepage Usability
<http://www.useit.com/alertbox/20020512.html>

Nielsen, Jakob – Useit.com
Ten Good Deeds in Web Design
<http://www.useit.com/alertbox/991003.html>

North Carolina State University – Dept. of Mathematics, Science, and Technology Education
Evaluating Science WWW Resources
<http://www.ncsu.edu/imse/3/evalweb.htm>

North Harris College Library
Evaluating Web Sites – Quick Guide
<http://nhclibrary.nhmccd.edu/research/steps/evalwebsites.html>

Northwest Missouri State University – Owens Library
Web Site Evaluation Chart
<http://www.nwmissouri.edu/library/search/chart2.html>

Oberlin College Library
Evaluating a Web Site
<http://www.oberlin.edu/library/artlib/webanalysis.html>

Ohio Literacy Resource Center
Evaluating Internet Resources
<http://literacy.kent.edu/Oasis/Workshops/ELR/evalrescform.html>

The Ohio State University Libraries
Evaluating Web Sites
<http://gateway.lib.ohio-state.edu/tutor/les1/index.html>

Pace University Library
Web Site Evaluation Worksheet
<http://www.pace.edu/library/instruct/webevalworksheet.htm>

Rainbow Babies and Children's Hospital
Evaluation Criteria for Health Web Sites
<http://www.uhrainbow.com/families/webguide/evaluationcriteria.asp>

San Diego State University – Educational Technology Department
Evaluating Web Pages
http://webquest.sdsu.edu/processguides/evaluating_student.html

Schrock, Kathy
The ABCs of Web Site Evaluation
<http://school.discovery.com/schrockguide/pdf/weval.pdf>

Schrock, Kathy
Critical Evaluation of a Web Site: Secondary School Level
<http://school.discovery.com/schrockguide/evalhigh.html>

Smith, Alastair – Victoria University of Wellington
Criteria for Evaluation of Internet Information Resources
http://www2.vuw.ac.nz/staff/alastair_smith/evaln/

Smith, Alastair – Victoria University of Wellington
Testing the Surf: Criteria for Evaluating Internet Information Resources
<http://info.lib.uh.edu/pr/v8/n3/smit8n3.html>

Social Science Information Gateway (SOSIG)
Quality Selection Criteria for Information Gateways
<http://sosig.ac.uk/desire/q1cont.html>

Solock, Jack

The Internet: Window to the World or Hall of Mirrors?

<http://scout.bilkent.edu.tr/toolkit/enduser/archive/1996/euc9611.html>

**St. John's University, Division of Library and Information Science
– Nancy Everhart**

Web Page Evaluation Worksheet

<http://www.duke.edu/~de1/evaluate.html>

Stanford Web Credibility Research

Stanford Guidelines for Web Credibility

<http://credibility.stanford.edu/guidelines/index.html>

Tillman, Hope

Evaluating Quality on the Net

<http://www.hopetillman.com/findqual.html>

UCLA College Library – Esther Grassian

Thinking Critically About World Wide Web Resources

<http://www.library.ucla.edu/libraries/college/help/critical/>

UCLA College Library – Esther Grassian

Thinking Critically About Discipline-Based World Wide Web Resources

<http://www.library.ucla.edu/libraries/college/help/critical/discipline.htm>

University at Albany Library

Evaluating Internet Resources

<http://library.albany.edu/internet/evaluate.html>

University of Arizona – Elaine Cubbins

Techniques for Evaluating American Indian Web Sites

<http://www.u.arizona.edu/~ecubbins/webcrit.html>

University of California – Berkeley Library

Web Page Evaluation Checklist

<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/EvalForm.pdf>

**University of Connecticut Health Center – Lyman Maynard Stowe
Library**

Evaluating Web Sites for Consumer Health Information

<http://library.uchc.edu/departm/hnet/evalgu.html>

**University of Illinois at Urbana-Champaign – Graduate School of
Library and Information Science – Lisa Janicke Hinchliffe**

Evaluation of Information

<http://alexia.lis.uiuc.edu/~janicke/Eval.html>

University of Maryland – Office of Information Technology

Information Literacy: The Web is Not an Encyclopedia

<http://www.oit.umd.edu/units/web/literacy/>

University of Michigan – P.F. Anderson

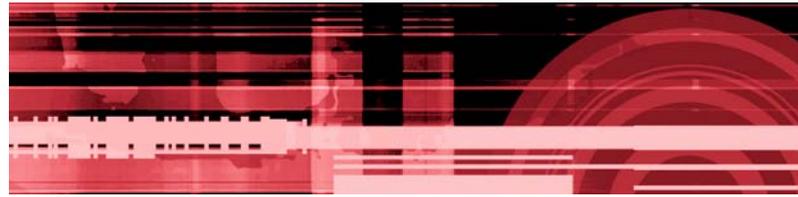
Consumer Health Web Site Evaluation Checklist

<http://www-personal.umich.edu/~pfa/pro/courses/EvalPtEd.pdf>

**University of North Carolina at Chapel Hill – School of
Information and Library Science – Serena Jardine Fenton**

**Information Quality: Is the truth out there? – Evaluating Web
Information**

<http://ils.unc.edu/~fents/310/#Evaluating%20Web>



University of Southern California University Library – Julie Kwan

Criteria for Evaluating Information Resources

<http://www.usc.edu/isd/locations/science/sci/pubs/criteval.html>

University of Southern Maine

Checklist for Evaluating Web Resources

<http://library.usm.maine.edu/guides/webeval.html>

University of Texas at San Antonio Library

Internet 101/102: Untangling the Web

<http://www.lib.utsa.edu/Instruction/web/webeval.html>

The University of Texas Medical Branch – Moody Medical Library

Evaluating Health Resources on the Web

<http://lib1.utmb.edu/Help/evaluating.asp>

University of Wisconsin – Eau Claire, McIntyre Library

Ten Cs for Evaluating Internet Sources

<http://www.uwec.edu/library/Guides/tencs.html>

University of Wisconsin – Stout Library

Evaluating Resources

<http://www.uwstout.edu/lib/reference/evaluation.htm>

URAC

URAC Health Web Site Standards

<http://webapps.urac.org/websiteaccreditation/portal/consumer/Standards.asp>

Usability.gov

Research-Based Web Design and Usability Guidelines

<http://usability.gov/guidelines>

Virginia Tech University Libraries

Evaluating Web Information

<http://www.lib.vt.edu/research/evaluate/evaluating.html>

WebSerch: The Web Research Resource

Evaluate Web Resources

<http://www.clubi.ie/webserch/resources/index.htm>

World Wide Web Consortium

**Checklist of Checkpoints for Web Content Accessibility,
Guidelines 1.0**

<http://www.w3.org/TR/WCAG10/full-checklist.html>

Yahooligans! Teachers' Guide

Evaluating Web Sites

<http://www.yahooligans.com/tg/evaluatingwebsites.html>



TAB 2 – Related Projects and Initiatives

Following are descriptions of a sampling of projects and initiatives, across a variety of fields, which are relevant to the issue of content evaluation. The format and availability of the bibliographical information for the sources included here varies widely. We have provided all available bibliographical information in the following references.

Accessibility

AWARE Center <http://aware.hwg.org/>

- ◆ The AWARE Center is part of the HTML Writers Guild and serves as a learning and resource center for Web authors to get information about accessibility.
- ◆ The site offers news and numerous resources for Web authors, including guidelines, tips and techniques, research and statistics, accessibility-related listservs, and more.

Bobby™ <http://www.watchfire.com/products/bobby.asp>

- ◆ Bobby, a software application from Watchfire™, can determine how accessible a Web site is to users with disabilities.
- ◆ Bobby can check a site against the World Wide Web Consortium's Web Accessibility Initiative (WAI) guidelines, Section 508, or other accessibility standards to pinpoint instances of inaccessibility.
- ◆ A free version of Bobby is available online, in which single pages can be submitted for evaluation; the complete desktop accessibility testing tool is available for purchase.

Cynthia Says <http://www.cynthiasays.com>

- ◆ Cynthia Says, a project of the International Center for Disability Resources, The Internet Society Disability and Special Needs Chapter, and HiSoftware, is a tool that can identify errors in design related to accessibility standards like Section 508 or

the World Wide Web Consortium's Web Accessibility Initiative (WAI) guidelines.

- ◆ The site includes educational information for Web developers on creating accessible sites.
- ◆ A free online test that validates one page at a time is available; a desktop version can be purchased.

World Wide Web Consortium's Web Accessibility Initiative (WAI) <http://www.w3.org/WAI/>

- ◆ The Web Accessibility Initiative, part of the World Wide Web Consortium (an international body that creates standard protocols for the Web to ensure its interoperability and evolution), works towards increasing Web accessibility in five main areas: technology, guidelines, tools, education and outreach, and research and development.
- ◆ The site features accessibility-related news and resources, as well as information on getting involved in the Initiative.

Web Accessibility in Mind (WebAIM)

<http://www.webaim.org>

- ◆ WebAIM works to increase online learning opportunities, especially for users with disabilities or who face challenges to accessing online learning opportunities.
- ◆ The site features extensive guidelines and related products and services, including how-to information for Web developers and educational faculty and administrators.

Cultural Content

Pacific Bell/UCLA Initiatives for 21st Century

Literacies: Multicultural Literacy (Updated June 20, 2002) <http://www.kn.sbc.com/wired/21stcent/cultural.html>

- ◆ The site defines multicultural literacy as being aware of various cultures and languages, as well as recognizing the ways that multimedia information can include bias.
- ◆ The site offers strategies and sample lessons that educators can use to incorporate multiculturalism into their curricula, and introduces several ideas that have significance for evaluating culturally relevant online content.

Education

“Principles for the Networked World.” American Library Association (ALA). (February 2003)

http://www.ala.org/Content/NavigationMenu/Our_Association/Offices/ALA_Washington/Publications16/principles.pdf

- ◆ This document outlines the fundamental public policy requirements that libraries need to meet to be able to serve the public.
- ◆ The ALA lists seven policy areas that must be addressed for the promise of the networked world to be realized: Intellectual Freedom, Privacy, Equitable Access, Intellectual Property Rights, Infrastructure, Access to Content, and Information Literacy.

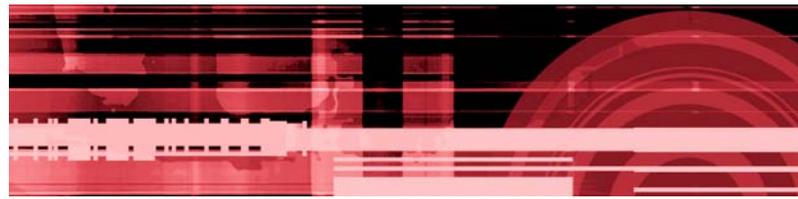
Schrock, Kathleen. “Teacher Helpers: Critical Evaluation Information.” *Kathy Schrock’s Guide for Educators at DiscoverySchool.com*. <http://school.discovery.com/schrockguide/eval.html>

- ◆ This resource includes Web site evaluation surveys for elementary, middle, and high school students, as well as an evaluation survey in Spanish.
- ◆ There are lists of numerous resources, including articles and criteria checklists, by Kathy Schrock and others, about Web site evaluation.
- ◆ Links are provided to several Web sites that are good examples to teach Web site evaluation to students.

Health

DISCERN Online <http://www.discern.org.uk>

- ◆ DISCERN is a tool to help consumers judge the quality of online health information, since it is difficult for consumers to know which information online is trustworthy.
- ◆ The tool has uses for several audiences, including health consumers, authors and producers, and health professionals.
- ◆ DISCERN went through extensive development, evaluation, and testing, and it consists of 15 key questions and an overall rating.



Health On the Net Foundation <http://www.hon.ch>

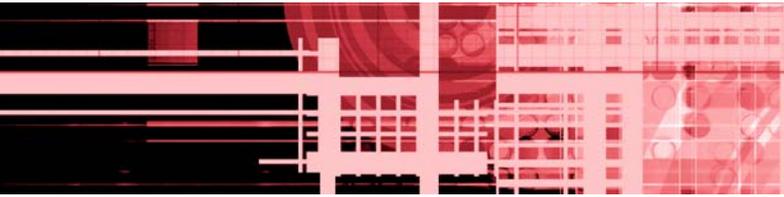
- ◆ Health On the Net, or HON, developed the HONCode (HON Code of Conduct), which outlines basic ethical standards in providing health information online.
- ◆ HON also offers a site-checker tool to evaluate how sites measure up against its quality standards.

Hi Quality <http://www.hiquality.org.uk/>

- ◆ Hi Quality is a Web-based resource aimed at raising the quality of health information.
- ◆ The site features standards and guidelines, a health information glossary, and links to related resources.
- ◆ A section of the site is dedicated to giving producers of health content practical advice on ensuring quality by offering guidelines, as well as a training portal with information about numerous training courses on producing high-quality information.

Internet HealthCare Coalition’s eHealth Ethics Initiative <http://www.ihealthcoalition.org/ethics/ethics.html>

- ◆ The eHealth Ethics are guiding principles for health content and include: candor, honesty, quality, informed consent, privacy, professionalism in online health care, responsible partnering, and accountability.
- ◆ The eHealth Ethics were built on these foundations:
 - Trust is a fundamental part of health care — but trust can be challenging to maintain in the anonymous world of the Web;
 - In the online world, no political/geographic boundaries exist that define what laws govern health professionals’ licensing, advertisement and selling of health products and drugs, or how personal information is handled; and
 - The goals of the code of ethics are to identify fundamental values at stake and then create an environment of trust online.



MedCIRCLE — Collaboration for Internet Rating, Certification, Labeling and Evaluation of Health Information <http://www.medcircle.org/>

- ◆ The MedCIRCLE project aims to increase consumers' ability to locate high-quality health information online. The project asserts that since research shows that users do not effectively evaluate health information online, there is a need for a client-side tool to help users find quality resources.
- ◆ MedCIRCLE proposes the use of meta-data labeling and encourages implementing a standard vocabulary and interchange format for rating health information, which they have developed, called HIDDEL: Health Information Disclosure, Description and Evaluation Language.
- ◆ MedCIRCLE advocates for a “decentralized quality management model,” in which various “parties” (organizations, health professionals, consumers) upload the meta-data (annotations, ratings, descriptions) and a technology tool aggregates and processes the information to guide consumers.

URAC (American Accreditation HealthCare Commission) Health Web Site Accreditation <http://webapps.urac.org/websit accreditation/default.htm>

- ◆ URAC offers an accreditation seal program where sites may display a URAC seal if they meet the organization's 50 quality standards.

Limited Literacy

CLAD – Clear Language and Design. <http://www.eastendliteracy.on.ca/ClearLanguageAndDesign/>

- ◆ CLAD is the public education and consulting service arm of East End Literacy, a nonprofit organization of Toronto, Canada.

- ◆ Although not specific to Internet information, they offer a Web-based, interactive “Reading Effectiveness Tool” to determine the readability of text.

Cowles, Susan. “Teaching and Learning with Internet-Based Resources: A set of lesson plans and activities.” National Institute for Literacy (NIFL). (1996-97) <http://www.nifl.gov/nifl/fellowship/reports/susanc/inthome.htm>

- ◆ This short course was created as part of the NIFL Literacy Leader Fellowship program.
- ◆ The “Starting Block” section has a “Ways to evaluate information on the Web” activity called “Is It Fools' Gold or the Real Thing?” with content evaluation guidelines that can be used by adult learners.
- ◆ The site also has two activities about Web evaluation for use with adult learners.

Hacker, Emily. “Surfing for Substance: A Professional Development Guide to Integrating the World Wide Web into Adult Literacy Instruction.” (2000) <http://literacytech.worlded.org/docs/surfing/index.htm>

- ◆ Section 4 of this guide is devoted to selecting and evaluating Web resources for use with adult learners.
- ◆ The guide includes a “Web Site Evaluation Questionnaire” for help selecting the best sites to use with lessons for beginning adult readers.

Plain English Campaign <http://www.plainenglish.co.uk>

- ◆ Plain English Campaign is a British organization dedicated to seeing that all public information be written in plain English.
- ◆ They offer a “Plain English Guide to Designing Clear Websites,” which focuses on clear navigation and design, and an “Internet Crystal Mark” for Web sites that meet their standards of clarity.
- ◆ The “How to Write in Plain English” guide, which is not specific to Web-based information, gives seven recommendations (with explanations) for writing in the plain English style.

PlainTrain, the Plain Language Online Training Program (adapted from *Plain Language: Clear and Simple* and the associated *Trainer's Guide*, publications of the National Literacy Secretariat in Canada)
<http://www.web.net/~plain/PlainTrain/>

- ◆ The program includes a guide that covers numerous recommendations for how to write in plain language, and shows many examples.
- ◆ The site also includes an extensive Plain Language Checklist.

Multilingual

Association for Machine Translation in the Americas
<http://www.amtaweb.org>

- ◆ The AMTA is a nonprofit organization of those interested in the research and technology around machine-based translation.
- ◆ The Web site offers links to related software, research, and organizations, as well as upcoming events and activities.
- ◆ The organization has a special interest group devoted to the topic of machine translation evaluation.

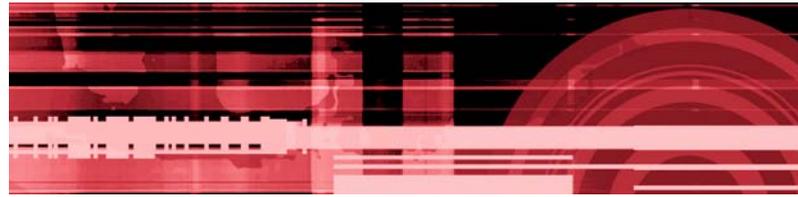
Pacific Bell/UCLA Initiatives for 21st Century Literacies: Multicultural Literacy (Updated June 20, 2002) <http://www.kn.sbc.com/wired/21stcent/cultural.html>

- ◆ The site defines multicultural literacy as being aware of various cultures and languages, as well as recognizing the ways that multimedia information can include bias.
- ◆ The site offers strategies and sample lessons that educators can use to incorporate multiculturalism into their curricula, and introduces several ideas that have significance for evaluating culturally relevant online content.

Privacy and Consumer Issues

Better Business Bureau/BBBOnline's Privacy Seal Program <http://www.BBBOnline.org/privacy>

- ◆ According to the Better Business Bureau (BBB), almost 75% of Internet users have concerns over privacy and online shopping. The Privacy Seal



program was created to assist e-commerce sites in addressing privacy issues.

- ◆ The site lists standards that e-commerce sites must meet to be able to display the BBBOnline Privacy Seal, and provides an example of a quality privacy policy.

Better Business Bureau/BBBOnline's Reliability Program <http://www.BBBOnline.org/reliability>

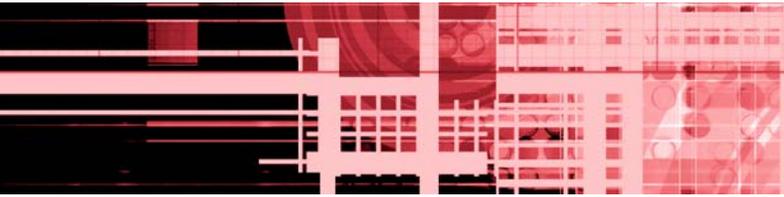
- ◆ This program allows e-commerce sites that meet certain standards of trustworthiness and reputability to display the BBBOnline Reliability Seal.
- ◆ The site includes a list of the requirements against which sites are measured.

Consumer Reports' E-Rating http://www.consumerreports.org/main/detailv2.jsp?CONTENT%3C%3Ecnt_id=21139&FOLDER%3C%3Efolder_id=21135&bmUID=1052773895919

- ◆ The site explains the methods behind the organization's testing of e-commerce sites.
- ◆ The site includes an outline of criteria used to evaluate and rate e-commerce sites in the areas of credibility, usability, and content.

Stanford Persuasive Technology Lab's Web Credibility Research <http://credibility.stanford.edu/>

- ◆ As part of the Stanford Persuasive Technology Lab, researchers are trying to understand what leads people to believe information they find online, with the eventual goal of enhancing Web design.
- ◆ Researchers at the project are currently carrying out studies on Web credibility, serving as a clearinghouse for information and resources on Web credibility, and working with Web designers to create credible sites.



TRUSTe's Seal Programs <http://www.truste.org>

- ◆ TRUSTe, a nonprofit privacy initiative, outlines principles of their program, which awards a “trust-mark” seal to e-commerce sites that meet their criteria for privacy, and lists the guidelines against which sites are evaluated.
- ◆ The site includes information about their Children’s Privacy Seal Program, which awards trustmarks to sites that are compliant with the Children’s Online Privacy Protection Act.

Usability

National Cancer Institute's Usability.gov

<http://www.usability.gov>

- ◆ The site offers a broad range of resources on the usability of health-related Web sites and other sites.
- ◆ It includes information on various methods for designing usable sites, checklists to ensure usability, and links to other usability resources online.
- ◆ Issues of accessibility are addressed as well.

Useit.com: Jakob Nielsen's Website

<http://www.useit.com>

- ◆ This extensive site includes articles, papers, guidelines, and more by usability expert Jakob Nielsen.
- ◆ The site includes an entire free archive of Nielsen’s popular “Alertbox” columns, covering a wide range of topics related to usability.

Intersections

Harvard School of Public Health's Health Literacy Studies <http://www.hsph.harvard.edu/healthliteracy>

- ◆ Part of the Harvard School of Public Health, Health Literacy Studies is a research program dedicated to examining the links between literacy and health.

- ◆ The Web site offers a section called “How to Create and Assess Print Materials,” which includes a subsection of resources for creating and assessing Web-based information as well.

Lawyers for Literacy Project, an initiative of the Canadian Bar Association, British Columbia branch <http://www.plainlanguagenetwork.org/LawyersForLiteracy/>

- ◆ This initiative’s site includes information on conducting a “Law Firm Literacy Audit,” to assess how well a law firm meets the literacy needs of its clients. Although the information is not Internet-specific, the audit does include a checklist for written material.

NOLO Law for All <http://www.nolo.com>

- ◆ NOLO advocates for laws at all levels of government to be written in plain English so that everyone can participate in the legal system.

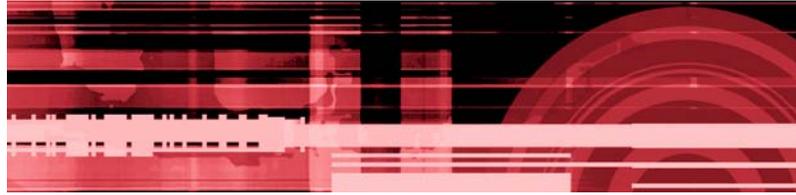
Plain Language Action & Information Network <http://www.plainlanguage.gov>

- ◆ This network is a government-wide group of volunteers working to improve communications from the federal government to the public.
- ◆ Resources on the site include related federal documents and guidance on writing government information in plain language.

TRUSTe's eHealth Privacy Seal Program

http://www.truste.org/programs/pub_health.html

- ◆ With this initiative, TRUSTe and URAC (American Accreditation HealthCare Commission) have joined together to offer a certification program to providers of health information and services online.
- ◆ The program relies on the expertise of each organization, privacy and health-information quality respectively, to issue one combined seal of approval and promote consumer trust online.



TAB 3

The Children’s Partnership’s GUIDELINES FOR CONTENT CREATION AND EVALUATION: Version 1.0

These guidelines were initially developed by The Children’s Partnership to establish a consistent, credible, and equitable system for evaluating Web sites for possible inclusion in the “Online Resources” section of the Contentbank Web site. We now offer them to the staff of community-based organizations and online content producers to aid in the selection and creation of low-barrier Internet content. We hope the guidelines will help address the needs of the 50 million Americans who, because of their limited-literacy and English skills, cultural backgrounds, or disabilities, are poorly served by online content today. We urge you to use or adapt them for your work and ask that you attribute them to The Children’s Partnership.

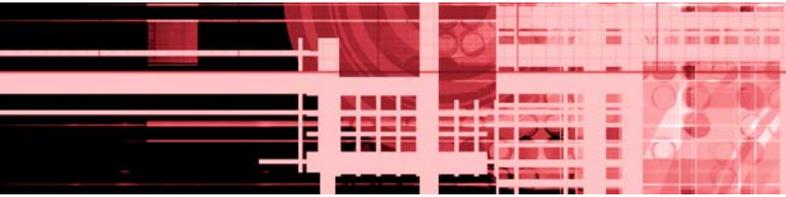
The guidelines include three sections:

- Section 1:** Baseline Requirements;
- Section 2:** Requirements for Low-Barrier Web Sites; and
- Section 3:** Requirements for High-Quality Web Sites

Site Name:	
URL:	
Reviewer:	Review Date:
Site Subject:	Site Type: <ul style="list-style-type: none"> Government <input type="checkbox"/> Nonprofit <input type="checkbox"/> Commercial <input type="checkbox"/> Educational <input type="checkbox"/> Other <input type="checkbox"/>
Intended Audience:	

- ◆ Mark any criteria that do not apply to the site you are evaluating as “not applicable” (N/A).
- ◆ Assign zero points when the site does not meet the given criteria at all.
- ◆ If there are two questions per guideline, award the higher point value if both are satisfied and the lower point value if just one is satisfied.

Section 1: Baseline Requirements <i>If your score in this section is less than 8 points, do not proceed with the evaluation.</i>	+4-5 points
Is the author or sponsor clearly identified?	
Is the site related to the following subjects: education, health, housing, jobs, legal services, cultural perspectives, local content, or other topics of particular interest to underserved communities?	
TOTAL: _____	



Section 2: Requirements for Low-Barrier Web Sites

Each category in this section focuses on a specific characteristic that can enhance the accessibility of online content. Assign to each applicable item in this section 4, 5, or 0 points.

+4-5 points

Literacy Level of Text

Are “active” verbs used instead of “passive” verbs (for example, “The car hit the tree,” instead of “The tree was hit by the car.”)?

Are the sentences clear and short (on average not more than 15-20 words each)?

Is the text written in the simplest and most familiar words appropriate?

Does the site avoid busy or distracting graphics and animation?

Language(s) of Text

Is the text available in one or more languages in addition to English?

Accessibility to Individuals with Disabilities

Does the site include descriptive alt tags, title tags, and URLs?

Is the site built without frames?

Is all of the information conveyed with color also available without color?

Do the foreground and background color combinations provide sufficient contrast for those who are visually impaired or colorblind?

Is the site Bobby approved, or does it adhere to Section 508 or other accessibility guidelines?

Does the site make its accessibility policy available to its users?

Cultural Focus of Content

Is this site about or intended for a specific cultural or ethnic group?

Does the site reflect cultural and ethnic diversity in conveying mainstream/general content?

Is this site created and maintained by members of the ethnic/cultural group reflected in its content?

Cost of Access and Use

Is the site’s content free or low cost?

Geographic Specificity of Content

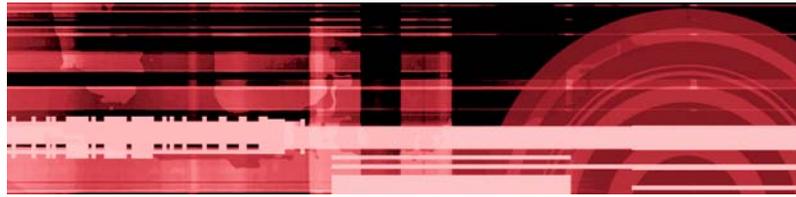
Does the site provide information that is localized as much as possible at the state or preferably city/neighborhood level?

Is the site sponsored by a locally based organization, government agency, or business?

Does the site provide practical information for the local community (for example local job, housing, and school listings, or information about neighborhood events)?

Can members of the site’s intended audience contribute content to the site?

TOTAL: _____



Section 3: Requirements for High-Quality Web Sites <i>Assign 3, 4, or 0 points to each applicable item marked “PRIORITY,” and 1, 2, or 0 points to each applicable item marked “DESIRABLE.”</i>	
SOURCE PRIORITY	+3-4 points
Is the author or sponsor clearly identified?	
DESIRABLE	+1-2 points
Are the credentials and backgrounds of the sponsors easy to find?	
Is e-mail, phone, fax, or mail contact information easy to find?	
PRIVACY PRIORITY	+3-4 points
If the site collects information about users, is it easy to find the Privacy Policy or “Terms of Use” statement?	
Does the Privacy Policy include a statement about how personal information is handled?	
INFORMATIONAL QUALITY PRIORITY	+3-4 points
Is the purpose of the site and the target audience clear?	
Does a scan of the site’s text show it to be generally free of grammatical and spelling errors?	
Is there a copyright date? Are there publication and revision dates on the articles and content?	
Is the information current, for example has the site been updated in the past three months?	
Is the site objective in presenting information? If it intends to have a bias, is the bias clearly stated?	
Is there a clear distinction between advertising and informational content?	
DESIRABLE	+1-2 points
Is the information edited down to the appropriate length for Web use, and is the need for excessive scrolling avoided?	
PRESENTATION PRIORITY	+3-4 points
Does the homepage appropriately indicate the site contents including the options, features available, and intended audience?	
Is the navigation clear? Are the menus simple and the sections appropriately named?	
Is an easy-to-find site map provided on the site?	
Is the text a readable size and style?	
Are the graphics simple and attractive without being distracting?	
Is there an easy way to get back to the homepage from elsewhere on the site?	



Do the pages have titles?	
Does the site run without requiring Flash, Shockwave, or any other plug-ins?	
If plug-ins are required, are they easy to download and use?	
DESIRABLE	+1-2 points
Does it have an attractive overall look and well-balanced use of color?	
Is there a printer-friendly option?	
INTERACTIVITY PRIORITY	+3-4 points
Is there a way to search the site to locate information, or is it organized in a manner that makes searching unnecessary?	
Does the site provide content without the need to log in or register?	
If registration is required for any part of the site, are the benefits of registration clearly explained?	
If there are financial transactions taking place on the site, is it clear that the information is secure?	
DESIRABLE	+1-2 points
Is there a way for users to comment on the site's content, for example a feedback form, or user ratings system?	
Is there a way for users to contribute to the site's content, for example submitting articles, links, or posting to a message board?	
TECHNICAL PRIORITY	+3-4 points
Is it viewable with both Netscape and Explorer?	
Does the site load quickly and easily (a maximum of 8 seconds)?	
Does the site fit within the width of your screen?	
Does a scan of the site show it to be generally free of non-working links, missing graphics, "Under Construction" messages, and code errors?	
TOTAL: _____	
Section 1: Baseline Requirements Total: _____ Section 2: Requirements for Low-Barrier Web Sites Total: _____ Section 3: Requirements for General Web Site Quality Total: _____ GRAND TOTAL: _____ SCORE (GRAND TOTAL ÷ 215 - total N/A points) x 100 = FINAL: _____%	

TAB 4 – Sampling of Other Content Evaluation Guidelines

A variety of organizations and experts have done pioneering work in developing criteria to evaluate Internet content. Here we have highlighted several evaluation guidelines of particular note and included a sampling of others, identified through our extensive research and review of over 100 sets of guidelines. (For the complete list of guidelines surveyed, see Research Appendices, Tab 1.) These examples can serve as valuable building blocks in the effort to develop content evaluation criteria that consider the particular needs and interests of underserved users.

Some of the guidelines included in this Appendix are also mentioned elsewhere in this Issue Brief. We have chosen to include them here as well in an effort to provide as much useful information as possible to researchers and others with an interest in this topic.

This resource is divided into two parts: “Guidelines Showcase,” which includes actual examples of exemplary guidelines; and “Other Useful Content Evaluation Guidelines,” organized by topic for easier searching. For each entry there is information on where to find the full set of guidelines.

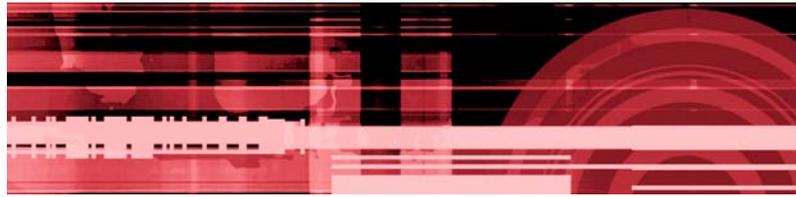
Guidelines Showcase

The Guidelines Showcase section is designed to highlight three exceptional examples of content evaluation criteria. firstfind’s criteria and Paul Gorski’s Multicultural Model for Evaluating Educational Web Sites are those rare examples that do address the particular needs and interests of underserved users. Stanford University’s Guidelines for Web Credibility, although without criteria for underserved users specifically, is the result of groundbreaking research that can be valuable for anyone interested in developing content evaluation strategies.

Example 1: firstfind.info

firstfind.info, a Web site developed by a group of New York-area librarians, is an online library that provides information to adults with limited-literacy or English skills. firstfind staff use the guidelines that follow to select resources for inclusion on the site. These guidelines also informed the development of the firstfind.info site itself.

Please see chart on following page.





Rating Directions

For each criterion below, rate it 0 if unsatisfactory, 1 if satisfactory, 2 if excellent in column A, then multiply by the number given in column B. Total across and at the bottom of the Total column for rating.

Rating Criteria

THE WEBSITE:	RATE 0-2	TOTAL
1. has content which is of high interest and suitable for adults	x	2
2. provides accurate, complete, reliable, current information (authority is recognized and suitable; there is a clear statement of authorship, ownership or responsibility for content; it includes publication or completion date or date last updated)	x	2
3. is easy and efficient to navigate (organized with clear, simple menus; intuitive or logical connections between pages; navigation bars, and home icon at end of each section; requires minimal scrolling; buttons make clear where they take you; includes good site map or index)	x	2
4. is easy to read , at a low-intermediate (“4th - 6th grade”) level, characterized by short sentences, simple vocabulary or words defined within context, plain English, assumption of little or no background knowledge, relatively little text per screen, background and text working well together. It may include Q&A format or bulleted text)	x	2
5. has good graphic design for adults (straightforward layout, lots of space between text, no clutter, no unnecessary “bells and whistles” advertising, flashing banners, appealing, includes adult-appropriate graphic images or illustrations)	x	2
6. makes its bias clear if it has one, or is fair in presentation of points of view	x	1
7. does not have as its primary purpose advertising commercial products	x	1
8. loads reasonably fast (under 30 seconds per page)	x	1
9. takes into consideration the needs of differently-abled students (e.g., non-frames version, Alt tags under images, and other considerations which make text-to-speech possible.) It may be “Bobby Approved” or in other ways be recognized as a suitable Website for adults with reading learning differences or disabilities	x	1
TOTAL out of possible 24 points		

Does the site include local information? ___yes ___no

Is the information printable? ___yes ___no

Recommendation:

_____ I recommend this website to be used as it is

_____ I recommend this website to be used in the following way(s)

_____ I would recommend this website IF.....

(Tell us what needs to be changed, so that we can contact the publisher about revising or altering the site.)

The firstfind guidelines are available online (p. 18) at http://www.ala.org/Content/NavigationMenu/Our_Association/Offices/Literacy_and_Outreach_Services/Outreach_Resources/firstfind_compilation.pdf.

Example 2: A Multicultural Model for Evaluating Educational Web Sites

Dr. Paul Gorski, an educator and creator of the Multicultural Pavilion Web site (<http://www.edchange.org/multicultural/>), developed this set of guidelines that applies a multicultural lens to evaluating online content. The following criteria are a set of questions designed to help teachers assess Web sites for use in the classroom.

Relevance and Appropriateness

1. Is the site's content relevant to your needs?
2. Is the Web medium appropriate and necessary for your needs?
3. Is the target age group clearly indicated and consistent with the age range of your students?
4. Are the mission and the scope of the site clearly indicated and relevant to your purposes?
5. Are graphic images appropriate for your students' age group?
6. Is the content timely and updated reasonably often?

Credibility

1. Is the author of the site clearly indicated?
2. Is the author's experience in the content area sufficient?
3. Is the site author and/or sponsor a known entity?
4. Is there evidence of quality control?
5. Is the site or site author affiliated with an identified educational organization?

Bias Identification

1. Does the site include a statement about the author or sponsoring organization that helps identify potential bias?
2. Is the site authored or sponsored by some person or organization with a known position regarding the content? If not, is their position clearly stated?
3. Is the primary purpose of the site commercial, and if so, how might this interest be informing content?
4. Does the site include forums for users to discuss its content and present divergent perspectives?

Accuracy

1. Does the site contain obvious content errors or omissions?
2. If information on the site is time-sensitive, is it routinely updated to incorporate new and follow-up information?



3. Does the site provide or invite diverse perspectives, or does it rely on a tightly defined single view for understanding its topic?
4. Are sources within the site clearly cited?

Accessibility

1. Is the site free of coding bugs?
2. Does the site load reasonably fast?
3. Is the author or sponsoring organization accessible to answer your questions, or those of your students, via email or online form?
4. Is contact information provided for the author or sponsoring organization?
5. Does the site take into consideration the needs of differently-abled students (e.g. non-frames version and other considerations)?

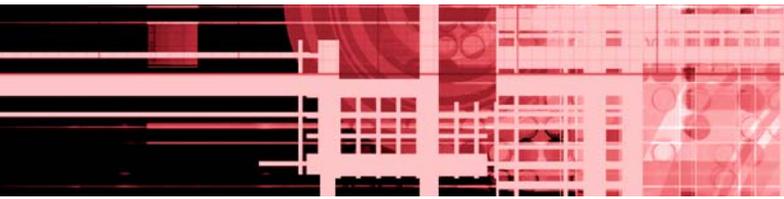
Navigability

1. Is the site organization intuitive?
2. Is the necessity of scrolling kept to a minimum?
3. Is navigation simple and obvious?
4. Are navigation bars provided to allow users to jump to different places within the site?

Multiculturality

1. Does the site use a variety of media and styles to effectively engage students with varying learning styles?
2. Does the site encourage interaction between author and user or among users?
3. Does the site encourage participation among users through intercultural interactive or collaborative opportunities?
4. Does the site invite critical examination or divergent perspectives through interactive forums or online evaluation instruments?
5. Does the site provide voice to other perspectives through links or other connections?
6. Is the site free of material that may be oppressive to one or more groups of students?

The Multicultural Model for Evaluating Educational Web Sites is available online at <http://www.edchange.org/multicultural/net/comps/model.html>.



Example 3: Stanford's Guidelines for Web Credibility

The Stanford Web Credibility Project is part of the Stanford Persuasive Technology Lab, where researchers are trying to understand what leads people to believe information they find online, with the eventual goal of enhancing Web design. Researchers at the project are currently carrying out studies on Web credibility, serving as a clearinghouse for information and resources on Web credibility, and working with Web designers to create credible sites. The guidelines below are the result of three years of research involving over 4,500 participants.

1. Make it easy to verify the accuracy of the information on your site.

You can build web site credibility by providing third-party support (citations, references, source material) for information you present, especially if you link to this evidence. Even if people don't follow these links, you've shown confidence in your material.

2. Show that there's a real organization behind your site.

Showing that your web site is for a legitimate organization will boost the site's credibility. The easiest way to do this is by listing a physical address. Other features can also help, such as posting a photo of your offices or listing a membership with the chamber of commerce.

3. Highlight the expertise in your organization and in the content and services you provide.

Do you have experts on your team? Are your contributors or service providers authorities? Be sure to give their credentials. Are you affiliated with a respected organization? Make that clear. Conversely, don't link to outside sites that are not credible. Your site becomes less credible by association.

4. Show that honest and trustworthy people stand behind your site.

The first part of this guideline is to show there are

real people behind the site and in the organization. Next, find a way to convey their trustworthiness through images or text. For example, some sites post employee bios that tell about family or hobbies.

5. Make it easy to contact you.

A simple way to boost your site's credibility is by making your contact information clear: phone number, physical address, and email address.

6. Design your site so it looks professional (or is appropriate for your purpose).

We find that people quickly evaluate a site by visual design alone. When designing your site, pay attention to layout, typography, images, consistency issues, and more. Of course, not all sites gain credibility by looking like IBM.com. The visual design should match the site's purpose.

7. Make your site easy to use — and useful.

We're squeezing two guidelines into one here. Our research shows that sites win credibility points by being both easy to use and useful. Some site operators forget about users when they cater to their own company's ego or try to show the dazzling things they can do with web technology.

8. Update your site's content often (at least show it's been reviewed recently).

People assign more credibility to sites that show they have been recently updated or reviewed.

9. Use restraint with any promotional content (e.g., ads, offers).

If possible, avoid having ads on your site. If you must have ads, clearly distinguish the sponsored content from your own. Avoid pop-up ads, unless you don't mind annoying users and losing credibility. As for writing style, try to be clear, direct, and sincere.

10. Avoid errors of all types, no matter how small they seem.

Typographical errors and broken links hurt a site's credibility more than most people imagine. It's also important to keep your site up and running.

The Stanford Guidelines for Web Credibility are available online at <http://www.webcredibility.org/guidelines/index.html>. For further information, see <http://www.persuasivetech.info>.

Other Useful Content Evaluation Guidelines

Accessibility

HTML Writers Guild Web Accessibility Standards

<http://www.hwg.org/opcenter/policy/access.html>

National Federation of the Blind's Criteria for Nonvisual Accessibility Certification

<http://www.nfb.org/seal/criteria.htm>

World Wide Web Consortium's Web Content Accessibility Guidelines 1.0

<http://www.w3.org/TR/WAI-WEBCONTENT>

Cultural Content

Cubbins, Elaine M. "Techniques for Evaluating American Indian Web Sites." (2000)

<http://www.u.arizona.edu/~ecubbins/webcrit.html>

Gorski, Paul. "A Multicultural Model for Evaluating Educational Web Sites." (1999)

<http://www.edchange.org/multicultural/net/comps/model.html>

Navarro, Amanda. "Culturally Competent Web Design." Community Technology Foundation of California.

<http://zerodivide.org/ccwebdesign/>

Education

American Library Association's Great Web Sites for Kids Selection Criteria

http://www.ala.org/Content/NavigationMenu/ALSC/Great_Web_Sites_for_Kids/Great_Web_Sites_for_Kids_Selection_Criteria/Great_Web_Sites_for_Kids_Selection_Criteria.htm

Ed's Oasis – Evaluation Center

<http://www.classroom.com/edsoasis/evaluation.html>

Kathy Schrock's Guide for Educators

<http://school.discovery.com/schrockguide>

Lesley University

http://www.lesley.edu/library/guides/research/evaluating_web.html

Re-envisioning the classroom in the digital age

<http://oldwww.matrix.msu.edu/educonsult/usability.html>



WWW Cyberguides for Content Evaluation

<http://www.cyberbee.com/guides.html>

Health

Allcock, Jana. "Evaluating Health Web Sites." National Network of Libraries of Medicine. (June 2000)

<http://nmlm.gov/scr/conhlth/evalsite.htm>

The Centre for Health Information Quality (a division of the Help for Health Trust, an independent charity based in the UK) (2002)

<http://www.hfht.org/chiq/guidelines.htm>

"Health Care Links: How to Evaluate Medical Information Found on the Internet." California Medical Association. (February 25, 1999)

<http://new.cmanet.org/publicdoc.cfm/60/0/GENER/99>

Healthfinder.gov's Selection Policy

<http://www.healthfinder.gov/aboutus/selectionpolicy.htm>

MEDLINEplus Selection Guidelines

<http://www.nlm.nih.gov/medlineplus/criteria.html>

NetScoring: Criteria to assess the quality of Health Internet information (2001)

<http://www.chu-rouen.fr/netscoring/netscoringeng.html>

QUICK (The Quality Information Checklist)

<http://www.quick.org.uk>

Limited Literacy

Evaluating Internet Resources (from the Ohio Literacy Resource Center's "Finding and Evaluating Internet Resources" workshop)

<http://literacy.kent.edu/Oasis/Workshops/ELR/evalresform.html>

Literacy Tech's (Northeast Literacy and Technology Consortium) Evaluating Sites (2002)

<http://hub1.worlded.org/nelrctech/webpub/evaluating.html>



firstfind.info's selection criteria (p. 18) (2003)

http://www.ala.org/Content/NavigationMenu/Our_Association/Offices/Literacy_and_Outreach_Services/Outreach_Resources/firstfind_compilation.pdf

National Institute for Literacy's LINC'S Selection Criteria (1999)

http://www.nifl.gov/lincs/selection_criteria.html

Privacy and Consumer Issues

Better Business Bureau/BBBOnline's Privacy Program's Eligibility Requirements

<http://www.bbbonline.org/privacy/threshold.asp#2>

Better Business Bureau/BBBOnline's Code of Online Business Practices

<http://www.bbbonline.org/reliability/code/principle.asp>

Consumer WebWatch Guidelines

<http://www.consumerwebwatch.org/bestpractices/index.html>

Online Privacy Alliance's Guidelines for Online Privacy Policies

<http://www.privacyalliance.org/resources/ppguidelines.shtml>

Stanford Guidelines for Web Credibility

<http://credibility.stanford.edu/guidelines/index.html>

Usability

Improving Web Site Usability and Appeal, from MSN Usability Research

<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnsiteplan/html/IMPROVINGSITEUSA.asp>

Jakob Nielsen's Ten Good Deeds in Web Design

<http://www.useit.com/alertbox/991003.html>

The Training Foundation's Web site usability standards

<http://www.trainingfoundation.com/standards/default.asp?PageID=409>

Intersections

Gorski, Paul. "A Multicultural Model for Evaluating Educational Web Sites." (1999)

<http://www.edchange.org/multicultural/net/comps/model.html>

Plain English Campaign's "How to Write Medical Information in Plain English" <http://www.plainenglish.co.uk/medicalguide.pdf>

The Plain Language Initiative: Guidelines for Using Plain Language at NIH <http://execsec.od.nih.gov/plainlang/guidelines/index.html>

TAB 5 – Useful Sources: An Annotated Bibliography

Following are descriptions of a sampling of resources from a variety of fields, which are relevant to the issue of content evaluation. The format and availability of the bibliographical information for the sources included here varies widely. We have provided all available bibliographical information in the following references.

General

Brandt, D. Scott. "Evaluating Information on the Internet." *Computers In Libraries*, 16, no. 5 (May 1996): 44-46. <http://thorplus.lib.purdue.edu/~techman/evaluate.htm>

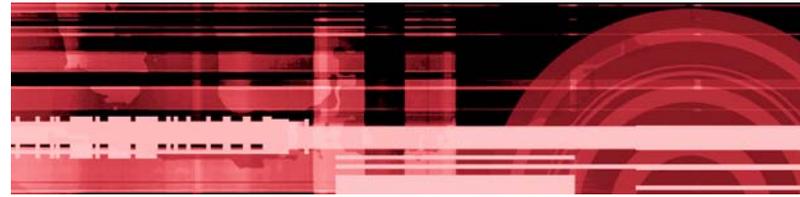
- ◆ Notes that evaluating Internet sources is especially important on the Web because it is unfiltered information.
- ◆ Advocates for adapting traditional evaluative quality control methods from print media to the Web.
- ◆ Highlights that searching (via engines) is not the same as evaluating.
- ◆ Distinguishes between two ways to approach evaluation:
 1. Objectively assess credibility of information; and
 2. Subjectively determine whether it meets your needs.

Burbules, Nicholas C., and Thomas A. Callister, Jr. "Who lives here? Access to and credibility within cyberspace." In C. Bigum, et C. Lankshear (Dir.), *Digital Rhetorics: New Technologies, Literacy, and Learning. Current Practices and New Directions* (21-57). Brisbane, AUST: Queensland University of Technology. (1997) http://faculty.ed.uiuc.edu/burbules/ncb/papers/who_lives_here.html

- ◆ Combines issues of access (to the Internet and computers) and issues of credibility (who has the skills to evaluate Web content, and who can acquire credibility as a content provider).
- ◆ Claims that one barrier to accessing Internet resources is the inability to sort through and evaluate the enormity of content.
- ◆ Predicts that as the Web grows, editors or archivists who sort through and organize Web content will gain status and credibility, and there is a danger of monolithic points of view.
- ◆ Warns of an "information caste society" that could result when some citizens are cut off because of the inability to gain access to and credibility within cyberspace.

Ciolek, T. Matthew. "The Six Quests for the Electronic Grail: Current Approaches to Information Quality in WWW Resources." *Review Informatique et Statistique dans les Sciences Humaines (RISSH)*, No. 1-4. Centre Informatique de Philosophie et Lettres, Universite de Liege, Belgium. pp. 45-71. (1996) <http://www.ciolek.com/PAPERS/six-quests1996.html>

- ◆ Describes the Web as an "information swamp" of many publications with information that is unattributed and undated.
- ◆ Notes urgency of taking steps to improve quality of the Web now if it is ever to be a place suitable for scholarly publication.
- ◆ Discusses six ways for improving the quality of information on the Web, including: procedural approaches (using templates, guidelines that specify standards and style); and evaluative approaches (grading or rating sites).
- ◆ Ideally, criteria should be simple and clear enough that eventually they could be used in software; currently humans are employing them idiosyncratically in a labor-intensive process.



Harris, Robert. "Evaluating Internet Research Sources." *Virtual Salt*. (1997) <http://www.virtualsalt.com/eval8it.htm>

- ◆ Suggests a simple, easy-to-learn process for evaluating Web content:
 - Recognize diversity of information online;
 - Do pre-screening activities before beginning; and
 - Test the quality of the information that is found.

Rettin, James. "Putting the Squeeze on the Information Firehose: The Need for 'Neteditors and 'Netreviewers.'" (1995) <http://www.swem.wm.edu/firehose.html>

- ◆ Compares reference information in print to Web-based reference information and discusses unique challenges of evaluating Web content.
- ◆ Strongly advocates for the need for evaluation of content, pointing to many examples of poor-quality content online.
- ◆ Discusses five major online services that evaluate Internet resources.
- ◆ Calls for stakeholders — librarians, consumers, content creators, etc. — to develop consensus on criteria for evaluating content.

Royce, John. "Where the Truth Lies." *School Librarian*, 47 (3). (1999) <http://vm.robcol.k12.tr/-jroyce/lies.htm>

- ◆ Points out the absence of editors behind the Web — anyone can post anything even if false, misleading, out-of-date, incomplete, etc.
- ◆ Notes that because of this opportunity, it is essential to teach content evaluation to students.
- ◆ Argues that it has always been important to teach students critical thinking, but it is crucial in this "age of infoglut."



Solock, Jack. "The Internet: Window to the World or Hall of Mirrors? Information Quality in the Networked Environment." Internet Scout Project, University of Wisconsin – Madison. (November 1996) <http://scout.bilkent.edu.tr/toolkit/enduser/archive/1996/euc-9611.html>

- ◆ Proposes that we are so enamored with the "technology container" that transmits information that we have completely neglected the contents of the container.
- ◆ Claims the Web is a worthwhile and valuable information medium, but a serious *caveat emptor* applies.
- ◆ Suggests users should look for three "signposts" when evaluating Web information: content, access, and design.

Smith, Alistair G. "Testing the Surf: Criteria for Evaluating Internet Information Resources." *The Public-Access Computer Systems Review* 8, no. 3. (1997) <http://info.lib.uh.edu/pr/v8/n3/smit8n3.html>

- ◆ Establishes the need for evaluating Internet content, especially by librarians.
- ◆ Provides a literature review of various evaluation criteria for Web content.
- ◆ Offers a "toolbox" of Web evaluation criteria, an amalgamation of various sources that can be applied by librarians selecting sites for inclusion in a resource guide.
- ◆ Discusses the various criteria used by several Internet evaluation services.

Tillman, Hope N. "Evaluating Quality on the Net." Originally delivered at the John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts, September 6, 1995. (Updated March 2003) <http://www.hopetillman.com/findqual.html>

- ◆ Divides Internet content into categories based on type, including: vanity publishing, gray literature, and advertising and public relations.

- ◆ Lays out generic criteria for evaluating Internet content and key indicators of quality.
- ◆ Discusses the various evaluation tools available online (including search engines, guides, and directories).
- ◆ Provides advice/guidelines for those creating content on the Web.

Ury, Connie, et al. "Evaluating Web Resources." (Created 1997, Revised 2003) <http://www.nwmissouri.edu/library/search/evaluate.htm>

- ◆ Divides Web content into five categories: commercial, vanity, gray, scholarly, and proprietary.
- ◆ Outlines assets and liabilities of the Web as an information medium.

Accessibility

Bohman, Paul. "Universal Design and Disability Access to the Web." WebAIM. <http://www.webaim.org/articles/webnet2000>

- ◆ Argues that as more people access the Internet from various technologies other than traditional browsers, the need for universal design grows.
- ◆ Notes that the disability community would be a beneficiary of greater emphasis on universal design.
- ◆ Mentions current initiatives working to increase online accessibility.
- ◆ Claims that implementing solutions to make sites accessible is not as challenging as one might think, and these efforts improve sites for all users, including those with disabilities.

Donkin, Jo. "The Case for the Use of Plain English to Increase Web Accessibility." <http://www.joannadonkin.com/plainlang.html>

- ◆ Notes that one way to make sites more accessible to those who have hearing difficulties and use sign language is to write in plain English.
- ◆ Points out that part of the World Wide Web Consortium's accessibility guidelines says sites should "use the clearest and simplest language appropriate for the site's content."

- ◆ Names the various groups that would benefit from plain language: those whose first language is not English; those with learning difficulties or limited-literacy skills; deaf users who use sign language; and those who are visually impaired and use a text-to-speech reader.
- ◆ Highlights that tools to measure plain language/readability are very subjective, and much work needs to be done to develop publicly accessible tools.

“Introduction to Accessibility on the Web.” City of Seattle Public Utilities Web Team. (September 10, 2001) available for download at <http://www.cityofseattle.net/pan/content.htm>

- ◆ Emphasizes that an information technology system is accessible to users with disabilities as long as it does not rely on using a single sense or ability.
- ◆ Illustrates how content, structure, and presentation must be separated to make sites accessible.
- ◆ Notes the high percentage of people with disabilities who do use the Web.
- ◆ Points out the main design elements that have accessibility problems: non-text elements, tables and forms, image maps and navigation, color, and text and paragraph formatting.
- ◆ Argues that following checklists, doing user testing, and using a testing service are crucial to evaluate and validate design.

“Understanding Disability Issues When Designing Web Sites.” IBM Accessibility Center. http://www3.ibm.com/able/access_ibm/disability.html

- ◆ Outlines four main categories of disability: visual, hearing, mobility, and cognitive and learning.
- ◆ Explains how each person with a disability may face one or more barriers that could be overcome or diminished by the site developer, the browser, an assistive technology, or operating system or hardware:
 1. Visual – text magnification, color contrast;
 2. Hearing – closed captioning, transcripts;
 3. Mobility – alternate input capabilities; and
 4. Cognitive and Learning – consistent design, simplified language.



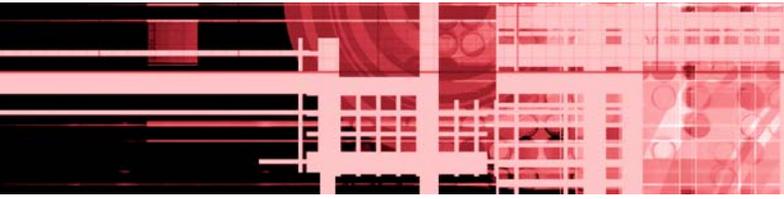
Cultural Content

Chu, Clara. “See, Hear, and Speak No Evil: A Content Approach to Evaluating Multicultural Multimedia Materials.” *Reference & User Services Quarterly*. Volume 39, Number 3. (Spring 2000)

- ◆ Points out that because the bulk of multimedia material is produced in English in the West (especially Web materials), scrutiny must be used when evaluating it for bias.
- ◆ Includes a literature review of works that deal with evaluation of multicultural materials, which primarily focus on identifying racial/ethnic bias and sexism in the illustrations and text of print-based materials.
- ◆ Introduces a “conceptual” approach to evaluation criteria, which focuses on four elements:
 1. Content objectivity;
 2. Language use;
 3. Subject mastery; and
 4. Resources.
- ◆ Concludes that there is not a significant amount of multicultural multimedia available now, and educators and others must continue to advocate for high-quality materials with cultural integrity.

Gorski, Paul. “Toward a Multicultural Approach for Evaluating Educational Web Sites.” (1999) <http://www.edchange.org/multicultural/net/comps/eval.html>

- ◆ Emphasizes that educational products must be examined to determine bias, since no body exists to ensure credibility of Web authors.
- ◆ Notes that the Web has wonderful potential to facilitate multicultural, interactive teaching and learning; however, most evaluation criteria do not consider whether this potential is being used.



- ◆ Lists seven categories of criteria for evaluating educational sites using a multicultural approach.

Shiohita, Joy. "Beyond Good Intentions: Selecting Multicultural Literature." (Originally appeared in the Sept-Oct. 1997 *Children's Advocate* magazine, published by Action Alliance for Children.)
<http://www.4children.org/news/9-97mlit.htm>

- ◆ Discusses nine criteria for choosing multicultural books for children, including such issues as stereotypes, language, epithets, illustrations, tough issues, and the author's perspective.
- ◆ Focuses on the evaluation of books; however, much of the information would be relevant to Web sites as well.

Twist, Kade L. "Cyber-Tricksters and Cyber-Shamen: The Other Side of the Digital Divide." Benton Foundation.
<http://www.digitaldividenetwork.org/content/stories/index.cfm?key=128>

- ◆ Establishes that the Web includes non-Indian people speaking on behalf of Indians.
- ◆ Argues that these sites contribute to the shaping of the public's perception of Indians and can have lasting social/political/cultural damage.
- ◆ Notes how the line between truth and fiction online is blurred, which can be especially challenging for K-12 children.

Worcman, Karen. "Digital Division Is Cultural Exclusion. But Is Digital Inclusion Cultural Inclusion?" *Dlib* Magazine, Volume 8, Number 3. (part of the Digital Libraries Initiative funded by the National Science Foundation) (2002)
<http://www.dlib.org/dlib/march02/worcman/03worcman.html>

- ◆ Examines various issues around the digitization of cultural resources.
- ◆ Notes desire of many in the field to find ways in which creating a digital archive of an indigenous community's culture and history could be a method of strengthening that community.
- ◆ Considers questions of whether projects that create digital archives of an indigenous culture will include that culture in the process of preserving and disseminating their culture; notes the danger of repeating colonization and appropriation in the virtual world.
- ◆ Emphasizes the significant social implications when communities have the ability to record their own stories; however, many barriers exist.

Education

Boklaschuk, Kelli, and Kevin Caisse. "Goals and Objectives for Educational Web Site Evaluation." (April 2001)
<http://www.usask.ca/education/coursework/802papers/bokcaisse/bokcaisse.htm>

- ◆ Acknowledges that teachers may feel overwhelmed when trying to determine good sites for classroom use.
- ◆ Claims that the field of education needs its own set of evaluation criteria apart from those used for more general evaluation.
- ◆ Divides evaluation of educational sites into two categories: content evaluation, which addresses audience, credibility, accuracy, objectivity, coverage, and currency; and technical aspects evaluation, which addresses aesthetic and visual appeal, navigation, and accessibility.

Schrock, Kathleen. "The ABCs of Web Site Evaluation: Teaching Media Literacy in the Age of the Internet." (Originally appeared in *Classroom Connect*, December 1998/January 1999) (Second edition, 2002)
http://school.discovery.com/schrockguide/pdf/weval_02.pdf

- ◆ Insists that both teachers and students should be able to critically evaluate Web sites and consider issues of authenticity, applicability, authorship, bias, and usability.

- ◆ Describes the ability to evaluate Web sites as a crucial skill in the information age, when there is so much information online.
- ◆ Includes list of 26 tips with explanations that teachers and students can use to evaluate sites.

Yahooligans! Teachers' Guide: "Evaluating Websites"
<http://www.yahooligans.com/tg/evaluatingwebsites.html>

- ◆ Emphasizes the importance of using quality sites to the success of any Internet-based lesson.
- ◆ Suggests the "Four A's" as a method to evaluate sites for educational use: Accessible, Accurate, Appropriate, and Appealing.

Health

Berland, Gretchen, et al. "Evaluation of English and Spanish Health Information on the Internet." RAND. (2001)
<http://www.rand.org/publications/documents/interneteval/>

- ◆ Establishes that the Internet is an increasingly important and influential source of health information to the public.
- ◆ Outlines the three questions addressed in a study examining the quality of online health information:
 1. How well search engines locate health information;
 2. How comprehensive, accurate, and current the health information online is; and
 3. What literacy level is required to understand health information online.
- ◆ Discusses key findings of the study:
 1. Search engines are not efficient tools for locating health information on a particular health topic;
 2. Consumers often find incomplete answers to important questions; however, the information is generally accurate;
 3. Most Web-based health information will be difficult for the average consumer to understand.
- ◆ Makes recommendations to consumers, consumer advocacy groups, health care providers, providers of Web-based health information, policy-makers, and regulators.



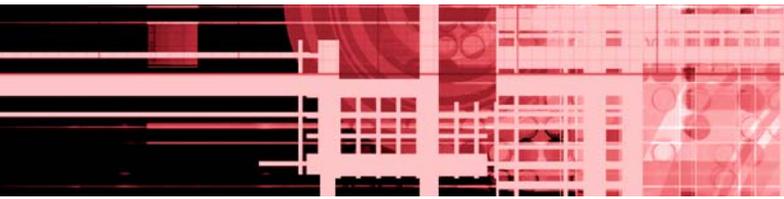
- ◆ Concludes that a key challenge is the extent to which the market for health information will reward those who provide high-quality information.

Commission of the European Communities. "eEurope 2002: Quality Criteria for Health Related Web Sites." *Journal of Medical Internet Research* (2002)
<http://www.jmir.org/2002/3/e15/>

- ◆ Aims to create a core set of quality criteria for health sites that the European community can agree upon.
- ◆ Outlines criteria objectives:
 - Address both provider and user education issues;
 - Address both information-giving sites and sites where transactions between providers and users occur; and
 - Facilitate compliance with EU directives, other current criteria, and technology standards in this arena.
- ◆ Determines Quality Criteria with eight broad headings: transparency/honesty, authority, privacy, updating of information, accountability, responsible partnering, editorial policy, and accessibility (how easy the site is to find and how easily people with disabilities can use it).
- ◆ Examines several methods of implementing criteria and other ways to protect the consumer.

"Credibility, Accuracy, and Readability: Consumer Expectations Regarding Online Health Information Resources." Manhattan Research. (May 2003)
<http://www.manhattanresearch.com/expectations.htm>

- ◆ Includes results of a study that found that 41 million U.S. adults are confused by much of the online health content available.
- ◆ Notes that for many, the confusion stems from the content's lack of a clear, credible source, as well as the information's complex language.



- ◆ Points out that 65% of those surveyed believe the accuracy of online health information should be better, and 22% percent have trouble reading and understanding online health content.

Health Summit Working Group of the Health Information Technology Institute of Mitretek Systems. “Criteria for Assessing the Quality of Health Information on the Internet - Policy Paper.” (1999, updated 2000) <http://hitiweb.mitretek.org/docs/policy.html>

- ◆ Recognizes the growing need for “objective, reproducible, widely accepted” criteria that could be used to judge health information sites.
- ◆ Claims that usability of information is so important in this arena because the health of millions of consumers could be affected.
- ◆ Points out that there is currently no agreement on a solution to improving health information quality online, and the current ratings/guidelines are not uniform.
- ◆ Outlines seven major criteria for health sites: credibility, content, disclosure, links, design, interactivity, and caveats.
- ◆ Offers the Information Quality (IQ) Tool, an online form to help consumers ask the right questions of health sites.

“How to Research a Medical Topic Online: Wrestling the facts you need from the mass of health information — and misinformation — on the Internet.” *Consumer Reports*. http://www.consumerreports.org/main/detail.jsp?CONTENT%3C%3Ecnt_id=21263&FOLDER%3C%3Efolder_id=21135&bmUID=997899700031

- ◆ Notes that the real challenge is finding accurate, objective, relevant information on medical conditions among hundreds of thousands of health sites.

- ◆ Lists problems with health information online, such as:
 - Some sites aimed at professionals are too technical/dense for most consumers; and
 - Some sites aimed at consumers are too intertwined with commercial entities trying to promote a product or treatment.
- ◆ Advocates for beginning with a targeted (not random) search.
- ◆ Highlights MEDLINEplus, which has predefined searches, as a good resource for consumers.

Kim, Paul, et al. “Published criteria for evaluating health related web sites: review.” *BMJ* (formerly *British Medical Journal*) (1999) <http://bmj.com/cgi/content/full/318/7184/647>

- ◆ Discusses results of an examination of 29 sets of guidelines or criteria for evaluating health content online.
- ◆ Reports that 80% of the criteria fell into 12 main categories (with “content” being the most commonly cited criteria), thus many authors agree on key criteria.
- ◆ Concludes that since many agree on key criteria, it may be helpful to develop consensus and create a tool the public can understand and use.

Ojalvo, Holly Epstein. “Online Advice: Good Medicine or Cyber-Quackery?” *American College of Physicians - American Society of Internal Medicine*. (From the December 1996 *ACP Observer*) <http://www.acponline.org/journals/news/dec96/cybrquak.htm>

- ◆ Lists positives about health information online:
 - Potential to empower patients, giving them more information to let them be more involved in their own care; and
 - Could reduce health care costs, if doctor visits for minor maladies that could be self-diagnosed are reduced.
- ◆ Lists negatives about health information online:
 - Patients may delay seeking medical attention; and
 - Most online consultation occurs in user groups and chat rooms, and anecdotal misinformation is often spread this way.

- ◆ Outlines six rules of thumb when looking for health information online.

Rigby, Michael, et al. “Verifying Quality and Safety in Health Informatics Services.” *BMJ* (formerly *British Medical Journal*) (2001)

<http://bmj.com/cgi/content/full/323/7312/552>

- ◆ Considers the benefits/risks of various types of health informatics (like clinical software, telemedicine, and Internet sites).
- ◆ Reports core findings of a recent European project — Towards Accreditation and Certification of Telemetrics Services in Health (TEAC-Health).
- ◆ Outlines several impediments to voluntary quality assurance for sites.
- ◆ Proposes EuroSeal — new European-based system and standard.

Science Panel on Interactive Communication and Health. “Wired for Health and Well-Being: The Emergence of Interactive Health Communication.” Washington, DC: US Department of Health and Human Services. (April 1999)
<http://www.health.gov/scipich/pubs/finalreport.htm>

- ◆ Suggests “widespread evaluation” as the most promising means for improving the quality of interactive health communication (IHC) products, with potential benefits including greater protection for consumers as well as financial benefits for health care and other industries.
- ◆ Outlines general evaluation criteria for IHC.
- ◆ Argues that evaluations should be practical and proactive, have a clear purpose, be a shared responsibility, and be integrated into the development process of the application.
- ◆ Notes that access is key and calls for working to reduce the gap between the health information “haves” and “have-nots;” suggests public-private initiatives to increase access among underserved groups.
- ◆ Proposes that applications for the underserved (that address the health issues of target populations like those with disabilities, minorities, and low-income people) need to be funded and encouraged.



Winker, Margaret A., MD, et al. “Guidelines for Medical and Health Information Sites on the Internet: Principles Governing AMA Web Sites.” *Journal of the American Medical Association (JAMA)* (2000)

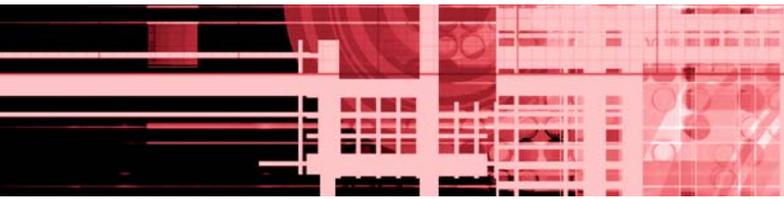
<http://www.ama-assn.org/ama/pub/category/1905.html>

- ◆ Illustrates that the shift in health information to the Internet offers potential for great sharing in the decision-making process between doctor and patient.
- ◆ Lists several barriers to this transformation process:
 - Variation in quality of health information;
 - Potential of commercial elements to influence health information; and
 - Privacy concerns.
- ◆ Includes four sets of guidelines used for content on the AMA site:
 1. Principles for Content;
 2. Principles for Advertising and Sponsorship;
 3. Principles for Privacy and Confidentiality; and
 4. Principles for e-Commerce.

Wyatt, Jeremy C. “Commentary: Measuring quality and impact of the world wide web.” *BMJ* (formerly *British Medical Journal*) (1997)

<http://bmj.com/archive/7098ip2.htm>

- ◆ Points out that the Web facilitates the dissemination of information, but not the discrimination between good and bad information.
- ◆ Lists aspects of sites that need to be evaluated when determining a site’s credibility and reliability.
- ◆ Emphasizes that the impact that health sites have on users must be studied.



Limited Literacy

Donkin, Jo. "The Case for the Use of Plain English to Increase Web Accessibility."

<http://www.joannadonkin.com/plainlang.html>

- ◆ Notes that one way to make sites more accessible to those who have hearing difficulties and use sign language is to write in plain English.
- ◆ Points out that part of the World Wide Web Consortium's accessibility guidelines says sites should "use the clearest and simplest language appropriate for the site's content."
- ◆ Names the various groups that would benefit from plain language: those whose first language is not English; those with learning difficulties or limited-literacy skills; deaf users who use sign language; and those who are visually impaired and use a text-to-speech reader.
- ◆ Highlights that tools to measure plain language/readability are very subjective, and much work needs to be done to develop publicly accessible tools.

Florez, MaryAnn Cunningham. "Q&A: Finding and Evaluating Adult ESL Resources on the World Wide Web." National Center for ESL Literacy Education.

<http://www.cal.org/nclie/digests/findingQA.htm>

- ◆ Discusses strategies for finding quality resources online for use with ESL students.
- ◆ Includes a checklist of questions that can be used to evaluate resources from the Web (including relevance, authority, and accuracy).

Hacker, Emily. "Choosing and Using Web Sites for Literacy Instruction: Evaluation Resources and Strategies."

Focus on Basics. Vol 4, Issue C. (December 2000)

<http://www.gse.harvard.edu/%7Encsall/fob/2000/hacker.html>

- ◆ Notes the challenge of successfully finding information online, especially information that is accessible to adult learners and second-language learners.
- ◆ Highlights three aspects of this challenge which are being addressed by literacy practitioners: creating guidelines for developing accessible sites for adult learners; developing multimedia products; and designing maps so that this information can be found quickly and easily.
- ◆ Suggests breaking Web evaluation down into four categories: authorship, design and navigation, content/information, and currency.
- ◆ Points out that many guidelines that make content accessible for people with disabilities also improve the accessibility for adult learners.

Zarcadoolas, Christina, et al. "Unweaving the Web: An Exploratory Study of Low-Literate Adults' Navigation Skills on the World Wide Web." *Journal of Health Communication*, Volume 7, pp. 309-324. (2002)

- ◆ Reports findings of a study that examined the content and navigation-related barriers that low-literate adults face online.
- ◆ Discusses how tasks like searching, linking, scrolling, spelling, and others required for Web activity can present challenges to this population.
- ◆ Offers nine specific recommendations of how to design Web sites to address the usability challenges often encountered by low-literate adults.

Multilingual

Chu, Clara. "See, Hear, and Speak No Evil: A Content Approach to Evaluating Multicultural Multimedia Materials." *Reference & User Services Quarterly*. Volume 39, Number 3. (Spring 2000)

- ◆ Points out that because the bulk of multimedia material is produced in English in the West (especially Web materials), scrutiny must be used when evaluating it for bias.
- ◆ Includes a literature review of works that deal with evaluation of multicultural materials, which primarily focus on identifying racial/ethnic bias and sexism in the illustrations and text of print-based materials.

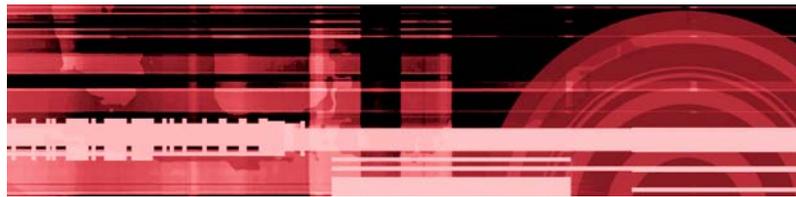
- ◆ Introduces a “conceptual” approach to evaluation criteria, which focuses on four elements:
 - Content objectivity;
 - Language use;
 - Subject mastery; and
 - Resources.
- ◆ Concludes that there is not a significant amount of multicultural multimedia available now, and educators and others must continue to advocate for high-quality materials with cultural integrity.

Hutchins, W. John. “Why Computers Do Not Translate Better.” (November 1991)
<http://sirio.deusto.es/abaitua/konzeptu/ta/hutchins91.htm>

- ◆ Distinguishes between systems that translate complete texts without human intervention, and those that rely on human assistance to clear up ambiguities.
- ◆ Provides detail on the various components of machine translation, including methods of analysis and transfer, specific words, morphological analysis, syntactic structures, and semantic roles and features, and describes the problems encountered by machine translation.
- ◆ Notes that since ambiguity, homonymy, and alternative structures comprise the major problems with machine translation, limiting the amount of choice within the text can ensure a better translation.

Kay, Martin. “Machine Translation.”
<http://www.lsadc.org/Kay.html>

- ◆ Traces history of machine translation from the 1950s through its resurgence in the 1980s and today.
- ◆ Lists the many factors that pose challenges to machine translation, including words with more than one meaning, sentences with more than one grammatical structure, and ambiguity about a pronoun’s antecedent.
- ◆ Notes that some have reported success with machine translation when the language is very limited and used in prescribed ways.

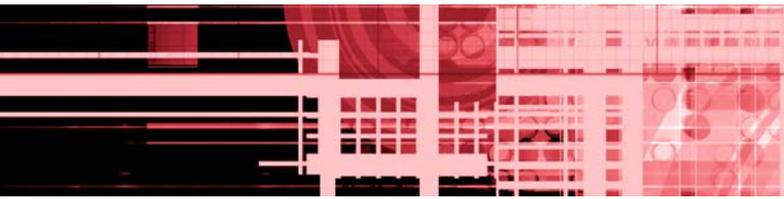


Napier, Marieke. “The Soldiers Are in the Coffee: An Introduction to Machine Translation.” *Cultivate Interactive*, Issue 2 (October 16, 2000) <http://www.cultivate-int.org/issue2/mt>

- ◆ Makes the distinction between unassisted machine translation and assisted machine translation.
- ◆ Notes that successful machine translation is difficult, and issues like idioms, sentences with complex structures, and words with multiple meanings present challenges.
- ◆ Argues that the future of machine translation is unclear, but the growth of trade internationally and increase in the presence of machine translation online suggest that interest will continue and more products will become available.

The work being done by researchers and linguists at universities around the world can provide additional information about the efforts to standardize quality assessments of language translations. For more information, see these sites below:

- ◆ <http://www.helsinki.fi/~chesterm/TransTheory.html> (University of Helsinki);
- ◆ <http://www.letras.up.pt/translat/abs/chén.htm> (University of Newcastle upon Tyne);
- ◆ <http://www.hum.port.ac.uk/slas/confprog.htm> (University of Portsmouth);
- ◆ <http://www.les.aston.ac.uk/isls220303.html> (Aston University); and
- ◆ <http://www.stjerome.co.uk/translator/vol6.2.htm> (*The Translator* journal).



Privacy and Consumer Issues

Cranor, Lorrie Faith, et al. "Beyond Concern: Understanding Net Users' Attitudes About Online Privacy." AT&T Labs-Research Technical Report. (April 14, 1999)
<http://www.research.att.com/resources/trs/TRs/99/99.4/99.4.3/report.htm>

- ◆ Presents the findings of an analysis of questionnaires from Internet users about their concerns regarding online privacy.
- ◆ Explores in detail the ways users experience privacy concerns.
- ◆ Discusses the technical, policy, and business implications of the study's findings.

"How Do People Evaluate a Web Site's Credibility? Results from a Large Study." A Consumer WebWatch research report, prepared by Stanford Persuasive Technology Lab. (October 2002) http://www.consumerwebwatch.org/news/report3_credibilityresearch/stanfordPTL_abstract.htm

- ◆ Presents the results of a study about what elements on Web sites are most effective in grabbing and holding users' attention and gaining their trust.
- ◆ Notes that less than 10% of participants referred to the identity of the site or site's sponsor, and less than 1% referred to a site's privacy policy to determine a site's credibility.
- ◆ Points out that instead, over 46% of participants looked to the site's more superficial features, like design, layout, and use of color and fonts.

"A Matter of Trust: What Users Want From Web Sites." Results of a National Survey of Internet Users for Consumer WebWatch, conducted by Princeton Survey Research Associates. (April 16, 2002) http://www.consumerwebwatch.org/news/1_TOC.htm

- ◆ Analyzes the results of a survey of 1500 adult Internet users about their perceptions of the credibility of online information and e-commerce, as well as what they expect of Web sites.
- ◆ Reports that users have different perceptions of credibility for different types of sites, with only 29% of users trusting Web sites that sell products or services.
- ◆ Concludes that although many users express concerns about trust online, many still give out personal and credit card information to sites once trust has been established.

"Trust and Privacy Online: Why Americans Want to Rewrite the Rules." Pew Internet & American Life Project. (August 20, 2000)

<http://www.pewinternet.org/reports/toc.asp?Report=19>

- ◆ Presents the results of a survey of 2,117 Americans about their attitudes about online privacy and trust.
- ◆ Notes that despite users' concerns, many still engage in trusting behavior online, and most have not experienced problems.
- ◆ Highlights that a substantial number of users are unaware of some basic privacy issues and do not use tools to protect themselves.

Usability

Bernard, Michael. "Criteria for Optimal Web Design (Designing for Usability)." SURL: Software Usability Research Laboratory, Wichita State University. (Updated March 30, 2003) <http://psychology.wichita.edu/optimalweb>

- ◆ Emphasizes the importance of understanding human psychology when designing Web sites.
- ◆ Uses extensive research to make recommendations about how Web sites can be designed in a way that is most helpful to users.

Lynch, Patrick J., and Sarah Horton. *Web Style Guide, 2nd Edition*. "Interface Design" chapter, User-Centered Design section. (2002)
<http://www.webstyleguide.com/interface/usercentered.html>

- ◆ Points out that users expect a level of sophistication in Web site design, and the goal of site design is to remove any barriers that the interface puts in users' paths.
- ◆ Notes that a lack of clear navigation aids is the biggest problem with most designs.
- ◆ Illustrates that information hierarchy should be designed to minimize the steps it takes to move through pages and that simple and consistent navigational interfaces often work best.
- ◆ Includes examples of sites with successful interfaces.

Nielsen, Jakob. "Top Ten Guidelines for Homepage Usability." Jakob Nielsen's "Alertbox." (May 12, 2002) <http://www.useit.com/alertbox/20020512.html>

- ◆ Explains that a site's home page is its "face to the world" and the starting place for most visitors to the site.
- ◆ Emphasizes that the home page is the single most important page on most sites, and thus the usability of the homepage is key.
- ◆ Outlines 10 ways to improve home page usability, divided into four main categories of recommendations: make the site's purpose clear; help users find what they need; reveal site content; and use visual design to enhance, not define, interaction design.

Intersections

Berland, Gretchen, et al. "Evaluation of English and Spanish Health Information on the Internet." RAND (2001) <http://www.rand.org/publications/documents/interneteval/>

- ◆ Establishes that the Internet is an increasingly important and influential source of health information to the public.
- ◆ Outlines the three questions addressed in a study examining the quality of online health information:
 - How well search engines locate health information;
 - How comprehensive, accurate, and current the information online is; and
 - What literacy level is required to understand health information online.



- ◆ Discusses key findings of the study:
 - Search engines are not efficient tools for locating health information on a particular health topic;
 - Consumers often find incomplete answers to important questions; however, the information is generally accurate; and
 - Most Web-based health information will be difficult for the average consumer to understand.
- ◆ Makes recommendations to consumers, consumer advocacy groups, health care providers, providers of Web-based health information, policy-makers, and regulators.
- ◆ Concludes that a key challenge is the extent to which the market will reward those who provide high-quality information.

"Many People Find Internet Information Difficult to Understand." University of Iowa Health Care News (2001) <http://www.uihealthcare.com/news/news/2001/07/23healthinformation.html>

- ◆ Discusses results of a study carried out by the University of Iowa and funded by the Robert Wood Johnson Foundation: the study shows that online pediatric health care information was written at a 12th-grade reading level, on average, much higher than the reading level of most Americans.
- ◆ Lists six specific recommendations to improve the readability of pediatric health information on the Internet.



Nielsen, Jakob. "Kids' Corner: Website Usability for Children." Jakob Nielsen's "Alertbox." (April 14, 2002)
<http://www.useit.com/alertbox/20020414.html>

- ◆ Discusses the results of usability testing conducted with a group of children ages six to 12.
- ◆ Outlines the primary problems in usability that caused difficulties for the children.
- ◆ Addresses the main difference between children and adult users, as well as differences between boys and girls.
- ◆ Offers general recommendations for designing child-friendly, usable sites.

West, Darrell M. "Urban E-Government, 2002."
(September 2002)
<http://www.INSidePolitics.org/egovt02city.html>

- ◆ Analyzes and compares over 1,500 e-government Web sites from the United States' 70 largest metropolitan areas.
- ◆ Describes evaluation criteria used in the analysis including the level of privacy and security, accessibility to users with disabilities, whether any fees were required, languages in which content was available, level of services offered, and availability of contact information, among others.
- ◆ Makes recommendations for how cities can improve their e-government services.

Zarcadoolas, Christina, et al. "Unweaving the Web: An Exploratory Study of Low-Literate Adults' Navigation Skills on the World Wide Web." *Journal of Health Communication*, Volume 7, pp. 309-324. (2002)

- ◆ Reports findings of a study that examined the content and navigation-related barriers that low-literate adults face online.
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