Disconnected: Teaching Information Equity to Undergraduates

by Angelynn King

On the day that I presented this paper as part of the LOEX of the West Conference in Bozeman, Montana, a serendipitously appropriate cartoon appeared on the editorial page of the Bozeman Daily Chronicle. One young woman, upon discovering that her companion does not own a car, a cell phone, a palm pilot, or a DVD player, exclaims, “It’s just so cool how you’re totally into this hip, new voluntary simplicity thing! How do you do it?” The second girl responds that she is poor. “Wow,” replies the first. “I could never do that.”

It is interesting that all of the items mentioned by the comically insensitive character in the cartoon are types of technology—and, with the exception of the car, all of them are types of technology that most of us who are now working in universities grew up without, but which our students take for granted. Inevitable though this perceptual generation gap is, it has tremendous implications for education, library education in particular. When the technology is information technology, and information is power, it is clear that those without technological power have no information—and those without information have no power.

While overall access to information technology itself is growing, wide social disparities persist. The groundbreaking Department of Commerce report on the “digital divide” shows that internet users in the U.S. are overwhelmingly—and increasingly—white, urban, educated and affluent (United States Department of Commerce). But our students tend to believe what they read in the chip-happy, technophilic press—that the internet is a universal communication medium, a kind of “global commons” and that sooner or later “everyone will be connected.”

If we accept that part of our mission as educators is to prepare students to become well-informed, responsible and rational members of a democratic society, then we cannot overlook the omissions inherent in this view. In addition to teaching information literacy, we need to build an awareness of
issues of information equity into our instruction. These issues are sparsely covered in the library literature, and most of the material that is available is highly academic and does not resonate with undergraduate students, many of whom have never been confronted with issues of social or economic class. How can we make this data speak to their condition, so that they do not leave college and join the burgeoning information economy completely unaware that there are large segments of the country’s – and indeed the world’s – population that are technologically “off the map”?

**Seminar Background**

In the fall semester of 1999, I taught an interdisciplinary first-year seminar – the first such seminar to be taught by a librarian at the university – entitled “Information, Knowledge & Power in the Electronic Age.” This course carried a general education designation in Computing Across the Curriculum, which at the University of Redlands means it was required to address two areas of computing: usage of technology and the societal aspect of that usage. In putting together the class, I wanted to combine my normal area of emphasis – hands-on information literacy skills training – with some background that would address the issues of access that I see as central to understanding how electronic information is produced and consumed in our society.

Throughout the course, I tried to expose the students to coverage of access issues from a variety of publication types – book chapters, scholarly articles, newspaper and magazine articles, and online sources. One of the reasons for this was of course that I was simultaneously teaching them to find information in all of these formats. But I also wanted to make the point that these are not just academic issues but everyday problems and concerns that permeate the whole spectrum of media. The annotated bibliography at the end of this paper contains the actual reading assignments for the course as taught, but for future use it could (and should) be updated with more recent publications when possible, especially in the more ephemeral genres of newspaper articles and online sources.

The four-credit class was divided into two sections, lecture/discussion and computer lab. Throughout the semester, as we read and exercised our way through the syllabus, we uncovered an extensive array of barriers to access. In this article I will present examples of how different types of classroom instruction – lecture, computer hands-on, reading, small-group discussion, and final paper – were used to highlight different aspects of the topic.

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**Technological Barriers: The Digital Divide**

The Department of Commerce report on the Digital Divide made major headlines when it came out in June of 1999. When I talk about this subject, I usually concentrate on raw numbers just to illustrate in a very basic way what I mean when I say “non-universal.” Although the statistics as reported (United States Department of Commerce) – roughly 94% of American households with telephone, 37% with PC, 26% with modem, 19% with internet access – may not raise immediate alarms, a different presentation of the same numbers – 6% without telephone, 63% without PC, 74% without modem, 81% without internet – show that while technological access may be increasing, a substantial majority of the population is not “connected” in any real sense. And here we are just talking about the United States, one of the most industrialized nations in the world.

The students were asked to reflect upon their own experiences with computers at home. Did they have one or more home computer(s), a primary or secondary modem line, internet access? When did they get it? Who supports it (i.e. fixes it when it breaks)? How much did they think that cost? I did not ask for a show of hands but rather asked each of them to discuss one aspect of their access to computers during the last few years, either at home or at school. Even in my rather small classroom of 16 students, very clear demographic lines were visible. Having more information about the students than they have about each other – I know, for instance, what their parents do for a living and whether they attended public or private secondary schools – I saw our own divide in access to technology primarily as one of income and parental education. But I would not be surprised if the students themselves perceived a certain racial and ethnic imbalance.

Another aspect of technological access not mentioned in the government’s report was the issue of adapted technology for users with disabilities. Due to the small size of the class, this did not naturally come up in discussion, but we did discuss it briefly.

**Educational Barriers: The Skills Gap**

An early reading assignment was the introduction to William Wresch’s book, *Disconnected: Haves and Have-Not* in the Information Age, entitled “Information Rich, Information Poor.” This chapter contrasts the lives of Theo Schoeman and Negumbo Johannes, two men living in present-day...
Windhoek, Namibia. One is a college-educated professional, the other a day laborer. One speaks English, the international language of commerce, the other only his tribal language. One is fortunate enough to be able to live where he works; the other must commute long distances from his village to the city. One is literate, the other is not. (Wresch 1-4)

I asked the students to imagine that they were Mr. Johannes. What are the barriers that stand between them and access to information? As the students put themselves – if only for an hour – into the imaginative position of someone whose challenges far outweigh his advantages, it becomes increasingly clear that access is not just a question of technology.

Even if Mr. Johannes had a computer – which would cost him several years' salary at least – he would of course have no place at home to plug it in. To get it from his home to his workplace, he would have to carry it with him in the back of the truck where he hitches a ride into the city every day. Having been excluded from any formal education beyond primary grades, he would need training in how to use the computer. Even if training were available, it would have to begin with teaching him to read. And even if he were literate, there would still be the question of language. Analysts estimate that nearly 90% of the over one billion sites on the internet are in English (Sandoval). Although the trend appears to be toward linguistic diversification (Associated Press), that may be misleading in view of the considerable Western European web presence. (I have no figures for how much web content is in Oshiwambo, Mr. Johannes' native language, but I would be willing to bet that statistically it is very close to zero.)

Even for relatively privileged users, there are invisible skills that lie beneath the surface of language and literacy. Database selection, Boolean logic, controlled vocabulary and weighted search results are concepts that many students will not have encountered before college, and these make up a significant part of the in-class internet instruction. The immediate utility of knowing how to hone a search is fairly obvious when a student is faced with tens of thousands of hits, but what may not be appreciated is how info-glut can be a type of impoverishment in itself. When you have too much information, of questionable quality, the actual amount of useful information can be small or even nonexistent. Until you learn some fairly high-level searching skills, you essentially do not "speak the language" of computerized information.

Logistical and Financial Barriers: Virtually Homeless

A particularly innovative use of web technology is a virtual homelessness game called Hobson's Choice. The game is mounted on the home page of Real Change, Seattle's Homeless Newspaper. So in addition to exposing the students to the content, I was also able to show them that there are many different types of organizations selling their wares – whether they be products or ideas – on the internet.

The initial screen of Hobson's Choice presents the following scenario: You were hospitalized and couldn't work for 3 weeks. You have no savings or insurance. Your landlord says "Pay up or get out!" ("Hobson's Choice.") Several options are presented, from seeking to borrow money from friends and family to attempting to negotiate with people in positions of authority. But as you progress through the game, you find that many options have to be repeated numerous times, and most do not work. Family and strangers are equally unsympathetic to your plight. At some junctures, you find you have no option but to wait.

The limited options, ceaseless repetition, and constant disappointment are an integral part of the game. As the introductory screen points out, the dictionary defines a Hobson's Choice as a choice between taking what is offered or nothing at all. Many of the students reach their frustration tolerance fairly quickly and want to quit. It should not be surprising that in real life, facing real frustrations in real time, many real people stop trying as well. One poor student spent over an hour in jail. At one point I permitted him to log off and start over, but he immediately landed back in jail. Finally I pardoned him, because I wanted to go home myself.

Of course I realize there is nothing funny about being homeless. But this is as close as the vast majority of them will ever get, as their college educations will serve them as de facto inoculations against poverty. The Hobson's Choice game enables the instructor to engage the imaginations of the students on a subject that can be quite difficult to get across. They may have played a lot of unmemorable computer games, but I have to believe that the one in which they spent a half-hour living in their cars will stand out.

In a later discussion, I asked the students to reflect back on what it was like when they were virtually homeless. What options did they have for finding out about day labor, food banks, emergency medical care, public assistance
— all, of course, without any money? If information was available online, where was there access in the neighborhood in which they were likely to find themselves? If they were lucky enough to find themselves working, would anything be open after working hours? At the very least, the discussion engendered an unprecedented respect among this group for the public library.

**Social and Cultural Barriers: From City Council to World Arena**

A more overtly political assignment for class discussion was the City Council Lab. I asked the students to divide themselves into four groups of four and pretend they were the city council of a small town similar to Redlands. Their task was to formulate a policy for internet filtering of the public terminals in the city library. In doing so, they were expected to satisfy all of the following groups:

1) A group of parents concerned about children's access to inappropriate (especially sexually explicit) material online.

2) A conservative religious group objecting to a local web page containing information that they say defames their church. (A lawsuit for libel is in process.)

3) Free-speech advocates who maintain that censorship is not the business of the local government. (They threaten to challenge in court any limitations on access imposed by the council.)

4) A local business owners’ group that fears filtering software would limit access to their online advertising, cutting into their profits (and, not insignificantly, into the city’s tax base).

5) The PTA of the high school, which has just suspended seven students for possessing bomb-building instructions downloaded from the internet.

6) The librarians who work at the public library, who point out that they are severely understaffed and have no manpower to spare for additional monitoring of the terminal area.

Oh, and of course they wanted to be reelected, too.

The four groups came up with four completely different solutions, using a variety of tactics from raising taxes for more library staff to requiring underage patrons to carry validated parental permission cards to use networked computers. Each group’s elected representative put its proposal on the board (one group had co-chairs, so essentially half the group was in charge), and then we all voted for the best proposal. Here the spirit of collaboration and open-mindedness broke down: fifteen of the sixteen students voted for their own group’s proposal. The one defector — our jailbird from Hobson’s Choice — was impeached by his co-councilmen. I cannot pretend that this was not a realistic representation of small-town politics.

Reflecting on readings concerning Middle Eastern women online, American cyberhate groups, and the use of the internet by Cambodian opposition leaders, the class briefly discussed the differences between, and the similarities of, “freedom fighting” and insurgency. Who decides who gets online — both as producer and consumer — and how do they decide? It was pointed out that in many places, before you can get online, you have to be able to get out of the area in which you may be sequestered and into the area where the technology is kept. Who are the gatekeepers in your community?

Even in American public schools, gatekeeping can be a factor. A 1998 study carried out in the Pittsburgh public schools discovered that internet access was disproportionately doled out to white male students of higher socioeconomic status. Two reasons were identified in the report. First, the internet was used as a reward for high achievement and good behavior in class, thus underscoring the privilege of students who were already doing well. Second, many teachers were not comfortable with the technology and felt more comfortable handing it over to students who already had computer experience — the same group (Schofield). It should be stressed that the teachers themselves were unaware that they were doing this — gatekeeping is not in itself either heroic or villainous behavior; like many public service functions, the results depend largely on the preconceptions.

**Both Sides Now: The Final Paper**

In addition to the Computing Across the Curriculum designation mentioned above, the course was also designed to fulfill the freshman/sophomore writing designation, which at Redlands stresses critical thinking and expression. The students were required to turn in a total of 40 pages of writing throughout the semester, the bulk of which was made up of a draft and two substantial rewrites of a 10-12 page research paper. In the final paper, I
asked the students to discuss both the advantages and disadvantages of information technology for different populations, utilizing both the class readings and sources they had found on their own (requiring a minimum number of citations in each category tested both their assigned reading and their information seeking skills.) Most of the students were able, to varying degrees, both to argue from the canon and also to research their arguments beyond the syllabus. In most cases, the quality of the students’ writing improved over the course of the semester, although proper citation style proved not to be one of my pedagogical triumphs.

While I am somewhat uncomfortable reinforcing what I see as falsely dichotomous thinking by asking for a “pro/con” argument, I had found the students throughout the semester to be very resistant to – and even threatened by – ambiguity of any kind. This I think is largely a function of age and (lack of) experience. While beginning writers do need to be pushed beyond their comfort zones, pushing too far too fast can cause a complete breakdown in writing ability, so I satisfied myself with requiring them to argue both pro and con. Since most of the issue-oriented writing they have done up to this point has stressed adopting a single position and supporting it, this is a small but significant step toward a more comprehensive essay strategy. If at some point I get some of them back as upperclassmen – the university has a junior/senior writing requirement as well – I will be sure to emphasize that there are more (and sometimes many more) than two sides to every story.

Conclusion

Back when the class was still in its planning stages, my husband, an elementary school teacher, suggested I clearly define my own goals for the students’ learning. I was torn. Was I primarily teaching them information literacy or information equity? The class seemed to consist of a series of dualities: lecture/lab, reading/writing, scholarly/popular, theory/practice. We even met twice a week in two different classrooms, in two different buildings on opposite sides of campus.

As the semester progressed, however, it became apparent that information literacy and information equity are inextricably intertwined. Because we are who we are, we have access to more information than any population in the world – but we are also less aware of what we don’t know. Not feeling bypassed by the Age of Information, we tend to think we have it all. We need to practice seeing from the margins to see clearly from the center.

In my summing up at the end of the semester, I pointed out to the students that they had the same physical access as when they first arrived on campus – the same computers in the same computer lab, open the same number of hours in the same place – but hopefully they had considerably more actual information. And this is what I hope I’ve taught them: there is a lot more to getting on the information highway than just owning a car. You have to know how to drive, where to drive, and when to get on and off. And you have to be careful whom you allow into the front seat with you.

Afterword: About Bias

It is crucially important, if we are teaching critical thinking, to stress to the students that there is bias – some prefer to call it “point of view” – in all sources. This includes government information like the Digital Divide report and extends to the instruction itself. It is intellectually irresponsible to teach students that all information is inherently biased and then present our own instruction as if it were value-neutral. So I always ask them, “Why did I ask you to read this? What am I getting at here? Knowing what you know about me, what do you think is my message?”

My own strongly held belief is that the internet is not a “universal communications medium” at all but rather a universal marketing medium. I constantly stress the issues of authority, audience and agenda and exhort the students to “follow the money.” From here it follows naturally that if you are not a member of an identifiable consuming group, that is, a group that can be counted on for at least ideological patronage, there is no information out there specifically for you. With the exception of the mounters of personal web pages – the electronic equivalent of vanity publishing – no one stands to gain from expending the time and effort necessary to communicate with you.

The course I taught was neither a political science course nor a course in social work. It was an information science course: I presented the information. And while the mere fact of my teaching it was inherently political, I must say that it was nowhere near as political as it could have been. While value-neutral instruction may be an ideal we can approach only asymptotically, disclosing our own agendas is literally the least we can do.

WORKS CITED


Annotated Bibliography of Reading Assignments (Selected)

Books and Book Chapters:

Berman, Sanford. Prejudices and Antipathies: A Tract on the LC Subject Heads Concerning People, 2d ed. Jefferson (NC): McFarland, 1993. This work is a must-read for anyone who is interested in – or unaware of – the manner in which the values elected in the labeling and organization of information shapes access. In its entirety it is probably too technical and librarianish for undergraduates, but the introduction gives an excellent overview of the reasoning behind Berman’s work.

Birkerts, Sven. The Gutenberg Elegies: The Fate of Reading in an Electronic Age. Boston: Faber and Faber, 1994. Chapter 9, “Perseus Unbound,” is a rumination on the relationship among the concepts of information, knowledge and wisdom as they relate to electronic media (and what “learning” then means in this context.)

Brook, James, and Iain Boal, eds. Resisting the Virtual Life: The Culture and Politics of Information. San Francisco: City Lights, 1995. Howard Besser’s essay, “From Internet to Information Superhighway,” draws parallels between the utopian predictions made for public television at its inception and the very similar claims now being made for the internet. Although it begins rather pessimistically, the author closes with some interesting assessments of future trends in fee structure, online privacy, and “infotainment.”

Grossman, Wendy. Net.wars. New York: New York University Press, 1997. A highly informed and well-researched examination of the many aspects of the regulation (or attempted regulation) of online expression, written by a journalist with a distinguished record of covering high-tech topics. Particularly useful in class are Chapter 7, “Exporting the First Amendment,” which makes the perhaps obvious but rather neglected point that American-style “freedom of speech” is not a universally recognized concept, and Chapter 9, “Unsafe Sex in the Red Page District,” an exploration of the tremendously disproportionate amount of attention directed at internet porn.

Roszak, Theodore. The Cult of Information: The Folklore of Computers and the True Art of Thinking. New York: Pantheon, 1986. Chapter 8, “The Politics of Information,” hypothesizes that data glut is actually an instrument of social control used to overwhelm and paralyze the public with unprocessable amounts of information. (It is worth noting that Roszak ends the chapter with an extremely upbeat paean to public libraries, “the missing link of the information age.”)

Stoll, Clifford. Silicon Snake Oil: Second Thoughts on the Information Highway. New York: Doubleday, 1995. Stoll, who broke ground as the first insider to write a thought-

ful and sustained criticism of computers as information providers, romps through subjects as useful and diverse as intellectual property law, Thomas Mann’s “principle of least effort,” the shelf life of electronic data storage formats, and the torching of the Library of Alexandria. Although we could easily have read the entire book, I assigned only Chapter 11, “Wherein the Author Considers the Future of the Library, the Myth of Free Information, and a Novel Way to Heat Bathwater.” Students love the author’s chatty, down-home style, and not one complained about his tendency to go off on tangents. The publication predates the advent of the World Wide Web, so there are numerous references to outdated technologies such as gopher, Veronica and Jughead – providing a good opportunity to discuss “currency” as a criterion for evaluating sources. (Note: Stoll’s new book, High-Tech Heretic: Why Computers Don’t Belong in the Classroom, and Other Reflections of a Computer Contrarian, was not yet in print at the time this course was taught.)

Wresch, William. Disconnected: Haves and Have-Nots in the Information Age. New Brunswick (NJ): Rutgers University Press, 1996. See the extensive discussion on the chapter entitled “Information Rich, Information Poor” in the body of the article under the heading “Educational Barriers: The Skills Gap.” In addition to the case studies, Wresch also provides definitions of several different categories of information – public, personal, organizational, professional and community – and assesses their accessibility to different populations.

Journal and Magazine Articles:


Gould, Stephen Jay. “Cordelia’s Dilemma.” Natural History Feb. 1993: 10-18. Gould provides an interesting take on publication bias in the sciences, pointing out that the reluctance of scientific journals to publish studies that lack dramatic results severely skews any subsequent analysis of the published data. (If nine out of ten similar studies show no correlation, and the tenth is the only one that gets published, “ten percent” is effectively transformed into “one hundred percent” for anyone who does a literature search.) Students found his arguments somewhat difficult to follow, but the subject is important enough to be worth the extra effort.

Heller, Steven. “A Cold Eye: Are Hate Groups Taking Over the Web?” Print Sept./Oct. 1996: 22-24. Reading this article on Neo-Nazi propaganda on the web is what first stimulated my thinking on the subject of web site evaluation and led to my own article (below.) Full of volatile information, the Heller piece is particularly useful to kick off a class discussion on Freedom of Speech.

Holt, Patricia. “Book Brawl: Independent Bookstores, the Internet, Chain Stores and Discount Houses Duke it Out.” Whole Earth Summer 1999: 64-67. This description of the role megastores play in the demise of independently owned local companies might be particularly interesting to aspiring entrepreneurs, who form a significant percentage of most entering classes. Amazon.com’s questionable practice of selling slots on its best-seller lists to publishers bears discussing, even taking into account the obvious editorial slant of the piece.

few before this one, many more since — but this one says it the way that I want to say it, stressing the five criteria of authority, agenda, accuracy, currency and scope. Since I frequently deliver this material as a lecture, in this class I assigned it as a reading instead, freeing up the class time for another activity.

Newspaper Articles:

Dunn, Ashley. “Most of Web Beyond Scope of Search Sites.” Los Angeles Times 8 July 1999: A1+. Adeptly illustrating the relationship between indexing and access, this article points out that well over 80% of web sites are not indexed in any search engine, making them truly “invisible” to most users.


Lieberman, David. “Net Hangs Out of Reach of Have-Nots: Web Study Shows Educated, Affluent Widening Gap.” USA Today 7 July 1999: B2. This is an excellent and concise summary of the 1998 Digital Divide report, accompanied by USA Today’s easily digestible graphics. For more complete information, see the official government web site below under “Online Sources.”

Sami, Marium. “A Link to the Outside: Saudi Women Find a Whole New World by Surfing the Internet.” The Spokane Spokesman-Review15 August 1999: B2. This one-page article on the burgeoning internet presence of Middle Eastern women contains as many talking points as many book chapters, touching on issues from official filtering of sites critical of the Saudi royal family to the difficulty Arab women have finding a female technician to service their computers (having a strange man in the house would be unseemly.)

Online Sources:

Dupont, Kyra and Eric Pape. “E-Mail is a Real Revolution: For a Cambodian Opposition Leader, the Net is a Lifeline.” Salon 15 March 1999. <http://www.salon.com/21stfeature/1999/03/15feature.html>. This article describes the role of the internet as an underground communication medium for the Cambodian opposition and provides an interesting contrast to the Heller article on white supremecist web sites. It is also useful to expose students to fairly mainstream online publications such as Salon and compare them to print sources.


United States Department of Commerce. National Telecommunications and Information Administration. “Falling Through the Net: Americans in the Information Age.” 1999. <http://www.ntia.doc.gov/ntiahome/digitaldivide/>. The official government web site on the Digital Divide contains the text of the three reports and numerous fact sheets. But it should be emphasized to unsophisticated users of government documents that all government information is not created equal: this is an executive branch publication of a democratic administration, with all that implies.

**September 11th and PLG: an Editorial Exchange**

by John Buschman and Mark Rosenzweig

September 11th has changed many things, PLG included. The petition “Emergency Declaration for a Halt to Preparations for Bombing Afghanistan: Librarians Speak Out,” written by Progressive Librarian co-editor Mark Rosenzweig and originally posted on the PLG web page [now posted at www.lib.org/librariansagainstwar], appeared to be PLG’s primary response to those events — and it sparked a debate. Let me say from the beginning that I know that Mark and others of like mind reflected study and thought in their PLG-net postings on September 11th, and to be honest, I have mixed feelings about all of this. As Mark wrote (in response to some of my comments on the Emergency Declaration), “the problem with [PLG position] statements is that we don’t have a mechanism in place for ‘officializing’ them. That’s why the petition format always wins out, because it’s just a question of ‘I’ve written this’...and those who agree should sign it.” As I noted then, the tone of this petition was reasonable, but it had absolutely nothing to do with our existence as a professional organization — even one with as broad a mandate as PLG has proclaimed. That librarians were making these statements was meaningless. In contrast, I argued that librarians or a library organization making statements about ourselves and our profession being dedicated to a form of justice which is embodied in human freedom, open intellectual inquiry, equality, and based on the rule of law would be meaningful, and in my opinion more powerful than simply being against war or injustice on principle. Having read the Emergency Declaration, I am not so naive as to believe American policies have no bearing on the September 11 attacks, but I’m finding the slaughter of Americans difficult to explain away in some Left “position” on foreign policy. (Irving Howe long ago ruefully noted the Left’s compulsion to always have a “position” on everything.) The kind of framework we (PLG and Progressive Librarian) should adopt in response to September 11th and to issues like war, peace, poverty, and justice in general should be more like that of the American Association of University Professors (AAUP):

The events of September 11, 2001, have undermined our sense of