

C E N T E R
F O R
**Children &
Technology**

**Old Wine in New Bottles:
Ethics and the Internet**

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Introduction

I first became interested in the field of technology and education back in the early 80's, while working at Children's Television Workshop. The company was in the process of launching a software division that would make the kind of entertaining, yet educational products that CTW is best known for. I knew very little about computers or software when I started working there and my very first assignment was to go to a software store in Manhattan and purchase copies of their best-selling games and design programs. We had made arrangements with a computer camp to spend the summer working with their campers. Our goal was to learn from a group of computer-sophisticated kids about the elements of game play and strategy that they found most appealing and challenging. We spent every afternoon that summer running game-playing clubs. The kids at the camp not only taught me a great deal about the nuances of individual programs, but they opened my eyes to the creative and expressive potential of computing technologies. That summer I watched kids build their own video games, I saw them discuss and deploy complex strategies that allowed them to conquer the games they were playing. I learned about the tradeoffs of magic versus brute strength in the Dungeons and Dragons-like game world of Wizardry, and I was introduced to the power of simulation in a survival game called M.U.L.E. What impressed me most was not the technology per se, but rather how wonderfully creative and clever the kids could be at devising strategies and building imaginative scenarios that no doubt pushed the software programs well beyond their intended limits. This element of creativity, the ability these children demonstrated to appropriate and re-interpret the technologies at hand, continues to be an element of my work with children, technologies and schools that I am most interested in.

How does this interest in children's inventiveness relate to the widespread concerns in current American culture about ethical questions and the Internet? I am interested in taking a critical look at the fears and concerns that underlie our deliberating about ethical issues, the Internet, and other new technologies. I believe that these concerns are not new. Rather, there's something about the Internet—its speed, the power it places in the hands of individual users, and kids' facility with it—that we as adults and educators find particularly threatening and that pushes us to revisit these long-standing questions with new, and perhaps exaggerated, urgency.

Even as we acknowledge widespread concerns about ethics and the Internet, we also know that the growth of the Internet and the development of the World Wide Web have the potential to do so much to support and advance education. I am deeply invested in seeing this new resource, these new tools, which are still very much in their infancy, reach their full capacity as integral supports and extensions of the educational experience for children and teachers nationwide. I state up front

that I do not believe in censorship, I do believe in responsibility, and I believe that these principles are consistent with the kind of critical, student-centered educational practices that schools should embrace. The bias that I bring to this topic is rather than censoring and controlling students, in relation to the Internet or to any source of information, we need to think about empowering students and helping them to make responsible and judicious decisions as they go about using these new technological tools.

Under the Clinton/Gore administration we have witnessed the launching of an ambitious agenda to get every classroom connected to the Internet by the year 2000. The administration is being proactive, acting on its belief that providing Internet connectivity from our schools is an important step toward addressing a host of rapidly emerging technological inequities. As a society, we recognize that technological skills are going to be essential not only for continued learning, but for competing in the job markets of the not-too-distant future. Public school access to the Internet is being promoted as an important component of an equity agenda. In the same way that learning to read and write are considered essential skills that all children must acquire, access to and fluency with the resources and communications capabilities of the Internet is becoming a part of what it means to be a literate member of society. But exactly what skills, what abilities, does this kind of literacy entail? I will return to this question later in this paper.

The Clinton administration's efforts are to be admired. And yet, as is true of any progressive social program, bringing schools into the information age raises a host of complex questions that need to be discussed and debated. Access to the Internet may be viewed, from a policy point of view, as a right of all school children. But once access is in place, it becomes a responsibility for the communities that have to deal with the complexities of putting policy into practice.

It is these responsibilities that raise the complex questions, and they are complex because they go right to the heart of how we define ourselves as teaching and learning communities. These are the ethical challenges that schools are confronting—challenges about responsibilities and freedoms. How much responsibility should faculty assume for students' behavior? How much trust are we willing to place in students? What are the legal ramifications if students come across content that is deemed inappropriate? What is and is not appropriate, and for whom? Whose definition of appropriate are we embracing?

The popular press has done a predictable job of raising the specter of fear. Headlines like "A Father, A Daughter, the Web and an Unstoppable Flow of Pornography" make it seem like all you have to do is log-on to the Internet and your

screen will be filled with smut. In actuality, the number of documented instances of students accessing inappropriate content or being the targets of opportunistic solicitations are quite few. The information manager at the Utah Education Network, a state agency that provides access to Utah's public education system, estimates that "fewer than one percent of all requests for Internet pages are intentional attempts to access inappropriate information." (New York Times on the Web, April 25, 1998). When something does happen, however, the media's spin tends to paint a picture of the net as home to every undesirable piece of content and predator that we can imagine.

I asked my friend Libby Black, who for the past 10 years has been an Internet Specialist with the Boulder Valley Public Schools, how many instances of inappropriate student behavior she was aware of in her district. She told me that over the past five years they had had three problems at the elementary level, which were the result of a substitute teacher not being familiar with the district's rules about kids surfing the web unsupervised. At the high school level they have had more instances of students accessing pornographic material, but no more than two dozen in six high schools during a five-year period. For the past six years I have worked in schools in Union City New Jersey and while there have been one or two instances of kids printing materials that were deemed inappropriate by the school's acceptable use policy, it's fair to say that this is not something that happens with any kind of regularity.

What strikes me as curious, is how fearful we are when the actual examples of problems arising because students stumble across or perhaps even deliberately seek inappropriate content are few and far between. And yet, it is understandable—especially in a society as litigious as the U.S.—that schools are concerned with protecting themselves and ensuring that the policies and practices that they put into place will not leave them legally vulnerable. There is not a school community in this country where these issues don't loom large.

Schools do feel responsible, and they do worry about the threat of lawsuits and the threat of public scandal. However, I also think that access to the Internet raises a host of issues that are serving as emotional triggers for us all, and our reactions tend to be oriented toward rapid-fire solutions rather than reasoned debate and discussion.

Emotional Triggers

What are these emotional triggers? I think they are issues about power and control that are always implicitly present in schools, and in all adult-child relationships, and that are being made explicit in new ways by the particular character of the Internet. Specifically, Internet access at the classroom level shifts the balance of power in several important respects:

1. **THE DECENTRALIZED ARCHITECTURE OF THE INTERNET EMPOWERS INDIVIDUALS.** Whom we talk to, what we access and what we share with the world is now more directly in our hands than was ever true in the past.
2. **SCHOOLS ARE USED TO BEING ABLE TO CONTROL AND SELECT THE INFORMATION RESOURCES THAT STUDENTS USE AND ARE EXPOSED TO.** Accessing information on-line dramatically alters this dynamic.
3. **STUDENTS OFTEN DEMONSTRATE A FACILITY AND UNDERSTANDING OF THE TECHNOLOGY THAT IS HARD FOR ADULTS TO ACHIEVE.** For educators who are comfortable learning from their students, this does not represent a threat. But for those of us who are used to more directive authority, this situation is experienced as a challenge.

Most schools tend to translate these tensions into five areas of pragmatic concern:

1. We worry about preventing students from accessing inappropriate content;
2. We worry about protecting students from “outsiders,” who might gain access to email accounts, pictures, and personal information that might enable them to determine where students live;
3. We worry about appropriate uses of email;
4. We worry about expressive content; that is, what kinds of student-generated content is allowed to go up on a school’s web server;
5. And, we worry about plagiarism and issues of authentic authorship.

Underlying each of these concerns are a set of assumptions that have to do with how we think both about *protecting students* and *protecting ourselves from students*.

I would likely to briefly address each area and consider how the dilemmas brought forth by the Internet are and are not new. I will conclude by briefly outlining the educational challenges the Internet places before us, and how we need to broaden our understanding of the kinds of literacy skills these new technologies require us to think about.

Accessing Inappropriate Content

Schools have tended to deal with issue in one of two ways. The first is to use censorship or blocking software that filters out content that is deemed inappropriate. Some of these programs filter content based on key word searches. If the word “gay” appears in a site, or if the word “sex” shows up, than the site is usually blocked. Other filtering programs use systems that rate the appropriateness of a site. Both the

filters themselves and any ratings they produce are, of course, based on someone's definition of what is appropriate and inappropriate. In most of these applications—though not all—the user does not have access to the list of terms that are being censored by the software. Some complaints about the opacity of these filters have gained publicity—such as some students complain that the word “breast” is filtered, making it impossible for biology students to do on-line research about breast cancer. As always, language remains contextual and consequently blocking software will always be an imperfect solution. Use of blocking and filtering software, however, appears to be quite widespread—in a recent survey conducted by the National Education Association, about half of approximately 300 teachers said their schools were using some kind of blocking or filtering software.

A second alternative that many schools have embraced is to establish acceptable use policies. These policies often ask students and their parents to adhere to a kind of code of honor around using the Internet. Schools that elect an acceptable use approach are operating under a different set of assumptions than those that use filters—namely, that students can and should be responsible for their behavior and that assuming responsibility for one's actions is a good thing and something we should be advocating as an important life-skill.

Many schools, of course, are using some combination of both of these responses.

Protecting Students' Privacy

Another concern of school communities is whether to post student pictures and email addresses on the Internet. Schools worry about less-than-desirable strangers knowing the names, email address and perhaps even the whereabouts of children. Schools and children's advocacy organizations worry that commercial entities targeting products at students will take advantage of personal information if it is available on-line. On the other hand, students who are building Web pages— for example, participants in the popular ThinkQuest competition—want and deserve credit for the work they do. They often want their pictures up on the Web and perhaps they want to be able to share their expertise with other students. Rather than simply prohibiting student photos and email address to appear on-line, many schools are electing to develop guidelines that direct students not to share personal information (telephone numbers, home addresses) with strangers.

Appropriate Use of Email

While schools are often willing to provide faculty with email accounts on the school server, in many schools there is a reluctance to provide email for students. In part, this relates to the issue of protecting students' privacy. However, I think if we take a hard look at our policies and practices around this issue, we are also worried about what students might say, and we worry about being responsible for having given them access to this new medium for speaking up.

It is true that there is lots of room for misunderstanding in virtual communication. In this medium, you cannot see people's expressions, gestures, or hear their tone of voice. A statement that is meant to convey irony can easily be read as an insult. With the slip of a finger a message meant as private communication between two individuals can be broadcast to many.

There's a general rule with email that says: "Don't write anything you don't want someone else to read." Almost all of us, however, ignore this and treat email as private even though it's not. System administrators always have access to people's email and a number of recent prosecutions have shown us that email can be retrieved to serve as critical evidence.

In other words, email is a new mode of communication for all of us and its place in our day-to-day activity is still evolving. However, as everyone with a newly-enriched relationship with an on-line relative or a newly-close relationship with a distant old friend can attest, email is probably the "killer-app" of the past few decades, one that has become more than a novelty or a form of entertainment for millions. To what extent are we justified in excluding our children—and young adults—from making use of this means of communication? We need to reflect more honestly about whether we are protecting them from what they might do, or protecting ourselves from hearing more from them, and hearing it more publicly, than we might wish for.

Plagiarism and the Authenticity of Authorship

Many educators are also concerned about the "cut and paste" phenomenon—that students will simply find information on the web and make use of it as is, without interpretation or synthesis. More recently, there have been a series of reports about paper-writing services that are available on the web, where you can go and pay a fee to have a term paper written for you.

More than any of the other concerns being addressed here, this one is an age-old concern in new clothing. While it is quicker to copy a web page into a word processing document than it is to re-type a photocopy of your sister's college application

essay, the two tasks are fundamentally the same. Again, the risk is not located in the technology but in the trust we hold for the students we work with. Would your students copy an essay to avoid writing one for themselves? Having or not having access to the Internet does not change the answer to this question.

Further, research evidence is showing that this concern seems to be an early and superficial one that fades away as teachers become more familiar with using the Internet in their teaching. Recent research that we have conducted around a state-wide technology initiative in Rhode Island found plagiarism to be a non-issue for the majority of teachers we surveyed. Teachers involved in the Rhode Island project do not report increases in plagiarizing (Henriquez & Riconscente, 1998).

A more nuanced but closely related issue that should be mentioned here is naive plagiarism—committed by students who are unclear about the boundaries separating summary and interpretation of a text from direct or near-direct quotation. This problem, though, arises from the paucity of many students' experiences with primary and secondary resources, not from their desire to intentionally subvert the learning process. Access to the Internet is, in this case, an enormous opportunity to increase students' chances to experience the process of reading, summarizing, and analyzing or interpreting text written by others. But again, making this experience a learning process, rather than a confusing jumble that leaves students not knowing what to do with the information they track down, requires careful and attentive teaching and multiple opportunities for experimentation over extended periods of time.

Expressive Content

The question of who decides what kind of content is okay to put up on a school's Web page is complicated, and it gets more complicated as students are increasingly involved in producing Web-based resources on a wide range of issues. The story of the C.H.O.W. web site developed by a group of 13 year old boys in a Texas community, is a case in point. C.H.O.W. stands for Chihuahua Haters of the World and grew out of a drawing that one of the boys made in the school's computer lab. A friend remarked that it looked like a Chihuahua being killed and that joke led to the development of the Web site. Well, unfortunately, the site captured the attention of a Chihuahua breeder in Fort Worth, and the Superintendent received a flood of email complaints. Despite the fact that the student who was the principle author of the site agreed to remove all references to the school, he was suspended from school and transferred out of his favorite class—the computer lab. The American Civil Liberties Union got involved in this case claiming that such actions by school officials are a direct threat to our first amendment rights to freedom of speech.

Old Concerns, New Worries

In each of these cases I would like us to consider what is it we are really worried about?

Inappropriate content can be found at the convenience store, the local newsstand, and the public library.

School and town newspapers have for years been publishing pictures of their students and identifying them by name.

In the same way that email can slip out of our control, a personal note or journal can be misplaced and read by those for whom it is not intended.

Plagiarism was not invented with the Internet. It is really no more difficult to copy out of an encyclopedia than it is off of a web page, and there are long-standing traditions of buying and selling term papers in many high schools, colleges and universities.

And, for many years students have created a means by which to express opinions that may run counter to those of the dominant culture. For my generation underground and alternative newspapers were our venue. For this generation, Web sites represent an alternative means of expression.

These are not new issues that we are dealing with—and yet in relation to Internet technology we have a tendency to introduce them as novel concerns. The technology is challenging us and pushing us to extend and expand the reach of what we traditionally do. I think that where we feel the threat most acutely is in the power of these technologies to chip away at the institution of schooling. This is threatening—not necessarily to any of us as individuals, but to the cultural practices that have for the past century defined what we think of as school. The Internet lets the outside world in and the inside world out. It vastly broadens what we commonly think of as audiences for student work and for a school's performance. These technologies have the potential to be revealing about what has traditionally been a highly isolated and self-referential profession. Most importantly, these technologies have the power to give children and youth an expressive and inventive voice in the learning process—and not all of us are equally comfortable with this.

The Internet is here to stay. It is not just another educational fad. It is becoming essential to how millions of us communicate and function in our daily lives. More and more schools are coming on-line. In just three years, the percentage of U.S. public schools with Internet access has increased from 35 percent in the fall of 1994

to 89 percent in the fall of 1998 (NCES, 1999). I think it's also fair to say that the most far-reaching possibilities of the technology are not going to be discovered by people of my generation. Rather, the technology is much more likely to be stretched by the creativity of people who are learning in our K–12 school systems today.

Rather than thinking about restricting access or limiting the scope of what students can do, we need to ask ourselves how we can educate each other, as well as the students we are responsible for, so that we all acquire the skills and knowledge that will allow us to make judicious and constructive use of the new technologies. I am grateful to my colleague, Cornelia Brunner, for her framing of the literacies that the new technologies challenge us to develop. She has identified four kinds of literacy that are necessary skills for students to acquire, and also need to become central components in comprehensive professional development efforts for teachers.

- * **TECHNOLOGICAL LITERACY.** Minimally, we need to learn how to use the machines, to master basic software applications, and to understand something about the flexibility that computers afford us in a wide variety of domains, from word processing to multimedia production tools.
- * **INFORMATION LITERACY.** The process of evaluating and making judgments about on-line resources has become an essential skill. While the challenge of interpretation has been at the heart of most scholarly inquiries, at the K–12 level we have largely operated on a single-text model of instruction. What a textbook says is taken as gospel. We need to be able to make judgments about information resources and we need to help students acquire those skills that enable them to become critical consumers of information.
- * **COMMUNICATIONS LITERACY.** From the early days of telecomputing there has existed a body of information outlining the codes of behavior that should surround on-line communication. Al Rogers and others at the Global School House Foundation played a key role in creating some of these early materials. Those of us who have been users of email for some time have internalized these netiquette practices. However, as communication has broadened and the network of people with whom we communicate expands, new requirements emerge. I'll give you just one brief example. One of the benefits that people frequently speak about in relation to the Internet is that students can communicate with practicing professionals, ask questions, obtain advice, and so on. In some of our work at the Center for Children and Technology we have learned that for students to communicate effectively with knowledgeable adults a complex set of skills are necessary. Students have to be able to articulate what they know and don't

know; they have to be able to frame problems in such a way that what they are asking for is clear to someone else; and they need to be able to distinguish between a directive and a suggestion. Similarly, we have found that adults are often not skilled at communicating effectively with students. Learning how to ask and pose questions that invite conversation rather than foreclose it, is another example of the kinds of skills that we have found both students and adults need to acquire.

- * **MEDIA LITERACY.** There's that old cliché—a picture is worth a thousand words. Yet we rarely evaluate the role of images in shaping how we learn about the world, let alone the other conventions that go into shaping multimedia productions. Media literacy skills require looking at a number of factors that effect our understanding of the information at hand. For example, what information has been left out? Whose bias is represented? How does the organization of content reflect a particular point of view? How do the kinds of images and sound that are used constitute a perspective?

Why is the term literacy appropriate here? That word has been adapted to contexts like this one because it implies the ability to decipher, understand, and make use of resources that play a role in our daily lives. Rather than controlling our students, or controlling the Internet, thinking in terms of literacies encourages us to imagine engaging with our students, and engaging with the resources the Internet makes available. We need to learn, along with our students, how to make sense of the capacities of the Internet in ways that make sense for us, rather than hiding ourselves and our children away and handing the responsibility for shaping this new domain of communications over to people who do not share our concerns, or our vision of how the Internet can contribute to improving the lives of children and the educators who work with them.

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