

CHAPTER 2

Cybertechnologies and Activities

This chapter provides an outline of the various Internet and digital technologies and online activities that are implicated in cyberbullying and cyberthreats.

In the recent past, technologies on the Internet were roughly classified as Web technologies and communication technologies. Web sites were more static in nature and did not allow any interactivity, whereas communication activities were interactive and rapidly changing. A significant merger of these technologies has now occurred, making this kind of classification more difficult. However, this distinction is made in the following materials. In terms of hardware, the technologies include computers and various personal digital devices, including cell phones, MP3s, and personal digital assistants (PDAs), such as Palms and Blackberrys.

What is the future of these technologies? Equipment will be increasingly smaller, faster, more interactive, and more ubiquitous, and it will have greater multimedia capabilities.

TERMS OF USE AGREEMENTS

Internet service providers, cell phone companies, Web sites, online communities, and providers of the different communications technologies do seek to place some controls on the material and communications posted on their sites. The sites have a document referred to as “Terms and Conditions,” “Terms of Use,” or simply “Terms” that outlines the agreement between the site and its users. Generally, the terms of use agreement prohibits harmful speech. These agreements are discussed in chapter 6 as one of the limits on free speech.

ONLINE SOCIAL NETWORKING COMMUNITIES

On the Internet, youth like to hang out in online communities. In these online communities, youth engage in social networking—sharing information, engaging in discussions, exchanging pictures, making connections with others with whom they share interests, and talking about issues of the day, which for teens includes discussing such subjects as school, media stars, sex, relationships, sports, and the like.

Online communities offer a variety of basic information and communication services and activities, such as profiles, personal Web pages, blogs, chat rooms, discussion boards, and gaming. The nature of these services may vary from community to community online. (These individual services or activities are described more fully later in this chapter.) Youth from a particular geographic region or within a specific social institution, such as a school, can form their own online groups within the larger online community, focusing on discussions that relate to their school or region. (Check out www.myspace.com, www.livejournal.com, www.xanga.com, www.facebook.com, and www.bebo.com for examples of these online communities.)

Many online community sites are designed for, and very attractive to, youth ranging from the ages of 13 to 23. Parents and other adults should have some concerns about younger and more vulnerable teens who are actively involved with college-age or older individuals, in an environment where generally no responsible adults are present.

WEB SITE PROVISIONS

Age Limits

In the United States, where many of these online community sites are located, the Children's Online Privacy Protection Act (COPPA) places severe restrictions on the kinds of personal contact information that commercial Web sites can collect from children under the age of 13. COPPA also requires parental approval for registration. More information on COPPA can be found at www.ftc.gov/bcp/online/edcams/kidzprivacy. Most online community sites require that individuals be over the age of 13 to register.

The problem is that there is no accurate way to verify the age of any young Internet user who wants to claim another age.¹ Most youth over about the age of 10 know that it is possible to lie about their age to register on a site that has an age restriction. Social-networking sites are highly attractive to students in middle school, many of whom are under the age of 13. Many underage students register on these sites, often with the permission of their parents.

Some policymakers have argued that these sites should use age verification. Age verification processes can generally limit access to adult sites because adults have various forms of government or business-issued identifications, such as driver's licenses and credit cards. There are no similar forms of identification for minors.

Registrations and Profiles

To use certain technologies, such as instant messaging, or to fully participate in any online community, it is necessary to register. Individuals who do not register may often read what has been posted but are unable to participate actively. To register, the user must provide a certain amount of personal information. On many sites, an option is offered during the registration process to create a *profile*. Users are encouraged to post information in these profiles about their age, location, interests, and activities, as well as online contact information, including e-mail and IM addresses, Web sites, and the like. There is no mechanism for the site to verify this information. Users can also post a picture on their profile, and many do. Other registered users or visitors can search these registrations or profiles by any of the categories. Registrations and profiles are a vehicle by which users make contact with others who have similar interests.

In the course of registration, users create the *username* by which they will be identified on the site. Many teens have more than one account on these systems, each with its own username and associated persona. This allows them to experiment with different personalities. The usernames a teen creates can often provide a strong clue about the image the teen wishes to convey within the community. Sometimes teens will create usernames that are sexually suggestive.

A review of the online profiles on popular communities leads to the conclusion that youth are posting a significant amount of personal contact information, personal interest information, and images,

sometimes with sexual overtones. This is an issue all parents and adults working with youth should be attentive to.

Personal Web Sites

Many teens are creating personal Web sites. A survey in 2005 by the Pew Internet and American Life Project revealed that 22 percent of youth ages 12 to 17 report keeping a personal Web site.²

Young people who establish personal Web sites may disclose personal contact information and intimate personal information or may post harmful material on that site. Sometimes, several young people will collaborate in the creation of a site that denigrates another youth. If the creator of the site has established a guestbook or provides the vehicle for people to submit comments, others may post or send harmful material to the creator of the site.

Personal Web sites also provide a location where a young person may post material that constitutes a cyberthreat, generally in the form of distressing material. This may include personal Web sites created by youth with suicidal poetry and other anguished statements or graphics about their troubled lives.

As noted, the Web hosts that allow individuals to create their own personal Web sites always have a terms of use agreement that governs the kinds of material that can be posted. But these Web hosts do not have the facility to review each and every posting, and they must therefore rely on a complaint process to notify them if harmful material has been posted.

COMMUNICATION ACTIVITIES AND TECHNOLOGIES

Electronic communications can be roughly classified in two ways:

- Synchronous (real time) or asynchronous (delayed).
- Public or private.

Synchronous communications are those where the participants are communicating with each other at the same time. With asynchronous communications, the communication is delayed until a user receives or accesses it. Frequently, when communications are synchronous, the user must take specific steps to preserve the communications. Asynchronous communications are generally preserved or archived in some format by the Web site or provider, or by either or both of the users in an e-mail in box or cell phone memory.

The notion that electronic communications are private is actually incorrect. Most communication technologies can be used in a manner that is ostensibly private or initially between a limited number of known individuals. But once a message has been transmitted in electronic form, absolutely no technology will prevent the recipient of that communication from sharing it with anyone, anywhere.

Electronic communication technologies can be used to transmit text and images, including drawings, digital photos, and videos. Using a mobile communications device that fits easily into a pocket and can be used with ease at school, today's teens can instantly access and send e-mail, engage in text messaging, access Web sites, and take and send digital photos.

The providers of the various communication services, including Internet service providers and cell phone companies, also have terms of use agreements that include restrictions on the misuse of communication technology through the dissemination of harmful speech. Some misuse of communication technologies is considered illegal under state or federal laws.

The following are common types of electronic communication activities.

E-mail

E-mail is asynchronous communication that can be sent to one or many recipients. E-mail messages are received in a private e-mail account. E-mail is provided by the user's Internet Service Provider or through a Web-based e-mail service, such as Hotmail. E-mail is accessed through a computer or a PDA.

Instant Messaging

Instant messaging (IM) is synchronous communication. Instant messaging software allows users to communicate with a specific person, create a custom chat room for a specific group of people, and share files. IM can occur only between individuals who have included each other's IM address in their IM *contact* or *buddy list*.

During the IM registration process, the user creates a profile, which involves the same sort of concerns discussed earlier. Any other registered user can search through profiles to find and make contacts. When IM addresses have been shared, it is possible for either user to identify when the other user is online and seek to initiate communication.

Many teens have a large number of IM addresses in their contact list, including many individuals they know only online—not face-to-face. The number of IM contacts has become a new measure of one's social worth. In fact, one IM company recently introduced a new game that allows its members to engage in a challenge to quickly determine which of two users has more IM contacts, a measure of popularity.³ The company also increased the capacity for individual contact addresses to 450. The reason that IM companies are taking steps to encourage youth to increase their IM contacts list is to support the use of IM for market research and advertising.

It is possible with the IM technology to block communications from another user. But it appears that many teens do not take advantage of this capability to escape a cyberbullying relationship. When your social worth is measured by your number of IM contacts, blocking an IM contact is inconsistent with maintaining a high social worth. In addition, although it is possible to save an IM session, specific steps must be taken to do this.

Chat

Chat is a synchronous communication that is public but also has the capability of shifting to a private environment similar to IM. Chat room services are offered by most of the online community sites. Chat groups are generally established to address a specific area of interest. As with IM, it is necessary for the user to take specific steps to preserve the communications, although the Web site may have some archiving capabilities for public chats.

Discussion Boards and E-Mail Mailing Lists

Discussion boards and e-mail mailing lists are asynchronous public communication vehicles. These groups are organized around specific topics of interest. Discussion boards that are present on youth online community sites tend to be the asynchronous public communication environment of choice for teens. These boards are located on third-party community sites and operate under the terms of use agreement of the site that houses them.

E-mail mailing lists are distribution lists that an individual can subscribe to. The messages are then sent to the individual's e-mail box. E-mail mailing lists tend to be used more by adults. A more dated version of group communication is the Internet newsgroup, which also does not appear to be attractive to most teens.

Discussion boards and e-mail mailing lists are archived and publicly accessible. This means that harmful material posted in one of these communication vehicles can be accessed by anyone for many years into the future.

Blogs and Vblogs

Blogs are a merger between Web sites and discussion boards. The term *blog* is short for *Web log*, which refers to an interactive online personal diary or journal. The owner of a personal blog regularly posts commentary and solicits feedback on that commentary. It is possible to create “blogging rings” that link separate blogs together. Many blogging communities that are attractive to youth bear close resemblance to discussion boards, where everyone tosses in relatively brief and frequently inane comments on a particular subject. However, with a blog, as compared to a discussion board, the creator has more control.

Vblogs (video blogs) are blogs that feature the dissemination of video images. *Moblogs* (mobile blogs) can be updated using a cell phone. The Pew Internet and American Life study revealed that 19 percent of online teens keep a blog, and 38 percent of online teens read blogs.⁴

Concerns about blogging include disclosure of intimate personal information or personal contact information and posting of material that is harmful to others. Sometimes, teens will post scathing exposés or thoughts about their fellow classmates, teachers, and parents in their personal blogs. Other times, the reader of a blog may post offensive or harassing material using the response option in a blog.

Blogs can be sophisticated communication vehicles. Creative teachers are using blogging technology to facilitate classroom discussions and exchange of information and insight. These instructional activities provide a vehicle to teach the principles of responsible blogging.

Text Messaging

Text messaging is the communication of brief messages, generally via cell phones or PDAs. Although the term implies text only, it is possible to text message images. It is also possible to send anonymous text messages through Internet sites or to forward other electronic communications to a cell phone, which will then appear as text messages.

OTHER TECHNOLOGIES OR ACTIVITIES

There are a variety of other technologies and activities educators must know about.

Online Games

Many different types of gaming environments appear online. Some games are played against the machine. Other games involve users from different locations who are mutually engaged in a gaming activity, either against each other or cooperatively, against the machine. Many gaming environments also have a chat feature that allows players to communicate with each other as they are playing the games. Boys tend to be more attracted to the gaming environment than girls are.

Many interactions in simulation gaming environments resemble the interactions on the most objectionable reality-TV shows—cruel and mean. Frequently, the games involve inflicting violence on others, including sexual violence or violence against others based on race, culture, class, or other differences.

Multi-player role-playing games, where users take on specific personas to engage in gaming against others, are popular environments for young people. The establishment of these personas involves no requirement of truthfulness. Many youth will experiment with different personalities. The creation of multiple identities allows youth to disassociate themselves from the reality of the impact of their online activities: “It wasn’t really me who hurt him, it was my online persona.” For more discussion of this phenomenon, see chapter 5.

Frequent involvement in gaming can create a mind-set that online activity is not real and everyone online is just a player in a game. This disassociation can provide a rationalization for engagement in harmful online behavior. It is also possible that this disassociation from reality provides some protection for youth who are the targets of online violence. They might rationalize that people are attacking only their online personas and not them personally. This issue needs to be researched in more depth. These concerns are also discussed in chapter 5.

Another phenomenon associated with these gaming environments must also be considered with respect to a possible relationship to groups of students planning a violent attack, perhaps an attack at school. Within these gaming environments, the players form

“guilds”—groups of players who work with each other to execute a series of coordinated violent actions. A group of outcast students who participate in these gaming environments could, foreseeably, shift their online planning activities from the gaming environment to the real-world environment. For some members of such a group, there could be a disconnect between fantasy and reality.

Peer-to-Peer Networking

Peer-to-peer networking software is installed on an individual computer to make some or all of the files stored on each computer available to other individuals throughout the world. Sometimes embarrassing materials, especially sexual images, are transmitted through peer-to-peer networking in the context of cyberbullying. Some of the communication activities just described are also facilitated through peer-to-peer networking.

There are many reasons to discourage the use of this technology on a family computer. Peer-to-peer networking software is provided without charge—but in exchange, the software installs spyware, which allows tracking of Internet activity and delivery of pop-up advertising. A significant amount of computer crime is conducted through computers that have been compromised through the downloading of worms and trojans—software that allows others to use the computer to send unwanted advertisements or conduct other inappropriate activity. The primary purpose of using peer-to-peer networking is to facilitate the illegal downloading of copyrighted material, including music, videos, and software. A significant amount of adult pornography, child pornography, and gross images is also disseminated via peer-to-peer networking, many times deceptively labeled.

Online Matchmaking

Many online communities provide links to matchmaking services. Online matchmaking services allow users to find potential relationship matches by typing in certain parameters, including gender, age, location, and interests. The online matchmaking services are often highly sexualized.

Matchmaking services generally limit registration to those over the age of 18. But as discussed earlier, most youth over the age of 10 have figured out that they can lie about their age to enter sites intended for older users.

CYBERBULLYING THROUGH SCHOOL DISTRICT INTERNET SERVICES OR PERSONAL DIGITAL DEVICES

It is important to note, in the context of this discussion of technologies, that students can often use the school district's Internet service to access online communities or electronic communication services where they can engage in cyberbullying. It is a mistake to believe that filtering technology will or even can prevent this. The district filtering software may be set to block access to popular online communities. But a moderately intelligent middle school student can easily set up a home computer system that will provide the capability to circumvent the school computer to get to these sites or simply access a proxy site that will facilitate bypass of a filtering system. Conduct a search on the words *bypass Internet filter* to see how easy it is for students to find instructions on how to defeat any blocks established by a school district using filtering technology.

Most students are not foolish enough to try to access pornography through a computer in a school computer lab because the appearance of such material would be rapidly detected and lead to punishment. But cyberbullying, even on restricted sites, looks just like writing. Writing is an activity that is to be expected and is unlikely to lead to suspicion or detection.

Students may also engage in cyberbullying using cell phones or PDAs while at school. Students can now easily access their online social networking profile using their cell phone.

Most school districts have policies that prohibit students from using cell phones during class. But in many schools, there are active programs teaching students to use PDAs for educational activities. The prices of these devices are dropping rapidly. The major emerging concern is how schools will manage student use of technology when many students have wireless personal digital devices that they want to use in the classroom for legitimate educational activities—but that function outside of the school's filtering environment and that also could be used to engage in online social aggression. This issue is addressed more fully in chapters 7 and 11.