

University of Wisconsin-Stevens Point Study of Students and Information Technology, 2006

EDUCAUSE Center for Applied Research (ECAR) sent e-mail invitations to participate in the 2006 Students and Information Technology Survey to 277,137 students at 96 institutions. Respondents included 10,057 freshmen, 15,287 seniors, and 3,380 community college students for an overall response rate of 10.8 percent. The UWSP sample included 4254 freshmen and seniors—688 responded for a response rate of 16.2 percent. The following analysis compares UWSP responses to 25,344 responses from 88 four year institutions—41 doctoral, 32 master's, 13 bachelor's, and 2 engineering.¹ Hereafter, the responses from these institutions are referred to as other respondents.

ECAR points out that "...there is likely an overall bias in the data that favors the technology literate....The ECAR survey is, after all, a network based survey. Students with no or limited network access or connectivity are less likely to participate in this study."² Additionally, results may be affected by the percentage of engineering and business respondents because "these majors rate their skills higher than other majors and have a higher preference for technology in their courses."³ Twelve percent of UWSP respondents are engineering and business majors compared to 30% of other respondents.

Student Ownership of Technology

Sixty-nine percent of UWSP respondents own a personal desktop computer; personal laptop computer, 50%; personal digital assistant, 7%; smart phone, 6%; electronic music/video device, 47%; digital camera, 66%; electronic game device, 47%; and, wireless hub, 27%.

Twenty-nine percent of the desktop computers and 56% of the laptops are less than 2 years old. Forty-one percent of UWSP freshmen respondents own a laptop that is less than one year old compared to 12% of the seniors. Fifty-six percent of other freshmen own a laptop that is less than one year old.

Forty-one percent of UWSP respondents have purchased spreadsheet software for their own use; presentation software, 43%; graphics software, 25%; video/audio software, 31%; and, Web pages software, 16%.

The majority of UWSP respondents (51%) identify themselves as "mainstream adopters" of new technology. They usually use new technologies when most people they know do. Twenty-seven percent tend to be "early adopters" and 22% are "late adopters".

¹ EDUCAUSE Center for Applied Research, The ECAR Study of Undergraduate Students and Information Technology, 2006. Volume 7, 2006. Available at <http://www.educause.edu/ecar> .

² Id., p. 56

³ Richard Katz, EDUCAUSE, email dated December 14, 2006.

Student Use of Technology

Table 1 (tables begin on page 5) shows the percentage of respondents using technology several times per week or daily. UWSP respondents are significantly less likely than other respondents to use an electronic device several times per week or daily to access a library resource on an official university Web site or for writing documents for their coursework. They are also less likely to create, read and send instant messages; download Web-based music or videos; participate in online social networks; or, access a course management system. UWSP respondents are similar to other respondents on the remaining items.

UWSP respondents most frequently use electronic technology for course activities, writing documents for their coursework, e-mail, and instant messaging. They are least likely to do online shopping and gaming or to create presentations, audio/video, and Web pages.

UWSP freshman respondents are more likely than seniors to create, read, and send instant messages daily (53% vs. 32%); participate daily in online social networks (45% vs. 17%); blog (33% vs. 18%); and, access a course management system several times per week or daily (43% vs. 28%).

UWSP respondents use their electronic devices—excluding cell phone—significantly fewer hours per week than other respondents. A majority (56%) use their electronic devices more than 10 hours per week compared to 70% of other respondents. About a quarter of them (27%) use their electronic devices more than 20 hours per week.

Fifty percent of UWSP respondents maintain two active e-mail accounts. Thirty-five percent maintain three or more accounts. Seventy-six percent report that their university account is their preferred e-mail account compared to 54% of other respondents. Eighty-nine percent prefer that UWSP communicate with them by e-mail.

Thirty-seven percent of UWSP respondents most frequently use commercial broadband service to access the Internet. Thirty-nine percent use university-operated broadband service. Fourteen percent use a commercial or university-operated wireless network. Fifty-two percent of the senior respondents use commercial broadband while 61% of freshmen use university service.

Student Skills

Table 2 shows the percentage of respondents reporting that they are accomplished or fluent in using computer technologies and applications. UWSP respondents are significantly less likely than other respondents to report that they are accomplished or fluent in the use of online library resources, computer maintenance, computer security, and course management system. They are similar on the remaining items.

Seventy-seven percent of UWSP respondents feel they have at least a basic skill level using spreadsheets; presentation software, 86%; graphics software, 54%; video/audio software, 23%; Web page software, 30%; online library resources, 90%; computer maintenance, 74%; computer security, 73%; and course management system, 66%.

Of those who use spreadsheet software, 52% of the UWSP respondents report that they learned it to improve course performance or because of course or major requirements. Seventy-eight percent learned presentation software for these reasons. Of those who use graphics software, 55% learned it for personal interest.

About one-third of UWSP respondents feel that the institution needs to give them more training on the information technology they are required to use in their classes. Thirty-eight percent of seniors feel they need to be given more training compared to 23% of the freshmen.

Technology Used in Courses

Table 4 shows that the use of technology in UWSP courses is generally similar to other institutions with three exceptions. UWSP respondents are significantly more likely than other respondents to report that e-mail, online gradebook, and e-portfolios are used in their courses. Ninety-seven percent reported the use of e-mail in their courses; presentation software, 69%; course management system, 63%; course Web site, 67%; and online gradebook, 71%. Least used were podcast, webcast, and blogs.

UWSP seniors compared to freshmen are more likely to experience the use of presentation software and spreadsheets in their courses while freshmen are more likely to experience course Web site, online gradebook, online discussions and online quizzes/tests.

Table 5 shows that over half of the UWSP respondents agree that the technology helps them better communicate and collaborate with their classmates; results in more prompt feedback from their instructors; allows them to take greater control of their course activities; and, helps them do better research for their courses. They are significantly less likely than other respondents to feel that the use of technology helps them take greater control of their course activities or do better research.

UWSP respondents are significantly less likely than other respondents to agree that the use of information technology in their courses improved their learning (58% vs. 65%). They are also significantly less likely to feel engaged in courses that require them to use technology (Table 5).

Fifty-four percent of UWSP respondents identified convenience as the most valuable benefit from using information technology in their courses; improved their learning, 13%; helped them manage their course activities, 17%; and, helped them communicate with their classmates and instructors, 12%.

Eighty-seven percent of UWSP respondents never take their laptops to class. Only 2% report that bringing a laptop to class is a requirement in any of their classes.

The majority of UWSP respondents (61%) prefer courses that use a moderate level of technology. Two percent prefer courses that use technology exclusively and three percent prefer courses that do not use any technology. ECAR found a direct relationship between self-reported

levels of skill and preference for information technology in courses.⁴ The higher the skill level the greater the preference for more information technology in courses.

UWSP respondents are significantly more likely than other respondents to agree that their instructors use information technology well in their courses (Table 5).

Students and Course Management Systems

UWSP respondents are significantly more likely to have taken a course that used a course management system and significantly less likely to describe their overall experience positively. Eighty-four percent of UWSP respondents have taken a course that used a course management system compared to 75% of other respondents. Sixty-six percent described their overall experience with the course management system as positive to very positive compared to 76% of other respondents.

Table 6 presents the percentage of respondents who found features of the course management system to be very or extremely useful. A majority of UWSP respondents found access to sample exams and quizzes; taking exams and quizzes online; turning in assignments online, and keeping track of grades to be very or extremely useful. UWSP respondents were significantly less likely than other respondents to find the syllabus, online readings and links to other text-based course materials, access to sample exams and quizzes, turning in assignments online, getting assignments back from the instructor, or keeping track of grades on assignments and tests very or extremely useful.

Where Students Would Invest Institutional Resources

Table 3 shows where respondents would spend additional monies to improve computing services. UWSP respondents were most likely to select computer labs and printing as one of the top three items they would like to spend additional monies on. Network speed was the third most often selected item for improvement. Least often selected for improvement were faculty IT training and help desk. UWSP respondents were significantly more likely than other respondents to select computer labs for improvement and less likely to select network availability.

UWSP senior respondents most frequently selected computer labs (54%), printing (47%) and student IT training (35%) for improvement while freshmen selected network speed (46%), music—Napster subscriptions, etc. (39%), and IT security (32%).

⁴EDUCAUSE Center for Applied Research, The ECAR Study of Undergraduate Students and Information Technology, 2006. Volume 7, 2006, p. 60.

Table 1: Frequency of Technology Usage			
Response categories are never, once per year, once per semester/quarter, monthly, weekly, several times per week and daily. Percent responding several times per week or daily is shown.			
	UWSP	Other	Sig.
How often do you use an electronic device for course activities?	75%	76%	
How often do you use an electronic device to access a library resource on an official college or university library Web site?	13%	21%	p < .05*
How often do you use an electronic device as an in-class requirement?	31%	31%	
How often do you use an electronic device for writing documents for your coursework?	54%	60%	p < .05
How often do you create, read, and send e-mail?	95%	94%	
How often do you create, read, and send instant messages?	55%	63%	p < .05
How often do you play computer games?	16%	20%	
How often do you download Web-based music or videos	14%	21%	p < .05
How often are you doing online shopping?	2%	3%	
How often are you doing online gaming?	3%	8%	
How often are you blogging?	6%	5%	
How often do you participate in online social networks?	44%	50%	p < .05
How often do you use an electronic device for creating spreadsheets or charts?	7%	12%	
How often do you use an electronic device for creating presentations?	2%	5%	
How often do you use an electronic device for creating graphics?	6%	7%	
How often do you create audio/video?	1%	2%	
How often do you create Web pages?	3%	2%	
How often do you access a course management system?	34%	40%	p < .05

*Based on binomial test, two-tail, alpha = .05. This is used for all tests of significance.

Table 2: Skill Level Using Computer Technologies and Applications			
Response categories are minimal, basic, conversant, accomplished, fluent and do not use. Percent responding accomplished or fluent is shown--includes do not use responses			
	UWSP	Other	Sig.
Spreadsheets	29%	39%	
Presentation software	40%	45%	
Graphics	18%	21%	
Video/audio	10%	13%	
Web pages	13%	12%	
Online library resources	39%	45%	p < .05
Computer maintenance (downloading software updates, installing additional memory, etc.)	20%	30%	p < .05
Computer security (firewalls, antivirus software, etc.)	18%	26%	p < .05
Course management system	23%	30%	p < .05

Table 3: If additional monies were available to improve computing services at your institution, select the top 3 items you would like it spent on.

Response categories are yes and no. Percent selecting yes is shown.

	UWSP	Other	Sig.
Student IT training	31%	29%	
Faculty IT training	7%	9%	
Computer labs	45%	38%	p < .05
Software required for courses	29%	29%	
Help desk	8%	11%	
Network speed	34%	33%	
Network availability	23%	31%	p < .05
IT security	25%	26%	
Printing	41%	36%	
Music (Napster subscription, etc.)	28%	29%	

Table 4: Technology used in courses during current semester

Response categories are not using this semester/quarter and using this semester/quarter. Percent using this semester is shown.

	UWSP	Other	Sig.
E-mail	97%	95%	p < .05
Instant messaging	15%	14%	
Presentation software	69%	66%	
Course management system	63%	67%	
Course Web site	67%	65%	
Clickers	14%	18%	
Simulations	15%	16%	
Online discussions	39%	36%	
Online quizzes	42%	40%	
Online gradebook	71%	62%	p < .05
Podcast	3%	3%	
Webcast	3%	4%	
Blogs	5%	7%	
Social networking software (the facebook.com, etc.)	23%	22%	
E-portfolios	15%	7%	p < .05
Spreadsheets	46%	50%	
Discipline-specific technologies (Mathmatica, Matlab, AutoCAD, Stella, etc.)	11%	18%	

Table 5: Attitudes toward use of information technology in courses			
Response categories are strongly disagree, disagree, neutral, agree, and strongly agree. Percent agree or strongly agree is shown.			
	UWSP	Other	Sig.
I am more engaged in courses that require me to use technology than in courses that do not use technology.	36%	41%	p < .05
Overall, my instructors use information technology well in my courses	62%	57%	p < .05
My school needs to give me more training on the information technology that I am required to used in my courses.	32%	27%	
The use of information technology in my courses: Helps me better communicate and collaborate with my classmates than in courses that do not use technology.	54%	56%	
The use of information technology in my courses: Results in more prompt feedback from my instructor than in courses that do not use technology.	68%	70%	
The use of information technology in my courses: Allows me to take greater control of my course activities than in courses that do not use technology.	51%	56%	p < .05
The use of information technology in my courses: Helps me do better research for my courses than in courses that do not use technology.	65%	70%	p < .05

Table 6: How useful did you find the following course management system features?			
Responses categories are not useful, somewhat useful, useful, very useful, extremely useful, and did not use. Percent very or extremely useful is shown--did not use responses are excluded.			
	UWSP	Other	Sig.
Syllabus	47%	63%	p < .05
Online readings and links to other text-based course materials	46%	58%	p < .05
Online discussion board (posting comments, questions, and responses)	38%	42%	
Access to sample exams and quizzes for learning purposes	61%	72%	p < .05
Taking exams and quizzes online for grading purposes	54%	59%	
Turning in assignments online	56%	64%	p < .05
Getting assignments back from instructors with comments and grades	49%	59%	p < .05
Sharing materials among students	43%	49%	
Keeping track of grades on assignments and tests	69%	78%	p < .05

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