

University of Wisconsin-Stevens Point Study of Students and Information Technology, 2007

EDUCAUSE Center for Applied Research (ECAR) sent e-mail invitations to participate in the 2007 Students and Information Technology Survey to 258,902 students at 103 four-year institutions and four community colleges. Respondents included 10,189 freshmen, 13,057 seniors, 2,693 students of other classifications, and 1,924 community college students for an overall response rate of 10.8%. Eighty percent of student respondents were from public institutions.

The UWSP sample included 4,977 freshmen and seniors; 674 responded for a response rate of 13.5%. Of the UWSP respondents, 4% indicated a classification other than senior or freshman; their data are included when all UWSP respondents are reported but not when specific comparisons are made between senior and freshmen students.

Of the UWSP respondents, 63% were female, 90% were age 24 or younger, 57% lived off campus, and 96% were enrolled full-time. Twenty-four percent reported their majors as life or health sciences (including agriculture-related fields), 20% were in education, 15% were in social sciences, 12% were in fine arts, 7% were undecided and remainder were other fields.

The following analysis compares UWSP responses to 25,348 responses from participating four-year institutions.¹ Hereafter, the responses from these institutions are referred to as other respondents.

Student Ownership of Technology

Students nationwide reported ownership of a variety of technology-related devices, with simple cell phones (without web access) being the most predominant (86%) followed by electronic music/video devices (68%), personal desktop computers and laptop computers (each with 59%), and electronic game devices (55%). Nine percent reported owning a digital assistant and 9% own smart phones. UWSP students reported slightly higher rates of ownership of cell phones than other respondents (89%) but they reported a 16% lower rate of ownership of laptop computers than students at four-year institutions elsewhere. Of UWSP students who own personal computers, their equipment is relatively new, with 24% of the desktop computers and 60% of the laptops being less than two years old. Fifty-two percent of UWSP freshmen respondents own a laptop that is less than one year old compared to 9% of the seniors and 64% of other freshmen nationwide. Although a fair number of UWSP students own laptop computers, a majority of them (85%) reported never taking a laptop to class.

The majority of UWSP respondents (56%) identify themselves as “mainstream adopters” of new technologies, using them when most people they know do. Twenty-six percent tend to be “early adopters” and 18% are “late adopters.” Unlike other respondents at four-year institutions, more UWSP students are in the mainstream and late adopter categories (74%) compared to 63%.

¹ EDUCAUSE Center for Applied Research, The ECAR Study of Undergraduate Students and Information Technology, 2007. Volume 6, 2007. Available at <http://www.educause.edu/ecar> .

Student Use of Technology

Table 1 illustrates the percentage of respondents using technology several times per week or daily. UWSP respondents are significantly more likely than other respondents to create, read, or send an e-mail. They are less likely to create, read, or send instant messages, download Web-based music or videos, or access a course management system. UWSP respondents are similar to other respondents on the remaining items. Notably, UWSP students are as likely to participate in online social networks as other students (66% and 65%, respectively), whereas UWSP students were significantly lower than the national sample in the 2006 administration of this survey (44% and 50%, respectively).

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

UWSP freshman respondents are more likely than seniors to create, read, and send instant messages daily (54% vs. 28%); participate daily in online social networks (74% vs. 40%); and, access a course management system several times per week or daily (52% vs. 37%). These results suggest more technological savvy among new students than seniors.

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 to access a library resource on an official college or university library Web site?	16%	20%	
How often do you use an electronic device for writing documents for your coursework?	66%	64%	
How often do you create, read, and send e-mail?	97%	95%	p<.05
How often do you create, read, and send instant messages?	52%	64%	p<.05
How often do you play computer games?	21%	23%	
How often do you download Web-based music or videos	13%	22%	p<.05
How often are you doing online shopping?	1%	3%	
How often do you access or use wikis?	7%	12%	
How often are you blogging?	3%	4%	
How often do you participate in online social networks?	66%	65%	
How often do you use an electronic device for creating spreadsheets or charts?	11%	15%	
How often do you use an electronic device for creating presentations?	3%	6%	
How often do you use an electronic device for creating graphics?	8%	8%	
How often do you create audio/video?	1%	2%	
How often do you create Web pages?	3%	3%	
How often do you access a course management system?	44%	50%	p<.05

Ninety-six percent of UWSP respondents report that their university account is their preferred e-mail account to communicate with their university compared to 83% of other respondents. Eighty-eight percent prefer that UWSP communicate with them by e-mail.

Thirty-five percent of UWSP respondents most frequently use commercial broadband service to access the Internet whereas 40% use university-operated broadband service and 13% use a commercial or university-operated wireless network. Fifty-three percent of the senior respondents use commercial broadband while 68% of freshmen use university service, which is a likely reflection of where they reside.

Student Skills

Table 2 shows the percentage of respondents reporting very good or excellent skills using computer technologies and applications. UWSP respondents are significantly less likely than other respondents to report that they have very good or excellent skills in the use of online library resources and computer maintenance. UWSP respondents were similar to the others on the remaining items. Notably, UWSP students rated their skill level about the same as other students in the use of a course management system, which is a positive change from the 2006 administration of this survey when they rated their skill level significantly lower than the nationwide sample.

Table 2: Skill Level Using Computer Technologies and Applications			
Response categories are: poor, fair, good, very good, excellent, and do not use. Percent responding very good or excellent is shown.			
	UWSP	Other	Sig.
Spreadsheets (Excel, etc.)	40%	44%	
Presentation software (PowerPoint, etc.)	58%	60%	
Graphics software (Photoshop, Flash, etc.)	19%	20%	
Video/audio software (Director, iMovie, etc.)	6%	8%	
Online library resources	38%	46%	p<.05
Computer maintenance (downloading software updates, installing additional memory, etc.)	32%	44%	p<.05
Course management system (WebCT, Blackboard, D2L, etc.)	50%	51%	

A strong majority of UWSP students reported at least average skills in the following areas: presentation software (83%), a course management system (78%), online library resources (76%). Sixty-six percent expressed at least average skills with spreadsheets and 58% with performing their own computer maintenance. Fewer students were confident in their skills with graphics software (37% reporting at least average) and video/audio software (13% reporting average or better skills) although that can be explained by the high percentages of students who report not using those applications at all (30% and 72%, respectively).

Of those UWSP respondents who use presentation software, 91% learned it because of course requirements in college or requirements from high school or a previous course. Seventy-seven percent learned spreadsheet software for these reasons. These reasons differ from those

respondents who use graphics or video/audio software as the highest percentages of them learned it for personal interest (55% and 37%, respectively).

About one-third of all 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-six percent of seniors expressed this sentiment compared to 20% of the freshmen.

Technology Used in Courses

Table 3 shows that the use of technology in UWSP courses is generally similar to that of other institutions as reported by participating students, with three exceptions. UWSP respondents are significantly more likely than other respondents to report the use of presentation software, course management systems, and course websites in their courses. Most notably, in 2006, only 63% of UWSP respondents reported the use of a course management system, which was comparable to others respondents that year (67%). UWSP students reported a 22% higher rate of use of a course management system between 2006 and 2007, which was substantially more than the increase experienced in the nationwide sample. Ninety-seven percent of UWSP respondents reported the use of e-mail in their courses although this was not statistically different from respondents at other institutions. The least used technologies reported by UWSP students included podcasts and webcasts although the results were analogous to responses of other respondents from four-year institutions.

Table 3: 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%	96%	
Instant messaging	12%	14%	
Presentation software	75%	71%	p<.05
Course management system	85%	78%	p<.05
Course Web site	67%	61%	p<.05
Programming Languages (New item)	8%	12%	
Graphics Software (New item)	16%	12%	
Video/audio Software (New item)	8%	7%	
Podcast	5%	5%	
Webcast	3%	4%	
Blogs	8%	9%	
Social networking software (facebook.com, etc.)	21%	21%	
E-portfolios	13%	7%	
Spreadsheets	51%	50%	
Discipline-specific technologies (Mathmatica, Matlab, AutoCAD, Stella, etc.)	15%	19%	

UWSP seniors are more likely than freshmen to report the use of presentation software and spreadsheets in their courses while freshmen are more likely to report the use of instant messaging, course management systems, and a course Web site. The latter could be an indication

of more widespread use of technology by faculty for their courses, greater use of the available technology by more savvy younger students, or a combination of the two.

Attitudes toward Technology Use

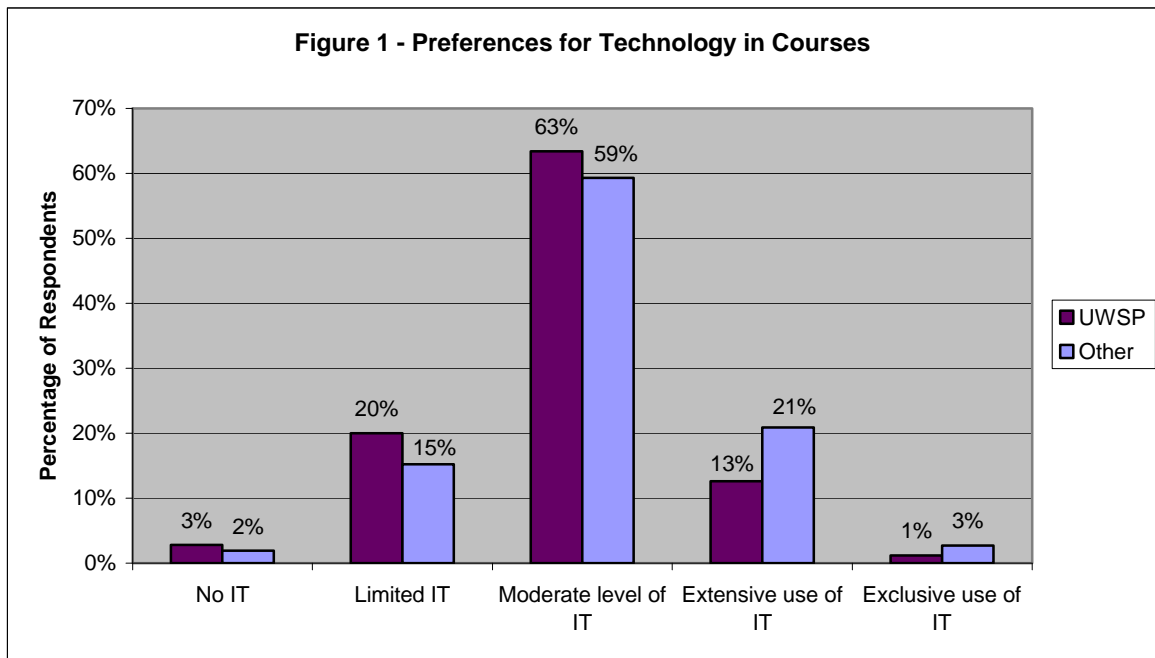
As illustrated in Table 4, over two-thirds of UWSP respondents believe that the use of technology in their courses results in more prompt feedback from their instructors and helps them do better research for their courses. Despite those high ratings of benefits, UWSP students are significantly less likely than other respondents to feel that the use of technology helps them take greater control of their course activities or receive more prompt feedback from their instructor. The results are generally similar to those of UWSP respondents from the 2006 survey.

Table 4: 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.	35%	41%	
Overall, my instructors use information technology well in my courses	60%	58%	
My school needs to give me more training on the information technology that I am required to use in my courses.	30%	26%	
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.	57%	60%	
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%	74%	p<.05
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.	54%	60%	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.	68%	71%	
The use of information technology in my courses has improved my learning.	57%	61%	

When asked to identify the most valuable benefit from using information technology in their courses, 57% of UWSP respondents identified convenience. Twenty-one percent said that using technology helped them manage their course activities, 11% said it helped them communicate with their classmates and instructors, and 8% said it improved their learning. Only 4% said there were no benefits associated with using information technology in their courses. The benefits reported by UWSP respondents parallel responses from students of other four-year institutions who reported similar percentages and the same rank order of perceived benefits.

Figure 1 illustrates UWSP responses compared to students at other four-year institutions on their preferences for taking courses that use information technology. The majority of UWSP

respondents (63%) prefer to take courses that use a moderate level of technology. This is similar to students at other four-year institutions (see Figure 1). Fourteen percent of UWSP students prefer courses that use technology exclusively or extensively compared to 24% of other students. Twenty percent of UWSP students prefer courses with a limited amount of technology and just 3% prefer to take courses that do not use any technology compared to other students who reported 15% and 2%, respectively. These results suggest that UWSP students are slightly more averse to taking courses that utilize technology.



Students and Course Management Systems

UWSP respondents are significantly more likely to have taken a course that used a course management system, but significantly less likely to describe their overall experience positively. Ninety-two percent of UWSP respondents have taken a course that used a course management system compared to 83% of other respondents. Sixty-six percent described their overall experience with the course management system as positive to very positive compared to 77% of other respondents.

Table 5 illustrates respondents' perceptions of the utility of various features of course management systems through percentages of students rating them as very or extremely useful. Although UWSP students were more likely to have used a course management system, they were less likely to rate the features as having high levels of usefulness. The most useful features reported by UWSP students were the ability to keep track of grades on assignments and tests (78%) and having access to sample exams and quizzes (67%); these two features also were identified by other students as the top two most useful. The least useful features reported by UWSP students were online discussion boards (36%) and the ability to share materials among students (40%), which were sentiments also shared by other respondents. With the exception of

online discussion boards, UWSP students were significantly less likely to rate any of the features of the course management system as very or extremely useful.

Table 5: 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	53%	69%	p<.05
Online readings and links to other text-based course materials	51%	63%	p<.05
Online discussion board (posting comments, questions, and responses)	36%	40%	
Access to sample exams and quizzes for learning purposes	67%	78%	p<.05
Taking exams and quizzes online for grading purposes	50%	59%	p<.05
Turning in assignments online	55%	64%	p<.05
Getting assignments back from instructors with comments and grades	53%	62%	p<.05
Sharing materials among students	40%	52%	p<.05
Keeping track of grades on assignments and tests	78%	83%	p<.05
Overall experience using a course management system - "positive" and "very positive"	66%	77%	p<.05

Summary

UWSP students are similar to students at other four-year institutions in many regards. UWSP students are as likely as other respondents to create presentations, produce spreadsheets, and utilize graphics software, and they rate their skill level about the same for these applications. In addition, the percentage of UWSP students who frequently use online resources – wikis, blogs, social networking, and shopping – is about the same as other respondents.

In areas of personal ownership and use, UWSP students are more likely than other respondents to engage in basic practices. For example, UWSP students are more likely to own cell phones and use emails than other respondents and they are significantly less likely to use instant messaging or download music and or videos from the web. UWSP students are significantly less likely to give themselves high ratings for skills in using online library resources or performing computer maintenance.

In areas related to use of technology in courses, UWSP students were significantly more likely to have made use of a course website and taken a course that utilized a course management system than other respondents, suggesting that availability and use of technology in courses is pervasive at UWSP. UWSP students were as likely as other respondents to rate their instructor's use of course management systems as positive and they rated their skill level of using the course management system the same as other respondents. However, UWSP students' use of and benefits stemming from course management systems appears to be somewhat limited. They were less likely to find the features of the course management system as useful or to view the experience of using it as positive, but they also were significantly less likely to indicate high frequency of use of the course management system. This suggests that UWSP students may not

be utilizing it with enough frequency (and perhaps with enough depth) to realize the benefits. The same may be true with the use of online library resources where UWSP students are significantly less likely to give themselves high ratings of skills. Given that fewer UWSP students are “early adopters” of technology, that approximately one-third of them indicated a need for further training, and that they appear to use basic technologies more predominantly than other respondents suggests that UWSP students may be more apprehensive about using sophisticated applications of technology and additional education and training may be warranted.

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