

Internet Credibility and the User Symposium

Symposium Chairs: Michael B. Eisenberg, Dean of the Information School, University of Washington, Seattle, Washington; Rick Weingarten, ALA Washington D.C. Office, Kathy Im, MacArthur Foundation

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Location: Marriott Waterfront, Seattle, Washington

Authors and Responders:

Skills

Mary Ann Fitzgerald

Miriam Metzger

Respondent: Delia Neuman

Institutions

Carolyn Brodie (co-author with Greg Byerly)

Greg Byerly (co-author with Carolyn Brodie)

Susan Curzon

Kristin Eschenfelder (focus on government)

Respondent: Nancy Willard

Tools

Batya Friedman

Jonathan Lazar

Respondent: David Lankes

Monday, April 11, 2005

Rick Weingarten – ALA Director of the Office of Technology Policy

Welcome, introductions, and agenda

Rick Weingarten opened the symposium by giving a brief history of the ALA Washington Office for Information Technology Policy (OTIP). The office researches technology, information and what they mean for libraries in general.

Thank you to the MacArthur Foundation for their input and generous donation. They provided a valuable combination of support and interest.

The OITP actively reached out for as many different approaches and styles as possible for this symposium. The papers offer diverse approaches to the topic of Internet credibility and the user.

The first area of focus is to talk about the users. With this in mind Symposium planners gathered input from all disciplines to get a better picture.

Mike Eisenberg - Dean of the Information School, University of Washington

Start out with introductions.

Mike related a story that occurred recently. Last year he suffered a heart attack and not long ago when to a check up with his physician. The doctor informed him that his heart “injection fraction” was at 40% and “not where they wanted it to be.” Mike asked the doctor to explain the measure. The doctor was unable to. Mike was alarmed considering that 40% implies that 100% is best and that his heart was functioning, according to this test at 2 fifths its capability. He began searching for information on “heart injection fraction” and found little and what he did find was unsatisfactory. With this in mind he designed an exercise for the group. (Please see attached exercise handout). The exercise consisted of questions related to “heart injection fraction” and credibility of information found online. Each group was given three website to search in order to find the needed information the sites were analyzed for signs of credibility and accuracy. Of the three sites; The American Heart Association, HeartInfo.com, and Consolidated Medical Information, the later was a complete fake. The site was created specifically for the symposium and contained a mixture of information, some correct, some altered, and some entirely fictitious.

The discussion following the exercise focused on how we determine credibility. The fictitious site, ConMed, contained spelling errors that tipped many participants off on its questionable content. Some participants were skeptical once they read, in the “About Us” section of ConMed that the content was chosen, in part, by graduate students. They felt that this indicated to them that the information was not authoritative.

Elsbeth Revere - Director of General Programs for the MacArthur Foundation

Elsbeth began by talking about how the MacArthur Foundation got involved with the symposium. Given the fact that a digital revolution is occurring the MacArthur Foundation asked what a private organization like theirs could do. The initial focus was on intellectual property and the public domain. This focus widened to question how people understand the information they get online. How do they determine if its fact or fiction?

She met with Rick Weingarten to talk about how to move forward.

She concluded by mentioning the physicist Maury Goodman who stated that “Information bring understanding and understanding brings wisdom.”

**Miriam Metzger - Associate Professor, University of California at Santa Barbara
A Conceptual Overview on Internet Credibility and the User**

Credibility research is related to rhetorical studies and psychology. The terms defined by Aristotle;

- ethos – the character of the speaker,
- logos – logic or reason, and
- pathos – persuasive appeals based on emotion apply to credibility.

In the 20th century psychologists became interested in the use of persuasion. This interest was initially directed at living individual but morphed into the use of persuasion in the media; radio and TV. This shift was spurred on by World War I.

Metzger referred to Haveland at Yale University who states the source of credibility is in the eyes of the audience.

Professional concerns with credibility came as a response to television. Concerns of media credibility appeared with an assumed threat of television to newspapers. Credibility was looked at across different media. The more people rely on a certain form of media the more they think it's a credible source. Internet credibility is the newest addition.

Questions surrounding Internet credibility are academic as well as commercial concerns. They are issues of trust. This conflates source message and credibility.

The definition of believability from the perspective of the information receiver comes from Haveland. It is made up of 2 primary dimensions.

- Trustworthiness
- Expertise

In addition to these; physical attractiveness, dynamism and information quality

The above include objective and subjective components. Expertise can also be subjective and dependent on the receiver.

There was a reemergence of credibility research in the late 20th century. Pre-Internet, the cost of being an information provider was high. The cost of putting information out there was high and the number of information providers was limited. As costs went down the number of information providers and producers went up.

In this model there are fewer gatekeepers. The information online is hard to regulate. Who oversees the Internet is an important question.

Digital information can be altered easily and the commercial nature of the Internet brings issues of trust to the fore.

Metzger mentioned Burbles (1984) who stated that the Internet creates a psychological leveling by making us think that all authors are on the same level. People tend to forget where they get information but it hasn't been researched if people tend to forget the origin of the information more quickly if it comes from an online source than if it comes from text media, radio or television.

There is no universal on what determines if something is credible. With this in mind how do we describe something with so much variability?

How do we measure credibility?

- Medium
- Forms of communication; blogs, email, etc.
- Entire site design
- Information messages on the site
- Sponsor or operator
- Author of the site

Types of online credibility

- Surface – quick visual inspection and design
- Presumed credibility – doctors are trusted more than “car salesmen”, .com versus .edu sites
- Reputed credibility – awards; eTrust stamps, awards from industry journals (PC magazine)
- Earned credibility – repeated positive experiences

Types can be measured at different levels.

What makes a website credible?

There is a laundry list of what makes websites more or less credible. Most of these have been tested but not all of them.

The lists are made with the help of user studies. This is basically an iterative process that involves designing and then going to users and asking if their right.

The elements of web credibility

- Site features
- Information on the site
- Author features
- Users

It is important to form partnerships with policy makers, information schools and important for information schools to inform the work at the OITP.

Tuesday, April 12th 2005

Mike Eisenberg opened the meeting with a plan for the symposium. We would start with the Skills papers, move on to the review and discussion. After that we would move on to Institutions and lastly discuss Tools.

SKILLS

Presenter: Mary Ann Fitzgerald – Skills for Evaluating Web-based Information

Critical thinking skills are crucial to evaluating web-based information.

Mary Ann told a story about her daughter. Her daughter heard a rumor that there was going to be a draft and that it was going to include girls. Her daughter is 19 years old and attends Mill College, a private girls' college in Georgia. She discovered that the rumor was actually a ploy being used by the Democrats to show the ridiculous nature of reinstating the draft. She found this information by going to the Federal government pages. The open Internet did not help her give authoritative information.

Looking back to the OJ Simpson trial its clear how many different stories were being told on television and in the media.

In order to focus on skills we have to work with the users to get them as savvy as possible. Most studies of kids show that the need to know can be generalized and that the motivation is huge.

Much depends on the goals the user has when looking at a website.

Referring back to the exercise from Monday night, it was relevant but the problem was not our problem. Research involves imposed questions on imposed situations unless the interest in the information comes from the user.

There was a rumor about Terry Schivo that asserted her heart attack was because of her eating disorder. Doing simple search based on this Mary Ann found that about 75% thought there was a connection. For Mary Ann that was good enough because she wasn't that interested. However, finding out about her father's cancer and potential medicine and care available motivated her strongly to find information: the right information. It's difficult to remove searching and observing searching behavior from motivation.

The epistemology of what you believe to be a source of authority is an important determinate that varies though out one's life and the more this is studied the messier it becomes. What we can do?

We can teach about criteria necessary to determine what is authoritative and that the user has the power to choose their own criteria and strategies. We can teach kids to do this.

This needs to happen in the beginning. We need to be aware of what switches us from being a casual user/observer to saying, "Hey, what about this doesn't seem right." We need to know what throws us into critical mode.

Most children can do that when asked. We need to show them misinformation and to alert them to what it looks like. Unfortunately once you show misinformation that's what tends to stick in peoples minds.

Referring to page 13 in her paper, literacy assumes that everyone can read and write. Studies are showing that the level of literacy in the US is going down.

We need to be able to determine what information matters and if we are going to be making decisions based on this information. Awareness that misinformation is out there must also be balanced with respect for authority. Awareness and a broad knowledge of a topic is important as well as the recognition that everyone has a bias. It is important to remember that affect plays an important role

If we can identify cognitive signals that there might be something wrong we need to stop and pay attention to that. Argument and logic skills aren't taught much anymore but are valuable tools for identifying credibility.

Discussion

Q: Are there different skills necessary for the Internet? What are the critical skills for the Internet?

Mary Ann Fitzgerald: 80-85% of traditional library skills work on the Internet, analyzing speeches, TV, radio, etc...Convictions and beliefs are not always recognized as biases. This is the case not only in children but also in adults.

For example: Evolution and global warming

Q: The scientific approach questions everything it is skepticism. You begin to question everything...

MF: "I'm okay with that."

Q: Has there been evaluation of children's abilities? Are they changing? In 1981 children were not as likely to multitask...

MF: On the whole we can stand by what is in the literature. I don't see things getting any better. Children aren't getting more critical and verifying information.

Q: What makes the Internet theme special from ferreting out what is true or not true?

MF: The gatekeeper issue is key, now that does not necessarily happen, but it is a key pivot that has changed the most.

Mike Eisenberg: Does the Internet fundamentally change things? Mary Ann's point is that it is different but not fundamentally so. The gatekeeper issue does change; though we don't all agree on this. We can hold the discussion till later.

Q: To what level have we researched credibility of informal information networks? What is the credibility of the group you're communicating with; friends, blogs, etc... In a study of sexual predators half of those studied felt they were in love with the predator. That's a credibility issue that true love exists in these online relationships. We have peers who are encouraging suicide, hate, etc.....

MF: Not a huge portion of that kind of thing being studied.

Greg Butler: The Internet may have added to this but it has always happened kids have always gotten information from kids.

Louis Fox: There is also high value. People are interacting with information. In the interaction knowledge is being created.

Betty Marcoux: In my study of migrant workers, trust was at the top of the list for credibility. For kids it was trust that parents put into the center; the authority of their parents telling them something was credible.

Jonathan Lazar: There is also the issue of email versus web pages, credibility is put in more question in the case of email. Adults are more skeptical, they tend to filter more.

MBE: Is that research supported?

Eliza Dresang: There is the example of the Sun Trust Bank email scam in Florida. Mostly lawyers and academics were getting trapped in it.

JL: Adults know about the potential of a scam more than kids which doesn't mean that adults always evaluate.

Miriam Metzger: Children are more trusting and will to share

MBE: We need to be careful about whether this is our own opinion or if the information we're giving can be cited.

Rick Emrich: As a group we were more critical than anyone of us would have been as an individual. (Referring to the exercise from Monday evening.)

MF: People are persuaded when the group...Albert Gunther at Wisconsin did some research on this...online communities and the credibility of online group credibility...

Jacquelyn Burkell: Interpersonal credibility and social psychology literature show that a key to teaching learned skepticism is to think about it at different levels. How do we get to the specific issues? We need to ask different questions for different electronic sources.

MBE: Also for development levels...

Allison Druin: We need field studies. We need to change the methods that we're using. You aren't going to see kids multitasking in a lab. We need to observe CSCL (computer supported cooperative learning) as it happens.

MF: There is definitely a need for new methodology. People will never be able to show exactly what's going on in their heads or tell the whole truth.

JL: In some cultures is not okay to question adults. How do we deal with that? It's not always okay to challenge authority.

Elsbeth Revere: Public school cultures do not encourage debate and confrontation.

MF: Teaching authority and ways to question authority is double edged.

BM: It's a learned behavior and then you start to lose it. It's a bell curve. It will be interesting in the future see how the senior generation will with this.

Presenter: Miriam Metzger - Understanding How Internet Users Make Sense of Credibility: A Review of the State of Our Knowledge and Recommendations for Theory, Policy, and Practice

When looking at skills we have to ask an important question:

Are these new or different skills?

The skills haven't changed, but the need to apply those skills has changed.

There are five common criteria:

- Accuracy – appearance this information appears to be correct
- Authority – source credibility author credibility
- Currency – how up to date
- Coverage – scope
- Objectivity – purpose of the site

This is known as the checklist model for looking at credibility. The problem is that people don't really go through the check list.

Other models include:

- Cromwell model...looking at different levels

- Contextual model for website credibility
Fee based web versus free web

Q: Is that the same as invisible versus visible web?

MM: Yes, no subscription services.

Q: Is this from the user perspective? Many users aren't aware if something is fee based.

MM: Meola found that we need to educate people about what is available rather than teaching them a checklist for credibility. If we want people to use these resources we have to make them as user friendly as Google. We could do this by promoting peer reviewed or edited articles, comparing information, and a final technique; cooperation-pulling up a couple of websites and then maybe a book then compare and contrast sources.

David Lanke: Knowing that xxx is a reliable resource implies giving someone the skills to identify a reliable resource.

MM: The relationship of identifying the author or the checklist is questionable at best. If you look at the checklist items - those markers are not associated with quality. If something is current doesn't mean it's credible and in practice they do not. Bad information can meet all of those criteria. This has been researched. Religiously applying the checklist doesn't guarantee good information.

The authority of the organization may be on the checklist and they may have good information but it might come up on the website.

DL: Credibility versus surrogates of credibility. When we talk about skills, how do we teach recognition of the surrogates as skills?

Debra Tatar: I'm concerned that we're being forced into a worldview where there is accurate or inaccurate information. Maybe we need more models, more relations.

JL: Giving short evaluation lists are still better than what users generally use, which is appearance.

Kristin Eschenfelder: Maybe we need a gradient.

Nancy Willow: Sexual education sites that promote all abstinence for example. The creator of this site is a very conservative organization and the site passes all of the items on the checklist...

Susan Curzon: It's important to remember that credibility also means reliability.

Robert Stonehill: There are not sufficient conditions but there are a lot of necessary conditions that need to be met.

AD: If this was easy there would be a lot of tools already available so it's a good question.

ED: If there is a profound difference in our society now, what about collaborative learning? It may be the way people ultimately establish credibility now.

MM: There has been a disconnect between research and practice surrounding this issue. There has also been a disconnect between theoretical models and what people really do. Methodology is the key and motivation is a huge part of this and it is understudied. The time is right to step back and look at motivation.

A lesson to be taken from checklist models is that its important to make any practical teaching recommendations really simple. There is the "business card" approach for example. Teaching people different strategies that take different levels of effort then people can choose what they want to use - a sort of "sliding scale approach."

RS: Right some kind of a fact check...definitions or a factoid...where does the interaction between the search and the action take place?

Carolyn Brodie: We go back to the places where we've had or found credible information in the past.

Eva Marie Lacroix: If all of the information has been written by professional and doctors, the Mayo clinic for example does a great job of this ...

JL: One thing to consider. We want to convert the information so that the average person can read it. Users really hate to see information for doctors, information for patients; people don't want to see that. It seems to imply that the information is different or that the patient/user is stupid.

MM: There are definitely classes of information that we can't worry about but there are many that we can.

NW: There is also the degree of controversy over a particular subject. We need to teach kids to think about that. You will find differences of opinion in things that are controversial.

DL: Susan said...credibility, reliability; validity...is it that reliability and validity are parts of credibility?

SC: What I was addressing is what exactly are we going after? As we struggle with the terms what exactly are we struggling with?

MM: Validity: things that appear to make sense.

DL: We can operationalize credibility and validity.

MBE: We need to be careful about teaching it, just because it's better than nothing.

KE: Information, that is clear a fact. Information that if we did a good job of applying the skills needed to determine credibility we could be pretty sure about it and information that we can't be so sure about.

MM: Recommendations or maybe a website coming out of this symposium, where people can go and find information on credibility. Think of the "Jayson Blair thing?" (New York Times reporter who falsified his stories). We also need to get the word out through popular press

There are seal programs; the Truste seal for example, capitalizes on the fact that we are kind of lazy. If it is possible to develop something along those lines it would go along way.

JB: What people think the seal means is that it's accurate. But in reality the seal only means that the site does have a privacy policy. It doesn't matter what the policy says.

MM: There is the HON code: "health on the net," as well as credibility rating systems, peer vetted resources, PICS labels specify levels of credibility, med picks...works by labeling health info by key interest groups.

It is the issue of peer review. In the end all these other tools or systems are viable or not viable and we are left with the users themselves.

For example, eusers.com sites like these are helpful even though if we understand that they sites may be biased. If there are enough people that rate something it may be good.

There is the Slash.org moderator role which is a type of peer review with safe guards and moderating. eBay has reactions to transactions and interactions.

Carrie Lowe: eBay shows the importance of motivation. You want feedback about your credibility, seller rating, and so on.

Break till 11:15

SKILLS

Respondent: Dalia Neuman

There were common themes and disparate ideas in both papers.

1. Internet credibility is an important issue; a sort of Holy Grail. But the world doesn't see that as an issue at all. We've just come out of an election season where this has been an issue. Both sides cared very little about credibility of information when it came to going to the polls.

Questions I pose: (see attached handout)

How does user assessment play out in the larger sense are they the same or different?

2. The sheer complexity of the issue each author underscores this repeatedly. It is interesting to note that only 6 of the citations of all the citation listed between the two authors are in common. And one of those was given to the participants by the symposium organizers.

3. Both authors stress how little we know. What do studies of elite groups tell us about the users that go to the library sit at the computer terminals?

Can we do anthropological interpretive work in a field that demands scientific work? The work is still suspect and if we can get it funded will it remain academic, relevant only to us but not to the users at large? Petty and the Walton and Burrell models are mentioned by both authors.

I have my own bias toward interpretive qualitative research, but are there other ways: perhaps, a combination of qualitative and quantitative research?

Schools need to teach the concepts of information literacy. Mary Ann suggests educational strategies. How can we devise formal and informal ways to help people become successful in judging credibility? For years people have judged books by their covers and the world has not yet collapsed. Should the responsibility fall to us as individuals?

How can we design, develop and implement teaching for credibility?

Each author talks about motivation and mention that some information is not important enough to question its credibility. Mary Ann Fitzgerald called for a sort of evaluation "on" switch and Miriam Metzger, a sliding scale of need to determine credibility.

We need to ask; to whom, for what purpose, in what context and in what degree, what beliefs, perceptions and characteristics of users.

Information power and building partnerships for learning defines information literacy as the ability to access, evaluate and use information from various sources for various purposes.

How can we tie our models and our research to the questions of credibility to the myriad ways users seek to use information.

I would like to commend the symposium for starting with users because with the user is where the symposium starts and where Internet use ends.

Discussion

KE: We need to shift our research to how contextual issues like group membership effect how people perceive information.

DL: There seems to be some confusion in terminology. There is the notion of credibility being complex in the way that someone uses a complexity theory. We can do isolated studies to look at this. We can look at complexity and patterns. A lot of the Internet is text driven. You can look at blogs and web logs and compare frame by frame. People don't do validity. They do credibility. We need to get extraordinarily precise to do research in this area.

SC: I'd like to pick up on third point. When we first started looking at credibility, by asking people how they search, then we started following students around the library, but throughout this it's still really hard to know what's going on in people's heads.

DN: Our research methods are lacking. Think out loud techniques change what you're studying because verbalization changes the process. Observation works better but we need better methods and more study so we can aggregate what we know.

AD: It goes back to research methods. It's going to need to be this combination: the users are going to get us a little way and the tools will too. But the funding is probably going to come from the tools side. We need meta-tools and these will have to be a combination.

DT: I'd like to go back to where we started and Mary Ann's mention of motivation. A lot of that type of work requires explanation that doesn't happen in psychology. But when you design you do need to know about it. Problems as models, Clark's version of psycholinguistics, where communications are not uniform, but points in time that are interesting. There is not nearly enough focus on design.

The amount of funding required to combine qualitative and quantitative work is substantial. In order to get to the position to do quantitative work you have to do tons to qualitative work. You need to build up the pieces of knowledge you need to do quantitative work. We need to proceed with caution because when you make a mistake or fail in quantitative work you don't add anything to the knowledge. Pew reports for example are problematic.

MM: The problem is complex and needs a multi-method study. As a person who does quantitative work, I recognize that we need the qualitative base.

NW: We need to be sensitive to the social and political framework in which this issue is being investigated. We have faculty that are focused on facts as opposed to revelation.

We need to ask if there is there an agenda. Is credibility about trying to pull people up to make decisions based on fact instead of revelation? If want to teach children to be critical thinkers we are flying in the face of a very strong movement that does not want that and wants to maintain belief in revelation.

DN: If people wanted to believe that Kerry's heroism is a lie or wanted to believe that G.W. Bush found a way out of military service, in this case it is important to ask is credibility the right word to discuss.

MM: Evaluating information by taking more than one piece of information into account is something that the ALA can and should do and we should take an "elitist"

MBE: or "leadership" role.

MBE: I'd like to summarize this discussion.

We discussed what exactly we're talking about related to the Internet? Are we just talking about the web, email, blogs? Are these fundamentally different?

Then we talked about kids, the nature of the group and the role of group in credibility validation. On the methodological side, we talked about qualitative studies, field studies, and the importance of natural settings.

Cultural differences-institutions, school, political cultures and their effects on questioning practices

Question of proxies and surrogates: lists are surrogates for attributes of quality, we look for the "right" one and then we could move on but that's not happening.

Kids aren't necessarily motivated to look for quality or credibility.

There is a full spectrum of users that we can talk about as well as a full set of tools.

Cerise Oberman: There is a disconnect between the research on the user and practice.

INSTITUTIONS

Presenters: Carolyn Brody and Greg Byerly - Internet (and/or Institutional) Credibility and the User

We'd like to start with some observations and recommendations: (see hand out from symposium)

- 1) Some institutions will resist change but they will change.
- 2) Libraries are in trouble
- 3) The researchers must be abreast of what the users are looking at.

Children users often come to us with things we have never even seen!

- 4) Blogs change hierarchy of grading
- 5) Internet ignorance is real. I'm not worried about information until I need it and then it's a matter of how much time I have to get it. We don't have any clue sometimes what information users need.
- 6) OCLC E-Scan

Self-service is important...self-sufficient...satisfaction...seamlessness. Users expect to get everything with one search

- 7) We need to look at groups and communities and how institutions look at them. Its about contact and being anywhere at anytime.
- 8) People may pay for credible information. The users are going to figure out in a community and collaborative way to do some of this credibility work for themselves.

13) It may be possible in the future that some company may say they have solved the credibility problem...therefore there could be a something that through the government is instituted like CIPA

We agree with Delia Neuman, it begins and ends with the users.

We see this as an opportunity to come up with something that works; whether its research, policy, or practice.

Discussion

Batya Friedman: What aspects of Google should we pay attention to?

GB: The S's; self-sufficiency, satisfaction, seamlessness

CB: We have to recognize the popularity of Google. In Ohio, when the major bookstores came into our communities our libraries and children's programs were suffering. We looked at what they were doing that we weren't.

JL: The secret of Google is the interface. All it does is what it's supposed to do. It's easy it does all the "S" (self-sufficiency, satisfaction and seamlessness) things. Think about scholar.google.com, it's something new that we didn't have in previous tools; Google print, Amazon A9.com (uses Google).

ER: They are committed to figuring out what users want and giving it to them.

AD: Google is not good for kids. We've had discussions with them. The spelling features for example are very hard for kids.

ER: They will try and figure it out.

MBE: We're talking about institutions and not tools. Which part of Google are we discussing? My question is...I want to focus on institutions. What other institutions have a responsibility or a role here? Do churches, mosques?

DL: The role of institutions as mediators or surrogates is clearer but what is it from a credibility perspective about Google that brings users from different institutions to Google? Do I care how an organization is structured, its mission or do I care about how the user uses it...what is it about an institution that speaks to the user at the level of credibility?

GB: What Google can do, they can do it well.

SG: The US Department of Education is not going to worry about what we do or don't do with our information. To them it's a business model. "Give me the tools to become more efficient and effective and let's not worry about the information part of it."

DL: Does it make sense to look at how or what the users get out of the institutions?

BF: These are all much more interconnected issues. Google has made commitments to how it commits to use; user consent. They have made specific decisions and users come to Google based on their organizational decisions. What other pieces can we not solve by user studies and teaching skills? What is important is that broader interconnected and organizational piece.

MBE: Google hasn't done a lot for credibility.

BF: I beg to differ. Google has made a specific decision to separate out ads from their content. They're setting a standard. They're making a set of commitments that put pressure on everyone else.

BM: Branding and provenance. Google is very comparable to the word Kleenex. Are we not looking at things in the reverse? Could Barnes and Noble be taking from the library model?

RE: One thing to think about with Google, why don't we talk about AltaVista? Is it ads? No. Is it a simple interface? What makes Google different? Google's search engine relies on how users are using the information. If there are a lot of links to some information it goes to the top of the list. That behavior is reflected back in the search engine. It's a mark of an institution responding to user need and behavior.

GB: Not quality but quantity was an initial draw to Google.

ED: I'd like to bring up an institution not mentioned in the papers: virtual schools. There are 20,000 enrollments this year in virtual schools; 500 virtual schools out of 12 charters. Within these we don't have anyone that would be considered the librarian or even the mention of library. Is there something that replaced brick and mortar libraries? Nothing is

really simulating a library. Where are the students and how are they doing their research? The teachers give them a list of the websites. Some are part time and still go to regular school, so where do they get information? In Florida we have the “ask a librarian” program and find that a lot of those students go to them for research and information.

MBE: Washington virtual schools have a very extensive library component.

MBE: It's time to break for lunch. Things we still have on the table:

What about institutions?

What effects institutions?

What can institutions effect?

What's the relation of the Google to credibility?

Tuesday 12th April 2005 Afternoon Session

Presenter: Susan Curzon - Internet Credibility: Seven Teaching Challenges

Scale and accessibility of information on the web are main issues. How can we begin to resolve this problem? Mass education around information skills is one possibility. I have outlined 7 teaching challenges and as more students are educated over time we would have an increasing number of users who possess critical information skills.

- 1) - Developing the educational strategy – information skills have to part of the strategies for the institutions. Information literacy is somewhat on the margins. By and large it doesn't penetrate the entire university curriculum.
 - a. Aligning information literacy with critical thinking. Earlier librarians had to push it back because faculty was saying that they were already covering it but in fact there are special critical thinking skills for libraries and information
- 2) – Educational structure – tests and tutorials, learning outcomes, assessment; information and communication technologies (ICT) testing, through ETS, entrance and exist standards...We need to know what the standards are. Research needs to be done on the best way to determine credibility. Is there one way or is there a combination. What is the best way to teach? Take standards of information literacy and take them into different disciplines.
- 3) Teaching the teachers- unless teachers at all levels are versed in information literacy we can't expect them to teach it...first, teacher credential programs – ALA should partner with organizations to develop credential programs.
- 4) Gaining accreditation support - we have to develop a national strategy that includes information literacy.
- 5) Resolving allied issues - people hear information literacy and think computer literacy - Plagiarism is also a really big problem. It would help it if was ratcheted up to a higher institutional level.
- 6) Cost benefits analysis - costs, times and something extra that needs to be added
- 7) Increasing librarian and teacher collaboration - who owns information literacy? Faculty controls the curriculum. We need make sure students coming out of LIS

programs really understand curriculum development. Make it a part of ALA accreditation.

Questions we need to ask:

- What are the key decisions?
- What are we really trying to do?
- What is our real level of commitment?
- How do we know when our society is information literate?
- How do we sustain such a large scale effort?
- How can national policy be influenced to support information literacy?

For the good of the individual, they need to be good consumers of information.
For the good of society, we need to be good consumers of information.
As information professionals and librarians we need to take an active role.

Discussion

France Harris: How do you test for something that is so contextual? Legislatures say show us the scores, but it's so contextual how do you show it?

SC: We must show something. Without assessment of some kind we will never have attention from university administration and leaders.

Greg Butler: The real opportunity is to think about performance based assessment. Using the power of technology to give feedback and make corrections on the fly. Current legislation requires that kids need to be technology literate by the 8th grade. We engaged the technical supervisors to push to be more informative and developed a free tool with ISTE (?) There is a dearth of formative studies done in this area. We developed a tool for teachers to see where kids are at the beginning of learning and end of learning.

The technology is there to do performative performance based assessment.

NW: For school administrators literacy skills are at the same level as the technical skills but they are below the concern they have with curriculum.

Greg Butler: The challenge we face is the idea of one size fits all. But how flexible are organizations at implementing this?

DN: ACRL standards are there. K-12 building blocks are there. "Information power" and information literacy standards from study head by Betty Marcoux are there. The school librarians in the room probably are well aware of this but the high administration people probably aren't. We need communication across the levels of academia.

K-12 still face the problem that the skills don't appear anywhere in the "No child left behind" act. It is an institutional barrier.

SC: What I am going for is something like a K-masters degree. A completely cohesive integrated approach - there are many approaches we need to agree on one.

MM: There is a gap between librarians and faculty.

CO: Use the power of accreditation bodies to make that happen. Accreditation is dealt with at the faculty level so having it be a part of accreditation it will get accomplished. Middle State institutions have taken this farthest.

ED: Assessment issues are not something I usually react positively to. I looked at a sample from ETS similar to the exercise we did yesterday. Maybe assessment is a way to get attention - how ever much it misses. Who would take charge of this and who would use this?

SC: California is the largest user, but the California Critical Skills test, has been bought by other universities.

Greg Butler: ... and ISTE.org resources.

MBE: The ETS test is being used by some institutions as an entry test

BM: The test is very prevalent in K-12. Intervention to raise awareness of library professional roles scored lowest on curriculum development and after the intervention that went up.

Presenter: Kristin Eschenfelder - The Openness of Government Websites: Toward a Socio-Technical Government Website Evaluation Toolkit

Definition of institutions: Richard Scott - social structures with a high degree of resilience.

Three types of institutions:

- Regulative – laws and governance
- Normative – values norms and expectations
- Cultural cognitive – shared understandings, classification systems

Institutions that produce information focus on a certain type of information.

KE did research on government website evaluation. The research was mostly in the public relation area which includes lots of information on the openness of public agencies. How can an agency know when it's produced enough?

What is interesting about government websites is what they don't publish.

1) You can't judge the openness of an agency just by looking at the website. You have to look at the context around it. For example open records requests, have to be done at a program level not an agency level.

2) You have to be clear about your assumptions.

Different approaches to what amount of information is enough. A libertarian approach would require that a minimal amount of information is enough.

A more European socialist approach would be more society led and potentially require a greater amount of information.

Questions:

- 1) We have assumed there are facts out there waiting to be discovered and if we search successfully we can discover it. We have situations however where reasonable people could disagree on what the facts are. Wikipedia for example solves this by presenting both views on a particular issue if they are in disagreement.
- 2) Papers we've heard today have focused on the individuals. What about the role of the group?
 - a. What is the role of group level phenomenon on perceptions?
 - b. In the development of credibility criteria - what is decided to be credible?
 - c. What we've been looking at are still models. How about looking longitudinally. What are relationships over time? We could look at a process model.
 - d. How is the Internet different? - The role of counter information, counter claims can be spread easily and widely.
- 3) Criteria for credibility issues.
- 4) Types of information and information needs.
- 5) Differences in social contexts - K-12 versus Higher Education.

We could have credibility research and credibility in context research.

DL: How do we balance comprehensibility with credibility?

KE: We need to see what facts are out there and what needs to be out there. If you do want to have a public board there needs to be a great deal of commitment in order to understand the information and what is going on.

JB: Screening test results are at every level difficult to understand. The problem is that there are overwhelmingly negative cases and you need to be good at identifying the conditions. If you get a positive there is a huge chance it's a false positive. You can drive a wedge between information and informative...information does not necessarily inform.

KE: You have to balance between exposing things and not exposing them. Both can hurt your credibility.

Institutions

Respondent: Nancy Willow

Key implementation barriers

- lag time in model research
- publication

Practical strategies are needed to see what happens when we find out what we've been doing hasn't been working.

The technology adoption life cycle is like a bell curve. Visionaries are willing to try something out if they see a 75% use rate.

Pragmatists want to see 100%.

Conservatives want to see 100% and know that everyone else is doing it.

In order to get the 100% we need assessment tools. What if we base assessment on a check list that isn't even what we really want or really working?

Focus on testing assessment drives the idea what you measure is what you get. We need to be able to measure what issues need to get implemented.

eRate (a redistribution of telecommunication funds) provided the money to develop a technology infrastructure in communities but no funding left over for professional development.

There are three different groups within school that aren't communicating

- System engineers
- Librarians
- Curriculum folks

Systems engineers are still developing the technology and literacy tools because they are not considered to be part of the curriculum.

National Education Technology Plan – is primarily for educational technology companies. It is not a plan that is focusing on technology. We need to expand access to commercially produced content. We seem to be advocating against instructional models. Filtering software, for example, we're talking about gatekeepers for information. Blocking is based on standards by companies with no information about what's going on at all. The systems and tech people are installing software with knowledge of the actual information needs of students.

We need to teach and support critical thinking and challenging authority and at the same time be aware that there is a socio-political aspect that we need to watch out for so it doesn't come back to "bite" us.

Discussion

BM: Blocking software can be put up there with credibility.

LF: At one time I was working with 70 school districts. 40 of them had filtering software that was filtering everything with .edu.

DL: School is a prime place to teach about Internet credibility but there are tons of impediments to getting to this. We don't need to take a kid to a porn site and say, "see don't look at this." Any social network or organization is filter. It has its own norms. Is it the fact that filtering is occurring; perhaps the real issue is by whom the filtering is being done?

NW: One of the major features in teaching credibility is filtering and the question is who is doing the filtering.

DL: Do the students know how is doing the filtering?

MBE: We don't have say what teachers and good librarians do is filtering: limiting the amount of information for a purpose is not necessarily bad.

RE: Educators filter information very similarly to the way that filters filter information.

DL: We need to teach that there are two different issues with filtering.

DT: We need to remember that most teachers probably don't understand what or how the filtering is working.

NW: Filtering is at some level tied to credibility and who is making the decision.

AD: What we're talking about is either a social approach or a technical approach. We need to find a socio-technical approach. We need to be thinking about community credibility. Part of Google's credibility is based on their results and the community of credibility. As Batya said are their really rights or wrongs or a whole spectrum.

NW: The point isn't what they're finding online but what they're discussing on their online communities.

Tools

Presenter: Batya Friedman – Credibility by Design

Value Sensitive Design

Implicit values come with any information design.

These are hard and essential problems. A huge number issues were put on the table during the day and may have hit on some of the central issues.

Friedman posited to argue against the Internet and put the term credibility on the table.

Digital information is different.

When we look at what's really out there we can see how well that matches with what we're calling credible.

Value sensitive design is an approach we've developed to approach values in the design process. It uses interactional theory.

It is important to remember that values are not embedded in technology. Once you put technology in the hands of people they do all sorts of things with it but if you put values in design you help support those types of things. This works across levels of the technology

If we think about who the players are; we have the computer science department that fundamentally builds the base, the software developers put interfaces on top of it that the users then interact with, then we have to lay on top of all of that the way technology works in social practice.

Say I'm diabetic, I could go out and look and see what I find online but maybe I want to connect with other people. Both can be connected through technology. Say I need to change my lifestyle. I could be monitored through services on the Internet. I can then be connected with healthcare providers and insurance companies. I may even have a PDA so I can then move around in the world and all of this information is going along too.

In value sensitive design you have to think of all the layers plus the policies that may be legislated around the particular issues.

Value sensitive design has a tripartite methodology.

- Conceptual investigations
 - What do we mean by credibility?
- Empirical investigations
 - Investigations about social law and regulations
- What do we do technologically?

As a community working on this we need a good language.

We need a uniform language.

- 1) First, it doesn't make sense to talk about or talk just about the Internet. We don't live in an Internet only world anymore. Everyone is online whether at work or at home. We probably don't even think; "I was online and now I'm off line and then

- I'm going back online"...the information is bleeding off the net into our physicality we're living in a different universe now. We need to solve these problems for a conception of the universe we're in now; a universe with ubiquitous computing.
- 2) The information is malleable. Think about how digital information feels different. With paint and canvas, radio, and print you have the medium in one hand and the information is there. They are tightly bound when I try to extract them they decompose. Digital information is separate from the medium. I could still represent information with paper clips. Its beyond easy modifiability...there is no trace left
 - 3) Tailorability. I can determine the way to display information. We can imagine a website for family planning on the first page we could ask about religious affiliation and then display the information appropriate to your religious beliefs. There is no guarantee that someone coming to the same site after me will see the same information.
 - 4) Interaction...email, blogs

2 Emerging Technologies

Voice interfaces

Voice is very strong. Infants recognize the mother's voice as newborns. Everything that happens with real voice can be transferred to synthesized voice. Research has shown that the female voice will be taken as having greater credibility. If it's of a technical class or information a male voice will be taken to have great credibility. We already have voice interfaces in cars, medicine and the trend is that voice interfaces will be used more in the future.

Telepresence

Allows you to be in one location and can actually control something in a remote location. Telegarden is an example web interface that allows you to control the robot arm to plant a seed, watch it grow. In Texas there is a type of Telepresence interface where you can fire a rifle. Currently only inanimate objects are the targets but they are trying to make it so you can fire at a real animal. There is also the possibility of remote medicine.

It is important to realize that credibility is also about "how do I act in the world." Can I really believe I planted a seed, shot a rifle, or performed surgery?

Can we take the feature of tailorability and see how it plays out when we're talking about online newspapers, for example and credibility?

We don't know what will come next but if we've done our job right we can see what we can do. We're proactive.

Using the idea of a design pattern is a possibility. When working with the concept of design patterns you look for a solution somewhere to a similar problem that works. If you're working with a team everyone brings back the three or four designs that they think our designed well and from looking at these it is possible to find nested patterns and find a design patterns; then its possible think about process of design. Who designed them, what was the process and what were the best practices involved.

What we know from the HCI community is when you design for the margins you can have a really good design for everyone else. This is the flip side from designing for everyone else.

An aspect to consider when designing for diversity is whose credibility cue is it? The person who can mark something as credible is very powerful. Do we have just one or can we validate multiple credibility cues. Can we think about plurality?

One the cultural level, if we've designed agile architectures, different cultural groups who may have different ways to signal credibility will be able to use the architectures to realize their credibility needs. The academic community has one way, a native peoples group might have a significantly other way of signal credibility connections to other people may be more important for example.

We have to think at the initial level to design for flexibility so it can be achieved as needed at other levels.

When you pick up on credibility you pick up on a whole slew of other values; trust and privacy are only two of many. A lot of other territory comes with the issue of credibility.

Credible information is important for democracy. We need to know what basis the government has for information credibility. There is credible vetted stuff and the open stuff in both cases we want to be able to share and talk about the information that's out there.

We also need to be able to say what we want.

Should we assume we live in a world where everything leaks out unless we stop it or a world where we have privacy: a world where we share information about ourselves when we want? Making and having an agreement on which world we want is important for design. Are we opening up or shutting down?

Discussion

SS: It's difficult to net people, places, and things semantically. But we have the tools to do it if we can just find out, for purposes of design, what the values and the credibility issues are. Internet 2 is an example of a structure that is already in place.

BF: I talk about audit trails later in the paper. What if we could design a mechanism that could bind source to information then put that into practice. What happens when we toss the ability to modify information in there? Is the information still accurate? What happens over time? Do I only retain the original source or as it passes from person to person can I retain the changes?

These aren't new ideas we need something that goes in this direction...

SS: We do have the mechanisms...there is an inverse relationship between credibility and privacy. Like the inverse relationship between precision and recall.

MBE: Can we agree that these are two big values that are in an inverse relationship?

RW: No, I don't think we can assume that across the board.

AD: There is an amplification that actually changes what is credible and what is private.

DL: Authority is a way to ensure credibility, so is reliability.

RE: Is there really a choice between vetted credible work and non vetted and uncredible work?

BF: This is where I think we need to go back and look at the conceptual terminology of what is vetted and what is credible. It might be better to refer to the structured and formal versus the unstructured and informal.

RE: Sometimes structured information is credible, sometimes not. Think of political campaigning. There is a large amount of embedded information and extreme vetting of information. Yet this information can undermine the process of democracy.

BF: I agree with everything being discussed here but I don't think I would call that vetted information.

BM: What about emotion, tailorability, and credibility. There was a news story about a web page that showed a bunny. The text threatened that the rabbit would be killed unless they received \$1000. They received \$25,000 in pledges is that credible?

JB: If credibility is marked by action, then of course it's credible.

DT: If the weather service says there is a 10% chance of rain, I bring my umbrella. What does that have to do with credibility?

JB: You've mixed in probability.

Presenter: Jonathan Lazar – Tools and Technology for Web Credibility

Accessibility also means that someone with a disability has access.

Three categories of information of the Internet:

- 1) one to one communication
- 2) one to many
- 3) many to many

There is also the issue of the credibility of email. We have ways we try to filter out email but we should add features to web browsers that let the user make the decision. If anything appears to have questionable credibility, alert the reader to it and let them decide.

We already have tools we use in face to face or physical communication. We call people we don't hear back from for example. We need something along these lines for email.

With email there are a few things to consider with email:

1. We could add flags to suspicious links
2. Filters, if you control the settings, can be useful tools. Having a filter like a white list, the mail only comes to you if it's on your list.
3. Linguistic parsers could go through and determine language patterns you can tell if it is really from this person.

We want tools to help up make better decisions not to make the decisions for us.

Whether or not the information there is necessarily true, people do rely on government sites. People do judge credibility on certain things that are already out there even if they aren't necessarily true.

- Name recognition
- Seals
 - Things like the Better Business Bureau
 - HON
 - High ethics
 - Bobby seal
- Privacy policy

But people don't really check the credibility.

Other ideas include:

1. A tool that pops up and, based on user feedback on sites, gives a credibility rating is a possibility of something we could use.

KE: Does a pop up tool have any kind of liability issues? For example if they rank a site highly credible but its not, who's liable?

2. What about a prescreened lists of sites like a librarian's index to the Internet?
3. Reputation systems, recommender systems, and collaborative filtering are further options.
4. Online communities monitor credibility of their members through registration, establishment of membership and qualifications.
5. Cards given out by the Web Accessibility Foundation are an example of a format is useful and important for getting out accessibility guidelines.

AD: Who controls the tool? In the hands of the user it means one thing in the hands of authority it means another.

Tools

Respondent: David Lankes

What is the problem? Why are we bothering to do this? Is credibility a problem? Are there differentiating conditions that lead to the Internet being a problem?

It's not that digital information isn't different. Digital information is not restricted to the Internet. Digital information can be more secure than analog. Encryption is a powerful tool.

It's not even the network. We have all sorts of different networks. Is the Internet different? It's not the brave new world. We fluidly go on and off, its permeated the environment we live in. Did we move from a time when all information was credible to all information is suspect? This may have been a valid fear at the beginning but it's not the wild wild west anymore.

Earlier determining credibility was often a choice of media, newspapers over radio, radio over television but this isn't the case anymore.

There are significant differentiators:

- Increased ability for self service
- Making you part of the system
- Nature of peer tools – tools without central authorities
- “A new obligation or Faustian Burden”
- Self service leads to a greater obligation for literacy of all types
- In self service/self selection driven world all authority becomes advisory. All credibility situational.

Reaction to the papers:

Assuring users of credibility is not a user perspective because someone else is doing the assuring.

The many to many model doesn't make sense in the user context. A user can only be one. Need a many to one: RSS syndication, search engines.

Tools:

- Awareness tools
- Encryption
- Identify management
- Medical information: we own the information but are not guardians of it
- Annotations: peer, expert, user, audit trail
- Wikis leave an audit trail that show where annotations are working.

Diversity of users and the diversity on the Internet become a means to credibility.

Bias:

- Bias is present in an inductive network.
- Traditional concepts of bias are deductive and driven by traditional mediums.
- If credibility is situational and driven by user's current knowledge/beliefs then bias is situational as well.
- We need to take the concept of bias out of this conversation.
- Bias is one of the primary reasons people use to talk about credibility.

Information is biased and it needs to be.

We need to focus on what the user does and remember that tools are what make the Internet. We need to be precise in our intentions and terminology.

Wednesday, April 13, 2005

Agenda

- Debriefing on tools
- Brainstorming how to think about tools
- Give people who didn't present a chance to talk

Definitional, Practice, Research

- 1) What do we recommend for practice?
 1. What would we like to see happen?
 2. Should we make recommendations through institutions?
- 2) Recommendations related to research

- a. Prioritization
- 3) What can we do for follow up?
 - a. A website?

Tools

Discussion

NW: Filtering the most effective filtering software is set under our own hardware which is our heads.

KE: All tools should be open source.

GB: Could you clarify open source do you mean open standards? Open code?

KE: Different layers of architecture. We need transparency down to the code level. Some people will want to see all the way to the code level but others won't.

SS: It's all just a matter of opinion. The more we move to standardization the more we can meet individual needs. Some people don't need to see all the way down to the code.

Tools don't have to be sophisticated but have to trigger people's skepticism
If people have critical thinking skills we need to remind them to be skeptical.

CO: The tool has to be embedded. It has to be made transparent.

FH: Standards should not be proprietary. RSF is a filtering tool that gives the user control to filter the web.

DL: There is a constant tension between the notion of provoking skepticism and ease of use. People need to reach some sort of cognitive dissonance. We may want people to work harder. We need to motivate them.

SS: When we look at possible futures do we need to necessarily build a complex world? The tools to clearly build a "web of trust" can be made at the election of the user. The tools are here. I would like to see an agenda coming out of what we do know. We know about values and emerging semantic relationships between people. Batya Freidman has done work with cookies that flash in different color something like this helps people identify potential dangers.

BF: Just in time management is another option.

SS: If the provider concentrates the focus on the customer or user people will migrate to them.

Bat: It will look simple on top.

SS: The underlying stuff is not rocket science.

Eliza: I would recommend the maximum ease of use. Work for a total ease.

DL: Longitudinally it took a lot of work before hand for people to enter identity information. We can make the validation as easy as possible. Remember it's not natural.

SC: At national level we speak for users. Would it be useful for us to do research concerning what users need in terms tools. What are the features, what are the needs? We need to create a good documented body of research.

MBE: Research needs to speak to the institutions providing services.

JB: We have to be careful about stopping people. I don't care about the source of the information and I don't want information to stop me. We need things that are available to them but don't stop them.

DL: Tools that range from I don't care to I care a lot.

JB: They should be running in the background.

MBE: An unobtrusive tool that is built on identity and relations...how would that work?

SS: Annotation could be layered on community assessment but in the end the user will walk to last mile.

DL: what about Microsoft tools for spell check?

Greg Butler: On newer versions you can get deeper into spell check, go to the thesaurus and so on.

DT: We need more depth. We need to get to that we haven't got to yet.

Aspects of credibility and the process around credibility need to be defined.

NW: The mlk.org site is a white supremacist site that is often mistakenly listed by libraries as a credible site.

MM: Fritsch checking levels, affiliation level, trace root, dig lookup, these are all available tools. The MLK page could be a great teaching tool. Vivid examples put together in four or five modules and used as teaching tools.

MBE: Practice examples...teaching tools with vivid examples

JB: How many real bad consequences are there?

MBE: You're saying it's not an issue?

JB: No, but we need to define it to approach it.

DL: We need to cede to the fact that for some people the sites like mlk.org are credible sources. Best we can do are series of alerts. If you want to do more you are creating an authority.

MBE: Would we recommend a seal protection system: credibility seals?

BF: I talked about credibility seals and ways they're problematic.

JL: We use them everyday in all aspects of our lives, think of rating systems.

KE: If we create a seal program we're opening a Pandora's Box.

NW: How many teachers view filtering as good because they believe that because of filtering the sites are credible?

RS: Filters don't drive to credible sites but protect the user them from harmful sites. Why aren't we upset by the editorial pages of newspapers?

MBE: They are labeled as such.

RS: Most are labeled online as well.

FH: They aren't always clear. Back to the mlk.org site, how many people go to it mistakenly and are persuaded. Most of the stuff you see on the web is not this horrible but where else do you see these techniques? Go back in history; look at the 30s...how many people are really going to fall for this?

DN: We started to discuss tools and we've gone to issues of policy and that is something we haven't addressed at all. What is the role of this group in determining, identifying and promoting some sort of policy about this agenda? There are other issues. We no longer trust government and we are trying to discuss credibility within a society that doesn't trust anymore. This is a critical issue in a larger framework.

Greg Butler: Building on the idea of creating a policy statement, the biggest for this group that this type of policy affects is public education. We (Microsoft) provide the platform for people to build stuff.

DL: That's what we need to influence.

SC: We need a research and action approach. Everything rests on the user's awareness that would be an extremely good body of research. Look at the *National Enquirer's* popularity. It would be easy to launch a media campaign at the ALA that would expose the issues of Internet credibility. Make it an event; get actors, and public relations. Make it a campaign.

Delores Carlito: A 7th grader does really care about credibility unless they are told to. We have to teach critical thinking.

RW: The government does regulate. Think of drug companies and the federal trade commission. There are domains of speech that are under federal law. Stuart Sutton made a point about providing guidelines for information providers. We can provide guidelines of how to make sites credible. Show providence ways to suggest a digital repository that users can access confidentially.

ER: Rick Weingarten's group at ALA has done this and introduced sophisticated ways to teach.

MBE: What if we harvested all the websites that libraries have collected and created a search. It would that be an alternative. We trust libraries.

BM: ALA did that with the 500 websites for children but they didn't categorize them at all.

MBE: What I mean is just a box where people can search just the libraries.

DL: What needs would be met?

MBE: Those of the library user group.

KE: You could you get preexisting links.

RE: We need to be cautious here. We're approaching tools from a perspective that is troubling.

MBE: Libraries collect information that has a certain level of value for the users.

JL: Tools are not the only answer. But tools can help a lot of people. Let's get to that section of people that want to think about credibility even if it's only 40% of the people.

MBE: We need education to raise awareness, tools, and policy.

NW: The history of filtering will give you reasons to be worried.

MBE: Filtering does not represent all tools.

NW: If you create a tool you're going to get to a requirement.

SS: The Internet is only available through a tool. It comes down to a tool. We can't marginalize the tool. The only window in is a tool.

KE: A tool is a double edged sword. There are dangers. Designers need to be urged that their designs need to be modular, open source, and open code.

MBE: What about recommending a series of guidelines on credibility?

BF: A little regulation could go a long way. Someone should be able to visually apprehend what's going on.

Break

After the break Mike Eisenberg asked people to think about ideas that had been discussed early and to give their opinions on future plans and directions. The following discussion reflects that.

DC: A search of sites cleared by libraries is a good idea. Education is the most important thing.

CB: OCLC e-Scan, the 4 S's as guidelines, and education. The education piece is crucial. We need to bridge the ACRL – AASL gap. We need to get college of education programs to work more with library/info schools.

CO: There are documents about bridging the organizations.

CB: Susan's publicity idea is good as is Mike's... "Loogle." I would be interested in piloting something like it in Ohio.

ED: The international digital children's library (ICDL) is a showcase of user's research and the results are on the website. Children were involved at the design level. Their ideas were implemented.

LF: The assumption is that we need a more credible Internet. There hasn't been a distinct definition of the problem. How big of a problem is it? I want a problem definition. Kids find the path of least resistance. They are given an assignment that doesn't require more so why should they critically look for information!

GB: I agree it might not be a big problem? We need a problem definition. You can get kids to evaluate a website because they get bad grades and eventually they begin to learn. This isn't an entirely new problem.

MBE: Add some guidelines to work with educators on framing assignments, questioning and how to build credibility into assignments.

KE: There is there a worksheet available that students have to fill out a checklist about the information they find online.

DN: Educators and library media specialists have been trying to get things implemented for 10 years now. It's hard to get things going. Maybe going out to museums and libraries would help to get things going.

ER: Websites for children and adults.

BM: All children can learn but what is it that they're learning? We need to see guidelines as a tool and that they are used that way. Guidelines aren't a bad thing but a cautionary note to us.

NW: Is this group ready to identify or develop guidelines?

Greg Butler: We need to get clear on desired outcomes. This is a journey. We're dealing with a moving target. It might be a good idea to think about engaging corporate partners. We have a stake in this as well. Think about the vehicle to use to drive this forward maybe something like the Partnership for 21st century Schools. We need a report stating the problem, research, tools and public education programs.

SS: I'm still struggling with definitions. What does credibility mean? There are reasons, even if we were satisfied with the Internet, to look at things and move the Internet forward. Things we could do better, in terms of tools and policy.

CO: We need a definition that we're all comfortable with. Information literacy is replete with 1000's of articles and handouts about teaching critical information literacy. Maybe what Louis Fox says is true, the first 2 hits on Google might be good enough. Are there other organizations working on these issues?

SD: The BJ Fox center at Stanford takes consumer reports approach. It's a very narrow focused attempt to deal with these issues.

MF: Science educators have the inquiry model.

MM: In the medical arena there is some interest in this issue; the Medcertain project in Germany. We need to find out how day to day teachers are teaching credibility.

CO: We don't want to lose the thread of context and motivation.

DL: One possible research plan would be to design a large multi-user game. People come in and sign up and interact with other people then the data can be mined to look at different activities in the game. It could be a way to look at credibility. We could see how participants go about making judgments and decisions in the environment.

GB: Websmart is doing that for web safety.

FH: Kids are doing more than we give them credit for. In IM there is a warning you can lock people out of messenger for 20 minutes if they're bugging you and kids think of it as a game. It's all about context.

ED: By and large research with kids is a deficit model. We need to look at what they can do.

DT: Going back to Louis Fox's point and am troubled by the idea that maybe there is not a problem. If you think about credibility on the Internet as a continuum from credibility issues elsewhere; the Internet is less of a wild west. What will the environment be in the future if we don't act? When we're talking about defining Internet credibility we need a differentiated definition. It should lead to points of action.

RS: We haven't separated scholarly versus casual use of the Internet. We have ideas of tools and training for scholarly use. They are not sufficient but pretty good and in place. Are we the group to talk about the casual use? The problem is less about the information we get but the information places get about us with spyware and by other means. What does credibility mean in this context? Is a site safe to visit?

MBE: We need to think about the application and practice side first, then research.

MM: Recommendations for practice, a handout, a game like David Lankes' idea, a website clearing house are all good ideas.

Greg: The ueber message is do you want people to change? Why?

NW: Do we know enough to be providing these guidelines? In defining the problem; what do we know about the solution that we could put into action now that is suitable for a range of audiences?

MBE: It has to be different from a policy paper like the one for 21st Century Schools.

MM: We could convene smaller groups to certainly get started with this.

NW: That's a first step.

MBE: Does anyone feel uncomfortable about this?

MM: What about the "Loogle" idea?

MBE: An alternative to Google...

Cerise: "Loogle" is what we would do to solve the credibility problem. But that's not what we're doing here...we're trying to encourage education.

MF: Right, and to encourage assessment...how, what...

Greg Butler: On the assessment the level, what we have today is at best a rearview mirror look. There has been no assessment measuring kid's success today.

SC: We also need to think about retired persons.

MBE: Definitionally we aren't just talking about Internet information but digital network information in different forms and on different machines.

NW: Robert Stonehill defined scholarly and casual use of information. Is personal research the same?

RS: The imperative is the same.

DL: Where is the user in this? For example annotation tools, recommender systems.

MBE: Let's think about tools from a user's perspective. Should we compile a list of current user options available today?

BM: What about verification of credibility? Who is going to design that? Who is going to vet the information?

NW: Something like a pull down menu that would provide link information. Something that shows what is linked to and from the site at the browser level.

MBE: Are we advocating for something like that? Are we at that stage? Are there recommendations from this group for design?

JL: Yes, graduate student projects could be centered on the tools and test them.

DL: If we have a current awareness campaign and raise awareness we can link to the problem statement and tools available to help the problem. We need to know a lot about the users in order to do this.

MBE: Some research is absolutely essential in order for us to speak reliably and credibly. We need research.

BF: Possibly we can learn something from privacy issues. We could make some design template work analogies. How are librarians and teachers teaching about credibility? How are designers designing for credibility?

DL: and do they work?

BF: Place this under the rubric of best practice.

KE: This would be great for an ARIST chapter with a focus on school library and library context. I keep hearing people come back to user feedback. What happens when the community gets bigger and bigger? Can we compare existing systems? Can we look at Barnes and Nobles for example and take recommendations from other systems.

MBE: Rick has argued for trusting the group. So there could be a comparison of that approach to a comparative examination of what's already there.

NW: Another question to ask is if users satisfied with their current skills? We need research on highly competent kids and adults. Let's see what people are doing to establish credibility and how we might improve upon that.

BM: We haven't talked about developmental (childhood stages) at all. It is a huge area. When can they become learned skeptics?

DN: Do users perceive this is a problem?

SC: All of this is one big research problem broken down into individual questions.

ED: What can children tell us about credibility at different ages? It's not what they can't do, but what they are doing.

DN: What criteria do we use? We need to do some model verification. We need to figure out who users trust.

SC: There is also the broader issue of user demographics. There was a correlation between the number of books in the home and the information literacy skills. It would be interesting to shop around a bit about the individual's environment, culture, and language. What things are leading people towards being more critical? We need to look at the total environment of the user.

MBE: Institutions are important and the family is included in that.

DL: What methodology are we going to use?

DN: The media literacy movement (5 or 10 years ago) produced a ton of research and best practices. Things are out there that we can draw upon from the past.

MBE: We need to identify the literature from communications, information science, HCI, psychology – social, cognition, decision making, media literacy.

KE: ...information processing literature.

RW: The amount of information people must face at different levels (Medicare) is appalling. What kind of pressures does that put on finding the resources?

Policy

MBE: What is the role of regulation in this?

Greg Butler: What we want to create is a policy maker's guide not set policy.

RS: Who are the policy makers?

SS: Standards bodies,

MBE: government, schools,

SC: accrediting organizations.

DN: Where is individual responsibility and professional responsibility? Digital information makes that view very different that the view we had 5 years ago.

MBE: People coming into the doctor's office with information has changed the way doctors' act...

DN: Does the AMA have a policy on this? Distribution of responsibility...

MBE: A teacher's level of responsibility to provide education.

KE: We need an investigation between credibility and first amendment rights.

DL: Defining credibility between source and user is a different thing than defining credibility as a contextual kind of thing. Liability means that someone else was responsible for credibility. If you move it past the user you complicate the domain.

MBE: So we need to think about credibility from the user's perspective.

Dave: We need to stick to the unit of analysis.

RW: The user is the focus but they are not in isolation. Libraries are not the source of the information. Libraries are the source of the digital information.

DT: Credibility and the first amendment is only one of several issues. There are many different kinds of decisions: privacy, information and power, and authority are just a few.

SC: First we need to consider the policy makers; board of trustees, gubernatorial commissions, and so on. Then pull some input from the policy makers because we will be in for a surprise. We need to know where we are for the research to go forward.

KE: What is being done in other countries?

MBE: Exercise: take a blank piece of paper what are the three major things you would like to focus on/see pursued further related to information on digital networks and credibility.

The results of this exercise are attached.