

Getting Past Google:

Perspectives on Information Literacy from the Millennial Mind

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Abstract

Many Net Generation students understand how to find information and post their own content online. However, they may have only limited knowledge about how to effectively evaluate online resources and ethically use them. Likewise, large numbers seem unaware of the limited control they may have over the personal information they divulge online and the implications that holds for how their content is used, by whom, and for what purposes. This student perspective on information literacy uses anecdotes, personal examples, and statistics on Net Generation Web usage to highlight gaps in students' net savviness. Also discussed is how faculty, librarians, administrators, and students must work together to close those gaps.

Introduction

I knew that I had been caught as soon as my brain processed the frozen image on the television. Dr. Phil, his finger raised in mock indignation and his eyes caught mid-glare, stood paralyzed on the screen. Beneath his body, large block letters screamed, “MIND YOUR BUSINESS!” Someone, I knew, had used our TiVo to pause the television. He was sitting right behind me.

“Interesting,” sang my 16-year-old brother from his seat on the couch. “It seems as though these families are fighting about privacy issues. Parents sniffing around. Siblings listening to conversations.... Interesting, indeed.”

He was hinting, of course, at the fact that I was a snooper. A mischievous sibling rifling through my younger brother’s business for the benefit of reporting back to the family matriarch. But unlike the family members on Dr. Phil’s weekday show, I had taken my detective work high-tech.

I had been spying on my brother by surfing his MySpace page.

Sure, I was slightly ashamed. A little red in the cheeks. But, as I reminded my brother, although he had been savvy enough to discover I had been on his MySpace page by using the browser’s history button, he had been cheerfully oblivious to the fact that his MySpace profile—a collection of photos, blog entries, and messages from friends—had been feeding me information for months about the inner workings of his daily life and the lives of his friends. I knew every rule that they’d broken hanging out at our house, every tidbit of gossip exchanged at their lunch tables, and every less-than-flattering comment he’d made about me and the rest of our family. (To be fair, I hadn’t been savvy enough to cover my own tracks by clearing the browser’s history.)

Without the slightest hint of password protection or privacy features, he’d basically handed me the telephone and asked me to listen in.

Like me and a growing number of Net Generation students, my brother is an old pro at tracking down information and creating content on the Web. Understanding where information originates and how content is used, however, is another story. Though he quickly learned to censor his Web site for my eyes, he never stopped to consider whether I was his only threat. In the weeks that passed before my brother discovered my snooping, he never considered how the information he produced might be viewed by potential employers, teachers, family friends, or even total strangers on the Net.

He is not alone. This fall, as a new batch of college freshmen entered the nation’s colleges and universities, campus administrators at a growing number of institutions began to lecture on the potential risks involved with Internet postings, specifically on social networking sites such as Facebook or MySpace.¹ College newspapers and curricula are following suit, urging students to think twice about what they post in their online profiles.

On the pages of North Carolina State University’s *Technician*, the editorial board offered the following tips for would-be posters:

1. Don’t put your cell phone number and your address on there—who knows what serial killers who also enjoy water skiing are on there looking for a *Silence of the Lambs*-style friend/addition to their person coat.
2. Don’t put pictures on there you don’t want everyone to see—a great gauge for this is to pretend your grandma gets on MySpace.com once a week because she is hip and likes to check out emo bands. Do you really want her to see you chugging a

beer while shaking your Laffy Taffy in the air in the sweater she knitted for you last Christmas?

3. Don't just accept everyone who asks to be your friend—when did we become so unselective of our friends? Have a screening process. If you don't know them, don't let them be your friends. It may be a weird ex-boyfriend or girlfriend checking to see if you are in a relationship.

Now that we have those things out of the way, remember these sites can be really good for meeting new people, but they are also filled with people who may try to take advantage of you—or they might just be really old. There is no guarantee [sexystud22](#) on MySpace.com is really a sexy 22-year-old stud or hot chick.”²

After resident assistants discovered photos of underage students on a Facebook profile that suggested they were consuming alcohol, 15 students were handed citations during the 2005–2006 academic year for alcohol violations.³ Students at Western Kentucky University faced similar charges stemming from incriminating Facebook photos in November, and a student from Fisher College became the first student expelled for comments posted on the Web site. The student, president of the college's Student Government Association, made threatening comments against a campus police officer on the Web site's message boards.⁴

For those students, my brother, me, and a growing number of others, the problem is fundamental. Growing up alongside the Internet, we accept technological changes in stride, quickly adapting them to fit our personal and learning lifestyles. Along the way, however, we often fail to analyze those changes and their broader impacts on society. We may know how to track down an answer on the Internet, but we're often quick to accept it without a critical evaluation of its source or content. We are, in the words of the American Library Association (ALA), information illiterate.⁵

The term *information literacy* is increasingly discussed among research librarians and college administrators, but its importance cannot be overstated. As a Net Gen learner—with an admitted penchant for all things Google and the time-saving qualities of Wikipedia—I've learned firsthand the hard lessons that information illiteracy has to offer. I've assembled sources for research papers that collapsed under a professor's discerning eye. I've built an MP3 play list by ignoring the tiny voice in the back of my head that wondered, “This is legal, right?” And I've created a blog only to discover that my grandmother did not want to read the details about the rambunctious exploits of my first night in an Irish pub.

My stories will sound strikingly familiar to today's and tomorrow's college learners, underscoring the importance of a new dialogue on what information literacy is and how it must be translated to the next generation of Internet-savvy learners.

Literacy Lingo

When librarians and researchers start conversations about information literacy, the most commonly referenced definition comes from the ALA, which defines information literacy as the ability to recognize when information is needed and to then have the ability to locate, evaluate, and use effectively the needed information. An information-literate learner, according to the ALA, is someone who can not only access information but also evaluate that information and its source and then use that information to accomplish a specific purpose.⁶

Getting Past Google

For the average college student, however, that definition sounds like a page from a course syllabus or a talking point on a tour of the university's library. The idea of evaluating information and then using it to accomplish a specific task may seem to hold little relevance beyond merely looking for sources for a class research paper or evaluating the merit of an unattributed Web site. But the core principles of information literacy—access, evaluation, use—crisscross with nearly every technology that the average college student will use on a daily basis, even those used for managing their personal lives. Realizing where these intersections occur takes little more than a reflection on the most popular technological tools in Millennial students' daily routine and the questions they raise for creating a new class of information-literate scholars.

Conducting Research Online

On a recent trek across Europe, I kept a worn, frequently folded scrap of notebook paper shoved in the back of my travel journal. On it, I listed some of the most important questions that came to mind as I encountered new places and cultures:

1. Who is Vittorio Emanuele, and why is every building in Rome named after him?
2. Does William Wallace really look like Mel Gibson?
3. Why do people still live at the base of Vesuvius? Isn't it going to erupt again?
4. How many people died at Pompeii?
5. I thought *The Scream* was stolen. Why is there one hanging in the art museum in Oslo?

My friends and I called it the Google List—a compilation of burning questions for which we simply had to know the answers.

When it comes to such trivial matters, it's hardly surprising that "Googling" has become second nature. But, as the Internet has expanded over the years, many college students turn to the Web not simply for quick, meaningless information but as the starting point for serious academic research. My peers and I use computers for nearly every aspect of our daily lives. I cannot remember the last time I wrote an assignment by hand—even something of fewer than 100 words. My planner is digital, my music source is digital, even my news comes from the computer. The Web, on its own, delivers weather, directions, clothes, and movie times.

In a study of more than 9,000 college freshmen and seniors in 2004, 93.4 percent responded that they owned a computer. The most common use for those computers was writing documents and sending e-mail, followed by surfing the Web for pleasure and then for classroom activities.⁷ In a recent study conducted for *Family Circle* by Harris Interactive, 13 percent of the teens surveyed reported that they spent between four and five hours a day on the Internet.⁸ It's no surprise, then, that academic pursuits start at the same place as the rest of our lives: the computer screen.

Evaluating the Web

It's not as if the Internet were an inappropriate resource for academic information. Each day, more archives move online, providing online access to documents that previously required a tank of gas and an afternoon to find. News organizations have started updating current events on a minute-by-minute basis, using the Web to provide an interactive approach to current issues through timelines, archives, and photo galleries. Academic studies are often published online with statistics databases

accessible to outside researchers. Academic journals are increasingly found in both paper and Web form.

The problem is that the Web is more than a playground for the academically sound. “Research papers” can be authored by anyone, from a senior scholar in a particular field to an enthusiast with little or no academic training. When a deadline is approaching, it is easy to ignore these simple realities in pursuit of a quick fix.

Even as a graduate student, I approached every research paper in the same way: I typed key terms into an empty field and hit Search. I perused the top hits, slowly getting a background on the subject. From there, I felt secure enough to search for my own sources in other libraries or journals. Disaster occurs, however, when students do not take the extra step, when they merely accept the most popular search results as gospel. That is where the need for training in information literacy is desperately needed, both to teach students where to search for reliable sources and to teach them the proper questions they need to answer to determine whether a source is credible.

For many professors and librarians, the answer to the problem is to merely give students a list of “questions to consider” when evaluating sources at the start of the semester. While these lists are useful, they are often crumpled up or discarded by the end of the semester. More useful is devoting classroom time to real applications, such as a classroom exercise dissecting particular Web sites or an online tutorial that walks students through guided evaluations of source material. Learners need to see examples of both the right and the wrong places to look.

Professors and librarians can also offer research guides for particular subjects, offering key places to search for information. Course management systems, now becoming a staple of most institutions, can be valuable places to offer links to reputable journals, databases, and archives.

Grasping All Technologies

In a world where virtually everything—from map directions to textbook ordering and weather reports—is found online, it’s not surprising that more and more college students are turning to the Web to navigate their academic lives. They simply expect that, like the answer to my own musings about Vittorio Emanuele (the first king of a united Italy, or so says Wikipedia), the answers to their probing academic questions will be found with an “http” in front. Increasingly, this means that students often limit their search options by relying on digitized sources when more relevant, hard-copy sources may be found on a library’s shelves. It only takes a short trip down to the typical university archive to illustrate this point. In a world of Internet databases and online journals, few students know how to flip through the files of a paper archive or how to load film into an old-fashioned microfilm scanner. Instead of venturing out to explore these technologies, the average student will merely turn to the Web, often embarrassed to ask for help or clueless about where to look. As an undergraduate, I often perused the university library’s Web site for relevant articles for my research. If an article didn’t exist in PDF form, I simply chose one that did, often limiting the research and knowledge at my disposal.

The answer, many librarians and administrators decide, must be to move information online, but that approach ignores the underlying problem. As new technologies emerge, and as many institutions vigorously push e-access, anxiety increases about using newly outdated technologies to locate more traditional information sources. It merely takes an introduction to the library or a walk through the campus journal collection to introduce undergraduates and graduates to these existing reservoirs of knowledge. Just as we provide templates for accessing information online, templates must be provided for accessing information in more traditional forms.

Copyright Bandits

In my defense, it wasn't *really* my fault. In fact, I don't think it was my fault at all. Had my \$400 design software had sufficient clipart, it never would have happened. I never would have felt the temptation to search for additional images on the Web. I never would have imported them into my site. I certainly wouldn't have let the site go live with someone else's photos on my URL. And, of course, I never would have received that polite, yet curt, e-mail kindly asking me to obey the basic principles of copyright law.

The problem, as I told them in an e-mail, was that I really never considered that the content I "borrowed on the Web" was not free. And even if it did belong to someone else—there was no harm in my taking it for personal use, right?

While most college students learn the dangers of "borrowing" a few phrases from an academic textbook, few consider the danger of borrowing images or video from the Web for their own use. I learned the ins and outs of copyright infringement during a crash course on copyright law at a journalism conference. As the speaker ran through a laundry list of possible copyright infractions, my face grew redder at each bullet point. My staff and I had "borrowed" JPEG files from the Web when we couldn't find what we wanted in the clipart galleries we had legally purchased. We had used maps and graphics—without attribution—that someone else had created. I'd even used movie clips on my personal Web site. Partly it was a belief that no one would stumble across the material. Who, after all, would care that we had swiped an online image? But, more significantly, none of us realized that what we were doing was breaking the law.

Unless students gain an understanding of copyright law—what it protects and what it doesn't—they won't think twice about crossing the line. Most students genuinely believe that if they are not selling someone else's photos as their own or stealing logos for a marketing campaign, it doesn't matter. Few recognize the routine ways they abuse intellectual property. Though some Web sites warn users that particular material may be covered by copyright, the responsibility rests with the user, not the copyright holder. Academic institutions—where intellectual property is created, protected, and revered—must be a driving force in educating the next generation about how copyright law applies to the Web. While few curricula leave room for a comprehensive legal review, individual professors can take the initiative to make sure that their students understand the ways that material is protected in cyberspace.

Hey, You! Facebook Me!

It wasn't lying. Not exactly.

I'm aware that I'm not really a staggering 5'8" (though I *am* a kayaking enthusiast and an amateur rock climber—ask anyone who went to camp with me in the sixth grade). My hair really only looks strawberry blonde under ultraviolet light. And that picture—where I'm radiant, trim, and glowing—was taken when I was 16. But building a MySpace profile, I reasoned, was like telling someone your age in the twilight years. Everyone understands that honesty is a luxury no one can afford.

Social networking sites such as MySpace and Facebook are gaining popularity at America's colleges and universities, offering users the opportunity to create profiles and manage their friends through message boards, birthday reminders, photo galleries, and database searches. Users can post pictures of themselves or their friends, write messages on their friends' Web sites, or search for potential friends by university, age, interest, or hobby. Student leaders have taken advantage of the networks to campaign for office. Organizations have recruited for new members. Classroom

colleagues have even used the sites to set up study groups or work sessions. But the rise in popularity of these sites comes at a price. Students are often unaware of or unconcerned about how this information is created on the Web and how it may be shared.

Who's on the Other Side?

On a grand scale, my profile deception was fairly innocuous, but it underscores a frightening reality. Just as I could fudge the details on my physical appearance without reprimand, other users can fudge the details of their profiles—from their age to their background to their criminal record.

For years, public service announcements and *20/20* programs have warned parents and children about the dangers of Internet chat rooms. When a person is reduced to a screen-name jumble of letters and numbers, we're told, you can never trust who is waiting on the other side of the screen. Unfortunately, that message was lost with new technologies. It is more difficult to lie, we reason, when you're crafting an entire profile. Pictures cannot be fabricated. Friends and interests cannot be invented. Message boards do not lie. Do they?

They can. And they do.

By logging on to Internet sites and engaging in conversations with other users, college students trust the honesty of the person on the other side of the computer, sometimes at their own risk. We may have learned years ago to ignore strangers on the street or to avoid meetings with Internet acquaintances, but college students rarely consider the information that a potential stalker can assemble from the profile that provides a gateway for the initial exchange.

Just as countless children's books and public television programs have drilled in "Don't talk to strangers," the next generation must be reminded about the dangers of trusting names, pictures, or profiles on the Web, all of which can be altered or fabricated. Colleges have been responsive, educating students about the risks involved with credit card debt and binge drinking, but most institutions are behind the curve when it comes to Internet safety. For the protection of the student body, student organizations, health departments, and administrators in student affairs must make online dangers part of the conversation.

That's Not What I'm Really Like

While snooping through my brother's MySpace profile, I took the time to peruse his photo gallery and the galleries of his closest friends. I was shocked, the more pictures I found, at the images posted by his young, female friends. Some of them, as young as 14, published pictures of themselves striking provocative poses while scantily clad. Their mouths smeared in lipstick, their eyes lined in black, they try to look more than twice their age.

I asked one of the girls whose profile I had seen about her photos.

"I don't get it," I said. "You look...well...easy."

"Easy?" she said, her black-rimmed eyes sizing up the full 10 years of difference between our perspectives. "I'm not easy! I mean, I don't wear those clothes to school. But everyone posts those pictures on their Web sites. It doesn't mean anything."

But does it?

Increasingly, online profiles are showcases for more than just a list of hobbies. My male friends post images of themselves guzzling beer or drinking at parties. My female friends try to appear as

Getting Past Google

attractive as possible. No one seems to consider the messages that these images convey. My brother claims that he doesn't judge a girl's promiscuity on the basis of her pictures. After all, he echoes, everyone's pictures look like that. But I don't entirely buy that. After all, wasn't my first reaction one of judgment? Or, do these pictures merely desensitize the next generation to such images?

Some social networking sites imply a certain level of privacy for users. In its early days, Facebook required users to be affiliated with selected universities—and to have an .edu e-mail address to prove it. Later, the site expanded to include some high schools and corporate users, and Facebook recently announced plans to allow almost anyone to join. But, even when Facebook was limited to students at participating colleges, campus officials and administrators were free to use the site to monitor student behavior. Incriminating photographs—such as those of students drinking while underage—jumpstarted legal proceedings and fueled the debate over how much privacy can be expected online.

Public profiles on social networking sites can be searched by parents, siblings, employers, or faculty members. Reliving a night of debauchery may be fun among friends, but it sends a negative—even damaging—message to the recruiter with an application in hand. Students often forget how readily available information can be on the Web. Those same resources that allow us to find potential friends also open our lives up to new scrutiny.

Blogs, likewise, provide open windows into our lives. I kept a daily blog of my adventures when I studied abroad for a year. When I created my blog, I joined more than 8 million Americans who, by the end of 2004, had created blogs, according to a study by the Pew Internet & American Life Project.⁹ Like social networking sites, blogs are gaining popularity among college students and teens. If current use predicts future growth, blogs will be a strong force in years to come. In a survey of American “tweens” and teens, more than 6 percent of teens, 38 percent of teenage girls, and 17 percent of teenage boys reported that they had a blog.¹⁰ I never considered, however, that someone looking for my contact information might search for my name and be brought to my blog site, where the nightly antics of my friends and I were displayed in full detail—not to mention the snide comments that I made about the people I interacted with on a daily basis.

To protect students, campuses must not merely educate about the expectation of privacy on the Web. Campuses must begin candid dialogues on how such information can be used by the university. For instance, is it legal and acceptable for the university to prosecute a student based on a photo of illegal activities posted on another student's profile? Before these situations occur, there is a need for dialogue between legal advisors, administrators, and students to develop reasonable and innovative rules for the use of Web material.

Downloading a Court Order

In a 10' x 13' dorm space, there was hardly room for a massive entertainment system. Or two separate CD players to accommodate my musical tastes and my roommate's potluck preferences. So, after listening to 'NSYNC on a three-hour loop one afternoon, I peered over her shoulder to see how she was getting that music from her laptop. It's Kazaa, she told me, a free file-sharing network on the Web. You just search for a song or an artist, she said, and download it from someone else's files.

Simple enough, I thought, as I plugged “Kazaa” into a search page. Like most college students, it was the last time I considered buying a CD. In a study by the University of South Carolina, 85 percent of the 2,000 college-age students interviewed said they preferred MP3 players to traditional radio. Most (72 percent) said they found new music on the Web instead of the radio.¹¹

Those were the days before the Recording Industry Association of America (RIAA) began handing out subpoenas for downloader information—long before preteen girls and elderly grandmothers were targeted for illegal downloading.

I didn't think twice about loading my playlist each morning or searching for new songs in the afternoon. After all, I wasn't burning CDs and selling them to my friends. My 25 songs were a drop in the bucket compared to some students' collections. Plus, what was the point of spending \$15 on an entire CD if I only wanted one song? Not to mention the fact that I wasn't copying music from a music store or an artist's Web site. I was simply copying information that someone else had purchased. So no one was really losing, right?

Thanks to a vigorous effort by the RIAA and the shutdown of sites like Kazaa and Napster, student awareness of the ethical issues surrounding music downloading is rising. Campus firewalls and legal online music services have also helped stem the copyright violations at many colleges and universities. But illegal downloading has not stopped. In fact, the merchandise has only diversified. DVDs, TV shows, and software are ripe for the taking as long as you know where to look.

When I considered buying expensive desktop-publishing software, for example, a friend told me to give him a day. The next afternoon, he had a burned disk with the pirated software, saving me hundreds of dollars. (I bought the software at the student bookstore the next day when paranoia made me pitch the disk in the trash.) Safeguards like product registration only go so far—there are plenty of programs that generate access codes and product registration numbers, if you know where to look. Most students, even if they do not know themselves, know someone who can find that information.

For the average student, myself included, the message about illegal downloading is not delivered strongly enough. It's easy to rationalize why your small contribution to the downloading problem is too insignificant to matter. After all, I've spent hundreds of dollars on computer software. Don't I deserve a break? I'm only using it for myself—it's not like I'm profiting from it! They'll never worry about one person downloading the occasional copy of Microsoft Office, right?

Universities must take a greater role in posing these ethical questions to students and helping students learn that even if downloading doesn't have immediate or obvious consequences, it is illegal. I never considered that getting music from another user was like walking out of the store with a printed CD. Students need to hear these questions, think about these scenarios, and come to realize, on their own, the ethical answers to the problem. Ethics, in a digital age, is not merely for the aspiring business student or lawyer. Students from all disciplines must understand the repercussions of illegal downloading, both from a legal and a social perspective. As technologies change, campus codes of conduct must reflect those changes, including IT rules to set campus expectations for university networks. Universities must decide how illegal downloading will be monitored and punished, and every student must be made aware of those policies to ensure consistency. It's not enough to simply wag the finger at illegal activity, either. Students, faculty, and administrators must come together to brainstorm alternatives to illegal downloading, including partnerships with online music services.

But Is This Really Information Literacy?

Facebook and iTunes may not seem like natural starting points for discussions about information literacy, but each of these areas—Web research, copyrighted material, social networks, and illegal downloads—fit within ALA's definition of information literacy: access, evaluation, and use.

Getting Past Google

Students must be educated on the proper places to access information, whether it is a research article in a reputable journal or a legal piece of software or music. They must understand how to evaluate the source of statistics online and the profile of a potential acquaintance on MySpace. They must understand not only how to adequately cite sources in a class assignment but also how to give proper credit for material found online.

Information literacy, therefore, becomes an issue beyond the book stacks of the campus library. It is an issue for administrators in student affairs, who must warn students about the dangers of giving away too much information or being careless with their privacy. It is an issue for legal departments, which must ensure students understand the legal implications of free-for-all downloading. And it is an issue for college and university faculty, who have a responsibility to educate the next generation about sources for information and how to engage with them.

Endnotes

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