

Controversial Uses of the Internet by College Students

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ABSTRACT

A total of 985 university students completed a 55-item survey that determined how they use the Internet (World Wide Web, Internet Relay Chat, e-mail, and instant messaging) for a variety of controversial purposes. Topics surveyed include how students use the Internet for academic cheating, fake e-mail, inappropriate e-mail, and improper use of copyrighted materials. In addition, subjects were surveyed about their habits of accessing controversial Web sites that involve topics such as fake IDs, illegal drugs, illegal weapons, pornography, racism, and gambling. Sample results indicate that more than 17 percent of subjects have used the Internet to cheat on class assignments, over 38 percent of subjects have accessed pornography Web sites, 9 percent have accessed sites that involve illegal drugs, and more than 18 percent have successfully accessed someone else's e-mail account without the other person's knowledge. The results also revealed many significant differences in how males and females participated in controversial Internet activities.

Background and Rationale

The Internet has become an integral part of the way that millions of people throughout the world communicate with one another. In fact, more than 407 million people were online as of March 2001 (Nua Internet Survey, 2001). These people have discovered the many benefits of the World Wide Web, e-mail, chat rooms, instant messaging, and other features of the Internet.

Students have also discovered the positive aspects of the Internet. For example, a study conducted by AT&T WorldNet Service found that 68 percent of parents, 69 percent of students, and 69 percent of teachers have personally seen students' grades improve through use of the Internet. However, many negative aspects of the Internet are now coming to light. For example, Barnes (2001) wrote that "the Internet is being blamed as the cause for increased use of pornography, hate speech, and terrorism" (p. 230). From pornography to pirating, from copying term papers to copying music files (MP3s), the types of Internet controversies are on the rise. The purpose of this study was to explore the extent to which college students use the controversial aspects of the Internet.

A commonly discussed negative aspect of the Internet is that many users can become addicted to its use (see Young, 1996, 1998; Brown, 1996; Grohol, 1995; or Holmes, 1997). Anderson (1999) found that 9.8 percent of students were considered Internet dependent, while Scherer (1997) reported that as many as 13 percent of college students can be classified as Internet dependent. Scherer's (1997) study also reported that Internet-dependent students were predominately male. Shotton (1989) also provided evidence that Internet dependency is more likely to occur in males.

The negative effects of heavy Internet usage have also been examined. For example, Kubey, Lavin, and Barrows (2001) examined 576 university students and found that heavy Internet usage correlated with impaired academic performance, loneliness, staying up late, tiredness, and missing classes.

In contrast to Internet addiction, other types of Internet controversy exist (see Cozic, 1996, or Winters, 1997, 1998). One of the obvious controversial features of the Internet involves pornography, and many authors have discussed how pornography is made available in places such as the public library (Schuyler, 1999). Other controversial Web sites on the Internet include racist sites, weapons sites, drug sites, term paper sites, MP3 sites (MP3s allow the copying of music files), pirating (copying software illegally) sites, fake ID sites (fake identification), and gambling sites. This brief list is not meant to be exhaustive; more types of controversial sites are being reported in the news media on a regular basis.

Many attempts have been made to control the controversial material on the Internet. For example, attempting to block or filter out unwanted material is an ongoing debate for librarians and school administrators (see, for example, Schrader, 1999, or Pownell and Bailey, 1999). Greenlaw and Hepp (1999) described a method for filtering Web sites known as the Platform for Internet Content Selection (PICS), which provides a set of technical specifications that allow Web sites to designate labels that can steer viewers away from inappropriate sites (p. 111). PICS-based software is used in programs such as Internet Explorer, Netscape Navigator, and Cyber Patrol. According to programs such as CYBERSitter, users can “choose to block, block and log, or simply alert them when access is attempted to these areas” (CYBERSitter, 2001). Similarly, Net Nanny is

used to filter out sites that are sexually explicit or encourage hate, violence, criminal acts, or drug use (Net Nanny, 2001). The debate about using filtering software will continue as concerns for children's safety come in conflict with an individual's right to information.

State and national legislatures have attempted to insulate people from indecent materials found on the Web. Many authors such as Saunders (1998) have questioned the constitutional aspects of this approach. Schuyler (1997) discussed how the American Library Association (ALA) has taken a consistent stance against all forms of Internet censorship and has expended significant resources to block laws such as the Communications Decency Act. It is interesting to note that even if a state or national law is passed that blocks certain types of material on the Internet, it seems that legislators fail to understand that the Internet is an international network and that controlling the information based on one community's (or country's) standards is technologically nearly impossible.

Clearly there are Internet controversies — not only about content, but also about how to handle filtering or blocking of the content. Interestingly, one item that is not clear is the extent to which Internet users visit these controversial sites. A review of the literature demonstrates that very few scientific studies have examined Internet users' behavior concerning visiting these controversial sites. One notable exception is my (Rumbough, 1999) survey of online behaviors of 611 college students. For example, I found that 33 percent of students accessed sexually related material, 11 percent accessed racist sites, and 8 percent accessed illegal weapon sites. However, since the focus of that study involved a broad view of many types of controversial and noncontroversial online

behaviors, it seems clear that a more focused approach to studying controversial online behaviors is needed. Consequently, the following research questions are posed:

1. To what extent do students use the Internet to access controversial Internet sites such as illegal drug sites, pornography sites, illegal weapon sites, racist sites, gambling sites, and fake ID sites?
2. To what extent do students use the Internet to engage in unethical activities such as academic cheating, fake e-mail, inappropriate e-mail, and software piracy?
3. To what extent do students access online resources that schools and libraries attempt to control, such as sites that allow downloading of MP3 files and online gaming sites?
4. Are there gender differences in controversial online behaviors?

METHOD

Participants

A total of 985 students participated in the study by completing a 55-item survey. Respondents were enrolled in psychology, art, communication, geography, theater, and business courses. Of the respondents, 690 (70 percent) were female and 295 (30 percent) were male. In terms of age, 0.7 percent ($n = 7$) were less than 18 years old, 77.7 percent ($n = 766$) were ages 18–20, 18.8 percent ($n = 185$) were ages 21–26, 1.7 percent ($n = 17$) were ages 27–39, and 1 percent ($n = 10$) were over 40. In terms of Internet usage, 53.8 percent ($n = 529$) used the Internet “several times a day,” 19.3 percent ($n = 170$) used the Internet “once a day,” 21.5 percent ($n = 212$) used the Internet “several times a week,”

4.7 percent ($n = 46$) used the Internet “less than once a week,” and 0.7 percent ($n = 7$) never used the Internet. A total of 53.2 percent ($n = 524$) were freshmen, 19.1 percent ($n = 188$) were sophomores, 14.4 percent ($n = 142$) were juniors, 13.0 percent ($n = 128$) were seniors, and 0.3 percent ($n = 3$) were graduate students.

RESULTS

Pornography Web Sites

When subjects were asked if they accessed Web sites that have pornography, 38.4 percent ($n = 376$) indicated yes and 60.7 percent ($n = 595$) indicated no. A total of 55.9 percent ($n = 549$) reported that they accidentally accessed Web sites containing pornography. Subjects asked if they thought that they were addicted to Internet pornography responded 4.6 percent ($n = 45$) yes. When subjects were asked if they thought that the university should block Web sites that contain pornography, 24 percent ($n = 242$) indicated yes, 60 percent ($n = 590$) indicated no, and 15.4 percent ($n = 151$) were “not sure.”

Significant differences appeared when analyzing the pornography questions by gender. Males were more likely than females to indicate that they accessed pornography Web sites ($\chi^2(2, N = 980) = 245.09, p < 0.001$) and to report that they thought that they were addicted to Internet pornography ($\chi^2(2, N = 981) = 69.30, p < 0.001$). In contrast, females were more likely than males to report accessing pornography sites by accident ($\chi^2(2, N = 982) = 19.08, p < 0.001$). Females were also more likely than males to indicate that they believed that the university should block pornography Web sites ($\chi^2(2, N = 983) = 45.90, p < 0.001$).

Illegal Drug Web Sites

A total of 9.5 percent ($n = 93$) of the subjects reported that they accessed Internet sites that describe how to manufacture illegal drugs. When asked if they had attempted to manufacture illegal drugs based on information found on the Internet, 2 percent ($n = 20$) indicated yes. A total of 1.7 percent ($n = 17$) of the subjects indicated that they had successfully manufactured illegal drugs based on information found on the Internet. Males were more likely than females to access drug sites ($\chi^2(2, N = 983) = 42.63, p < 0.001$), attempt to manufacture drugs ($\chi^2(2, N = 985) = 21.67, p < 0.001$), and successfully manufacture drugs ($\chi^2(2, N = 984) = 11.01, p < 0.01$).

Illegal Weapons Web Sites

When subjects were asked if they accessed Internet sites that describe how to manufacture illegal weapons, 5.4 percent ($n = 53$) said yes and 94.1 percent ($n = 927$) said no. Additional questions revealed that 2.7 percent ($n = 27$) have attempted to manufacture illegal weapons based on information found on the Internet, and 2.2 percent ($n = 22$) have successfully manufactured illegal weapons based on information found on the Internet. Males were more likely than females to access weapons sites ($\chi^2(2, N = 984) = 53.27, p < 0.001$), attempt to manufacture weapons ($\chi^2(2, N = 984) = 31.08, p < 0.001$), and successfully manufacture weapons ($\chi^2(2, N = 983) = 18.02, p < 0.001$).

Racist Web Sites

Subjects were asked if they access Internet Web sites that deal with racist material because they believe in what the site has to say. A total of 2.5 percent ($n = 25$) reported yes and 96.5 percent ($n = 949$) reported no. Males were more likely than females to answer yes to this question ($\chi^2(2, N = 983) = 12.09, p < 0.01$).

Fake ID Web Sites

Subjects were asked a series of questions concerning fake IDs. When asked if they visited Internet sites that sell or explain how to make fake IDs, 4.7 percent ($n = 46$) indicated yes and 94.4 percent ($n = 927$) indicated no. A total of 2.4 percent ($n = 24$) indicated that they had manufactured a fake ID based on information found on the Internet, 1.6 percent ($n = 16$) indicated that they ordered a fake ID from an Internet site, and 1.9 percent ($n = 19$) received a fake ID from an Internet sites. When asked if they had used a fake ID obtained from an Internet site, 1.9 percent ($n = 19$) responded yes.

The analysis of responses by gender indicated significant differences. Males were more likely than females to visit fake ID sites ($\chi^2(2, N = 982) = 36.08, p < 0.001$), to order fake IDs ($\chi^2(2, N = 981) = 20.31, p < 0.001$), to manufacture fake IDs ($\chi^2(2, N = 982) = 24.40, p < 0.001$), and to receive fake IDs ($\chi^2(2, N = 982) = 15.71, p < 0.001$). Males were also more likely than females to use fake IDs obtained from the Internet ($\chi^2(2, N = 983) = 28.13, p < 0.001$).

Gambling Web Sites

Students were asked three questions about online gambling. A total of 9.2 percent ($n = 90$) indicated that they had visited online gambling sites, while 3.8 percent ($n = 37$)

indicated that they placed bets at these sites. When asked if they thought that they were addicted to online gambling, 2 percent ($n = 20$) indicated yes.

Analysis of gender differences for this category resulted in significant results. Males were more likely than females to visit online gambling sites ($\chi^2(2, N = 982) = 62.15, p < 0.001$) and place bets on these sites ($\chi^2(2, N = 981) = 40.96, p < 0.001$). Males were also more likely to report that they were addicted to online gambling ($\chi^2(2, N = 982) = 19.62, p < 0.001$).

Academic Cheating

Subjects were asked if they had used the Internet to cheat on a class assignment. A total of 17.7 percent ($n = 174$) responded yes and 80.5 percent ($n = 792$) responded no. When asked if they used the Internet to purchase a paper from an online paper mill, 3.5 percent ($n = 34$) indicated yes, while 95.6 percent ($n = 940$) indicated no. Students were asked if they ever “copied and pasted” sections of an Internet site to a term paper without citing where they obtained the information. A total of 18.7 percent ($n = 184$) indicated yes, and 80 percent ($n = 787$) indicated no.

Students also responded to a series of questions that dealt with using e-mail for academic cheating. When asked, “After taking a test in a class, have you e-mailed information about the test to students who had not taken a test?” 4.9 percent ($n = 48$) indicated yes, and 94.7 percent ($n = 932$) indicated no. Subjects were asked if they have been e-mailed information about a test from students who took a test before them. A total of 5.8 percent ($n = 57$) indicated yes, and 93.6 percent ($n = 920$) indicated no.

Students were asked if they used e-mail to lie to professors. When asked if they had e-mailed a made-up excuse to a professor in order to have an absence excused, 15.2 percent ($n = 149$) responded yes and 83.4 percent responded no. Another question asked them if they had e-mailed a made-up excuse to a professor in order to get out of taking a test. A total of 3.9 percent ($n = 38$) indicated yes, and 95.5 percent indicated no.

Statistical tests were conducted to see if gender differences existed in academic cheating. Females were more likely than males to purchase a paper from an online paper mill ($\chi^2(2, N = 983) = 8.11, p < 0.05$), e-mail information about a test to others ($\chi^2(2, N = 984) = 11.77, p < 0.01$), and receive e-mails about tests from others ($\chi^2(2, N = 983) = 11.08, p < 0.01$). Additional examination of the questions related to academic cheating resulted in no significant differences.

Inappropriate E-mail

When subjects were asked if they had received a threatening e-mail message from someone, 16.7 percent ($n = 163$) responded yes. When asked if they had sent a threatening e-mail message to someone, 8.9 percent ($n = 88$) indicated yes. A total of 16.5 percent ($n = 161$) believe that someone has gained access to their e-mail accounts without their permission, 19.3 percent ($n = 189$) have attempted to gain access to an e-mail account that was not their own, and 18.6 percent ($n = 182$) reported that they have successfully logged into someone else's e-mail account without the owner's knowledge.

Some significant gender differences marked answers to two of the above questions. Males were more likely to send threatening e-mail messages ($\chi^2(2, N = 982) =$

24.17, $p < 0.001$). Females were more likely to attempt to gain access to an e-mail account that was not their own ($\chi^2(2, N = 981) = 14.21, p < 0.01$).

Fake E-mail

Subjects were asked three questions regarding fake e-mail. (Fake e-mail allows someone to change the identity of the sender of an e-mail message.) Results indicated that 12.2 percent ($n = 119$) of the subjects have sent fake e-mail in order to play a joke on someone, while 6.4 percent ($n = 62$) have sent fake e-mail in order to deceive someone. When asked if they had received fake e-mail, 16.2 percent ($n = 158$) indicated yes, 80.2 percent ($n = 780$) indicated no, and 3.6 percent ($n = 35$) indicated “not sure.”

Females were more likely than males to send fake e-mail as a joke ($\chi^2(2, N = 975) = 27.89, p < 0.001$), and males were more likely than females to send fake e-mail to deceive someone ($\chi^2(2, N = 974) = 21.81, p < 0.001$). Females were more likely than males to be the recipient of fake e-mail ($\chi^2(2, N = 973) = 15.97, p < 0.001$).

Pirating

Subjects reported whether they used Internet sites to pirate (illegally copy) software. When asked if they pirated software, 11.4 percent ($n = 112$) indicated yes. A total of 3.9 percent ($n = 38$) used the university’s computers to download the pirated software. Males were more likely than females to use the Internet to pirate software ($\chi^2(2, N = 980) = 96.50, p < 0.001$) and to use the university’s computers to do so ($\chi^2(2, N = 983) = 33.64, p < 0.001$).

MP3s

Subjects were asked a series of questions concerning MP3s. (MP3 stands for Motion Picture Experts Group MPEG1 – Layer 3. It is a digital audio compression format.) A total of 62.4 percent ($n = 610$) of the subjects reported that they used Napster or similar programs to download music (MP3s) from the Internet. In response to the question, “Approximately how many hours a week do you use the university’s computers to download music (MP3s) from sites like Napster?” 42.6 percent ($n = 411$) indicated “zero hours — I don’t use Napster,” 44.7 percent ($n = 431$) indicated “zero hours — I use Napster from my home,” 9.3 percent ($n = 90$) responded “1–3 hours,” 2 percent ($n = 20$) indicated “4–10 hours,” and 1.2 percent ($n = 12$) indicated “more than 10 hours a week.” When subjects were asked if they had made a CD from music downloaded from Napster or similar programs, 43.9 percent ($n = 430$) indicated yes, and 39.4 percent ($n = 386$) indicated that they would be less likely to buy music CDs because of programs like Napster. Subjects were asked if they thought that the university should block Web sites like Napster; 3.3 percent ($n = 32$) said yes, 92.7 percent ($n = 910$) said no, and 4.1 percent ($n = 40$) were “not sure.”

Analysis of gender differences revealed some significant differences. Women were more likely than men to download MP3s ($\chi^2(2, N = 978) = 12.14, p < 0.01$) and to make a CD from downloaded music ($\chi^2(2, N = 979) = 19.98, p < 0.001$). Men were more likely than women to indicate that their university should block Web sites like Napster ($\chi^2(2, N = 982) = 9.36, p < 0.01$). The other questions related to MP3s did not reveal any significant results for gender differences.

Gaming

When subjects were asked if they used the university's computers to play computer games, 29.1 percent ($n = 285$) indicated yes. Subjects, when asked if they believe there should be a university rule prohibiting students from playing computer games on the university's computers, responded 9.9 percent ($n = 97$) yes, 83.8 percent ($n = 820$) no, and 6.2 percent ($n = 61$) "not sure." Females were more likely than males to play computer games on the university's computers ($\chi^2(2, N = 981) = 20.3, p < 0.001$). No significant difference between genders appeared regarding the question about prohibiting gaming on campus ($\chi^2(2, N = 983) = 4.59, p > .05$).

CONCLUSION

Results from the survey have established that many users regularly participate in controversial aspects of the Internet. While the study answered many questions regarding the use of controversial features of the Web, many questions could be asked in future studies. For example, why are males more likely than females to engage in unethical activities such as pirating software and sending threatening e-mail messages? Conversely, why are females more likely than males to engage in activities such as using the Internet to cheat on class assignments and to attempt to gain access to an e-mail account not their own?

Future studies could also examine the motivation behind why users engage in unethical or controversial aspects of the Internet. For example, why are students motivated to use the Internet to cheat on class assignments or to lie to their professors?

The reader should be aware of some of the limitations of this study. One limitation is the possibility that respondents might not answer the survey questions

accurately. One way to address this issue is to have future studies use other methods of research to triangulate the results. Kendall (1999) wrote that other research methods such as participant observation and log-in/log-out methods could be used effectively to obtain results for online research. However, these other research methods have limitations also.

Another limitation to this study is that the subjects sampled might not be representative of the 407 million Internet users. Thus, readers should use caution before attempting to generalize the results of the study to all Internet users. Future studies could examine how differences in demographics such as age and educational level affect a person's willingness to engage in unethical or controversial Internet activities.

This study is significant because it explores many aspects of the Internet that have not been examined in previous studies. The results of this study will help us understand how the Internet is being used and will have implications for educators, scholars, and society. Since the Internet has become a medium of communication used by millions of people daily, it is imperative that we continue to explore this topic further.

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