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Executive Summary

Over 2,500 students were surveyed during the Spring 2008 semester to explore how they learn with technology tools and services available at the University. Designed, in part, as a companion to the Spring 2007 baseline “Teaching with Technology” faculty survey, this report suggests that students and faculty are largely in agreement with how technology impacts and enhances teaching and learning, as well as future directions that are predictably differentiated by their respective roles.

A new “net promoter” measure was included this year which revealed that students are very likely to promote the University to friends and family in part as a result of the quality of technology services available to their academic pursuits. Qualitative comments provide rich detail as to why students are supportive of campus technology efforts, while at the same time remaining highly responsive in their suggestions for technology service expansion.

Students attend to academic work largely from residential or library locations. They report making very good use of Library database and help resources, but are expanding into a number of alternative online services, which they collectively suggest are fraught with both benefit and risk – particularly with respect to online social networking. Although they self-report as having strong IT literacy skills, a gap analysis from the faculty survey reinforces the need for more skills-based training resources to best take advantage of the services available to them. Students detailed how they find help when encountering IT-related difficulty, making good use of campus-related services.

Students continue to hold *UBlearns* in high regard, while suggesting that more Web 2.0 collaborative tools should be made available, and to encourage faculty to use them. Nowhere was the need for enhanced services more explicit than the collective call to redesign classrooms and technology services to increase collaboration and active learning. Students are anxious to make good use of suitable space for group work, and detailed what they find both desirable and undesirable at various locations on campus. This data supports current campus master planning efforts as both timely and desirable; students (both in the learning survey, and Fall 2007 IT survey) and faculty support investment in collaborative learning spaces, expanded wireless services and network infrastructure for “any time, any place” mobile learning. There is also strong support for laptop loan programs, creation of interactive multimedia technology labs and expanded “off-hours” access to existing and/or new facilities.

Overall, this report is encouraging that resources and needs are strategically aligned for future academic and technology infrastructure planning, both from the perspective of students and faculty.

Introduction

The first “Learning with Technology” Survey for students was made available from April 3-21, 2008. Data were collected using Vovici™ software. The instrument contained 31 questions, and was designed by a committee representing the Offices of the Provost, the CIO, University Libraries, and Academic Services, Computing and Information Technology. The total number of valid respondents was 2,574. This report and the survey questions with raw frequency responses are available at <http://www.itsurvey.buffalo.edu/reports/>.

The purpose of this survey was to serve as a companion to the Spring 2007 “Teaching with Technology” faculty baseline survey from which a gap analysis could be conducted to measure differences between student and faculty expectations regarding the role of technology at the University at Buffalo; It was promoted to students through the internal University web portal (MyUB), and the CIT, CIO, University Libraries, and Student Response Center web sites. A login “pop-up” screen gave students using public computing labs (as well as the School of Management computing lab) the option of taking the survey as part of normal academic use. A prize incentive was offered to encourage participation, details of which are posted at www.ubit.buffalo.edu.

This report is organized into three sections:

- How students use technology and resources
- Effectiveness of technology resources
- Impact of technology and needs assessment

Survey Highlights

A gap analysis between student and faculty recommendations for resource priorities revealed a high level of congruency. The only striking difference was that students reported a much greater need for public computing labs and collaborative learning spaces, while faculty indicated a high priority need for more technology classrooms and resources to support new forms of pedagogy with technology. This data will be used to inform University master planning efforts that include provisions for new collaborative learning space planning, opening the possibility of responding to needs expressed by both faculty and students.

Students are not shy about reporting themselves as being highly skilled with technology, with the majority suggesting that they are “expert” users of common desktop tools, or could easily use most of

the common software without many problems. This type of self-reporting is suspect; UB faculty report skepticism regarding the skill level of many of their students, which may open the door to future information literacy skills assessment, perhaps made part of an orientation process or incorporated into UB101 and other introductory classes.

This survey included a question designed to measure the level of “net promoters” among our students. Recommended by Reichheld (2003) in the *Harvard Business Review*, this indicator reflects whether students are likely to recommend UB to friends and family based on its effectiveness in using information technologies for furthering and enhancing learning and instruction (see page 22). UB’s sophomores indicated the highest measure, averaging an 8 on a 10-point scale, with the majority of all students responding positively.

Demographics

Respondents to the survey represented all the schools and class levels at the University (Figures 3 and 4). Both residential and commuter students were proportional to the actual composition at UB.

Figure 1: Class Standing of Respondents

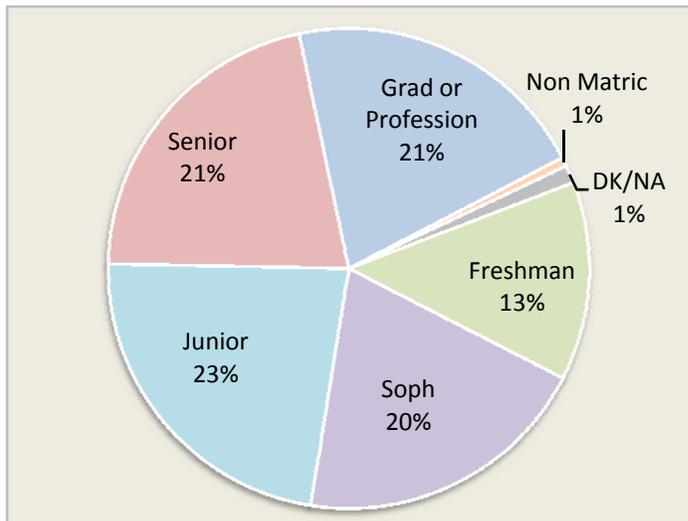


Table 1: Ages of Respondents

Response	Percent
Under 18	0.3%
18-20	40.6%
21-24	41.7%
25-34	13.8%
35-44	2.1%
45 or older	1.6%

Table 2: Gender of Respondents

Response	Percent
Male	52.4%
Female	47.6%

Figure 2: Primary Residence at UB

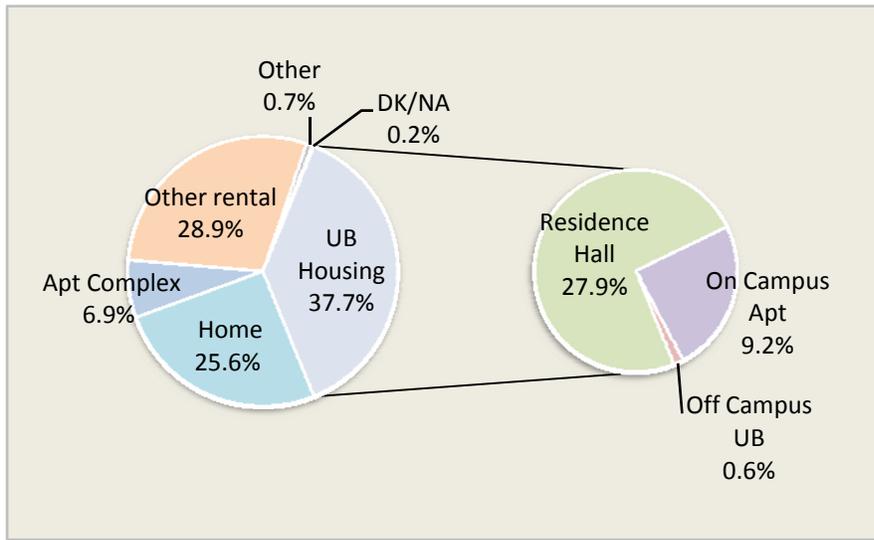
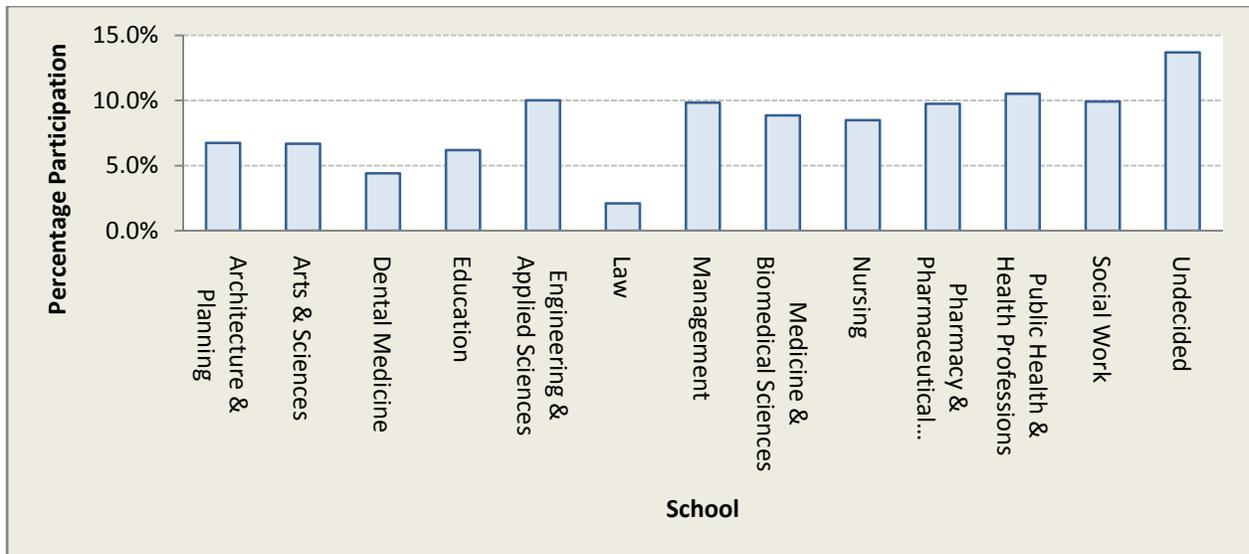


Table 3: Residency Status of Respondents

Response	Percent
New York State	81.3%
Out of State (US)	4.0%
International	14.5%
DK/NA	0.3%

A student’s choice of residence may impact his or her access to quality resources, as on-campus housing has direct access to the UB network and robust bandwidth.

Figure 3: Percentage of Participation based on School Enrollment



As Tables 1 and 2 above indicate, the majority of responses came from traditionally aged college students (age 18-24) and is reasonably balanced between male and female respondents. An optional question was asked about respondents’ ethnicity (Table 4).

Table 4: Ethnicity of Respondents

Response	Percent
Caucasian/White	60.2%
African American	6.2%
Indigenous or Aboriginal Person	0.4%
Asian or Pacific Islander	26.5%
Hispanic	2.6%
Latino	1.2%
Multiracial	2.9%

How Students Use Technology and Resources

Students reported how much time they were spending in various activities. One-third of students who responded work 11 to 20 hours a week at some job including student assistantships; one-quarter are not employed at all; and 12% work .75 of a full-time job (or more) each week.

Thirty-eight percent of the students reported spending 11 or more hours a day working on assignments or research in their living space at home or in a residence hall. The next amount of time spent with these activities is less than three hours. About half of the students spent this amount of time at a Library/Cybrary public workstation, departmental computer lab, public library, unoccupied classroom or lecture hall on campus, or at a WiFi location such as Starbucks™.

Figure 4: Hours per week Respondents Work

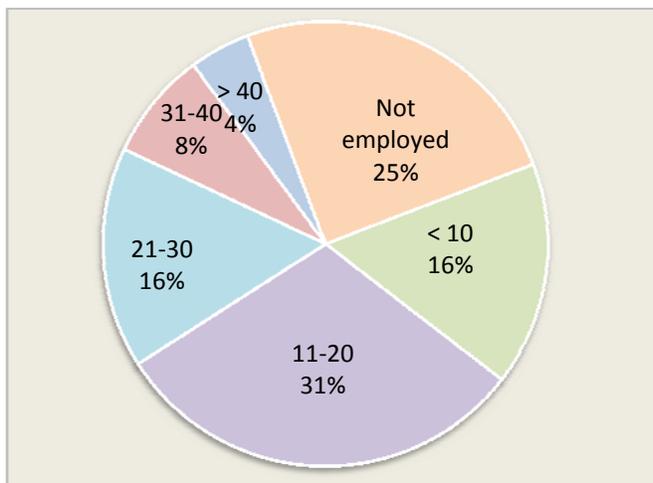
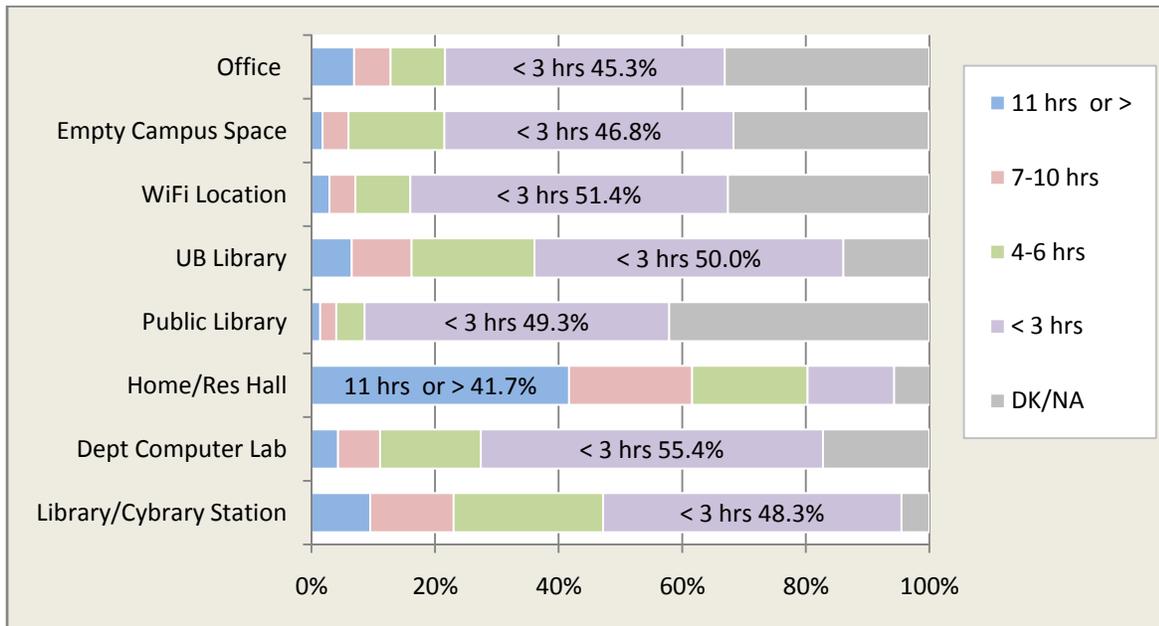
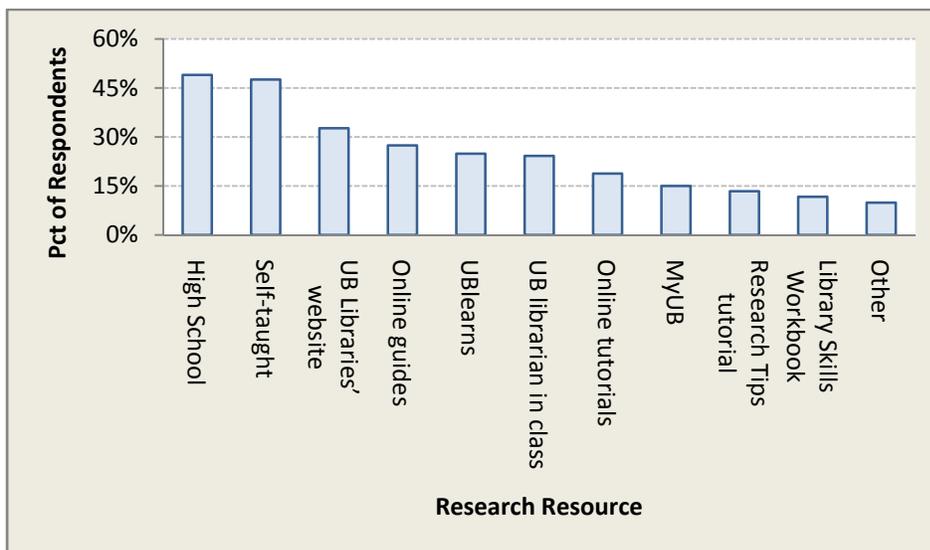


Figure 5: Hours per week Spent Working on Assignments or Research by Location



When asked from which resources students learned how to properly conduct research or write papers, 45% responded to the options *high school* and *self-taught*. The next largest response, 30%, selected the UB Libraries website.

Figure 6: Resources from which Students Learned to Conduct Research or Write Papers



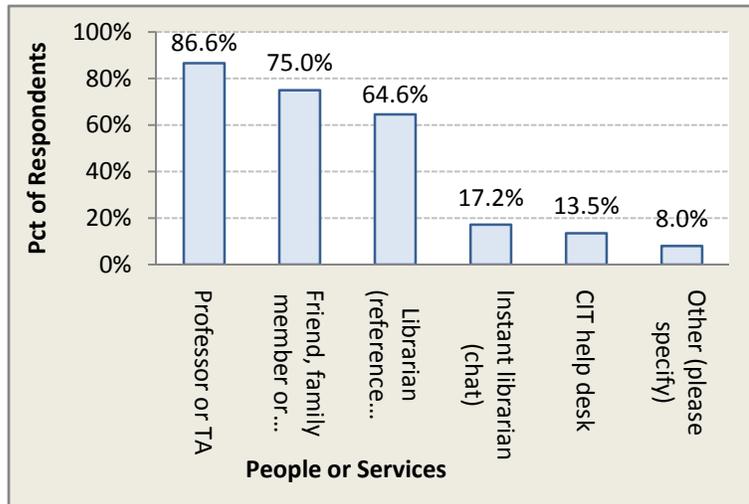
The people or services students consulted for help with research or projects, in nearly equal numbers, were family or friends, librarians(in person), or professors/teaching assistants (Figures 6 and 7). Considering a live librarian and online librarian as one, this is the most frequent choice by 41% of the

students. Of the 134 respondents who provided additional information, 40% (n=55) relied on online resources (e.g., Google or other websites), with many reporting self-reliance. When specifically asked to identify the top three resources for seeking help for research papers or projects, over 86% of students identified a “Professor or TA” followed by a “Friend, family member or classmate (75%) or Librarian (64%)”

Table 5: Resources used to locate digital images

Response	Percent
Internet (e.g. Google Images)	78.0%
Create them myself	38.4%
Library databases (e.g. ArtStor)	16.0%
Departmental collections	7.4%
I don't use digital images	7.1%
DK/NA	7.1%
UBdigit	4.6%
Other	2.4%

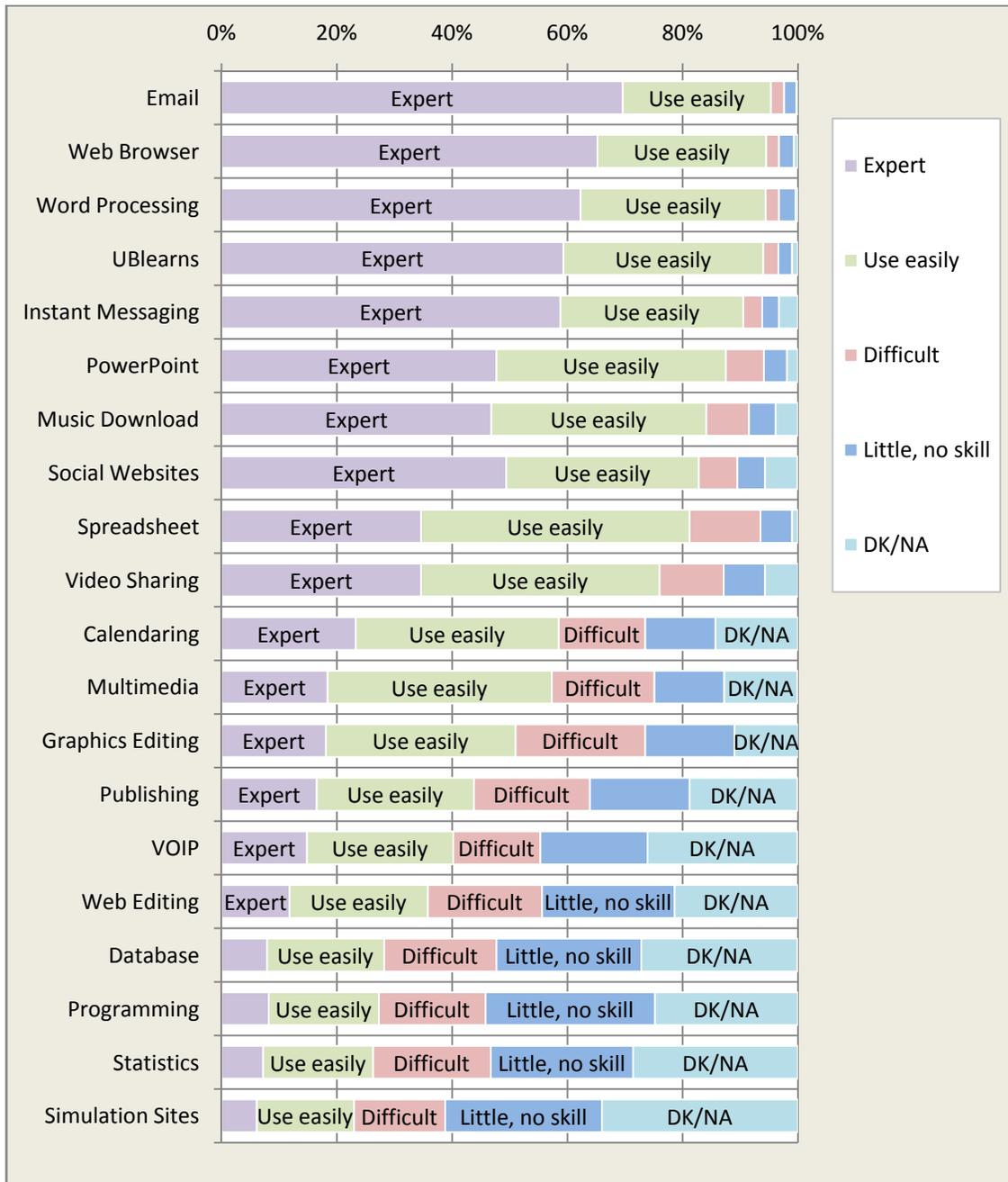
Figure 7: People or services consulted for help with research or projects



Of special interest is where students go to locate digital images. From the responses in Table 5, the largest number of students use images acquired from the Internet. Of the students who selected “other,” most indicated that they make images from their own digital cameras or scan images from books or journals. There seemed to be some confusion as to what the internal University image database *UBdigit* is, indicating that more marketing may be necessary to see this service better utilized.

Students were asked to self-assess many of their technology skills. Their responses (Figure 8) indicate a high degree of confidence in their skill levels. Most surprising, however, is that a small percentage of students report “difficulty using” or “no skill” with basic tools that faculty frequently assume all students have proficiency in, such as email, web browsing, and word processing. Given that students are increasingly relying on their own (or borrowed) digital equipment to create images and in some cases multimedia “mash-ups” (defined as some combination of multiple images and/or video clips and data to support scholarly work), the lower skill areas may require attention in future training efforts, as well as methods by which students can attain skill level with more complex technologies.

Figure 8: Respondents' Self-Assessment of IT skills



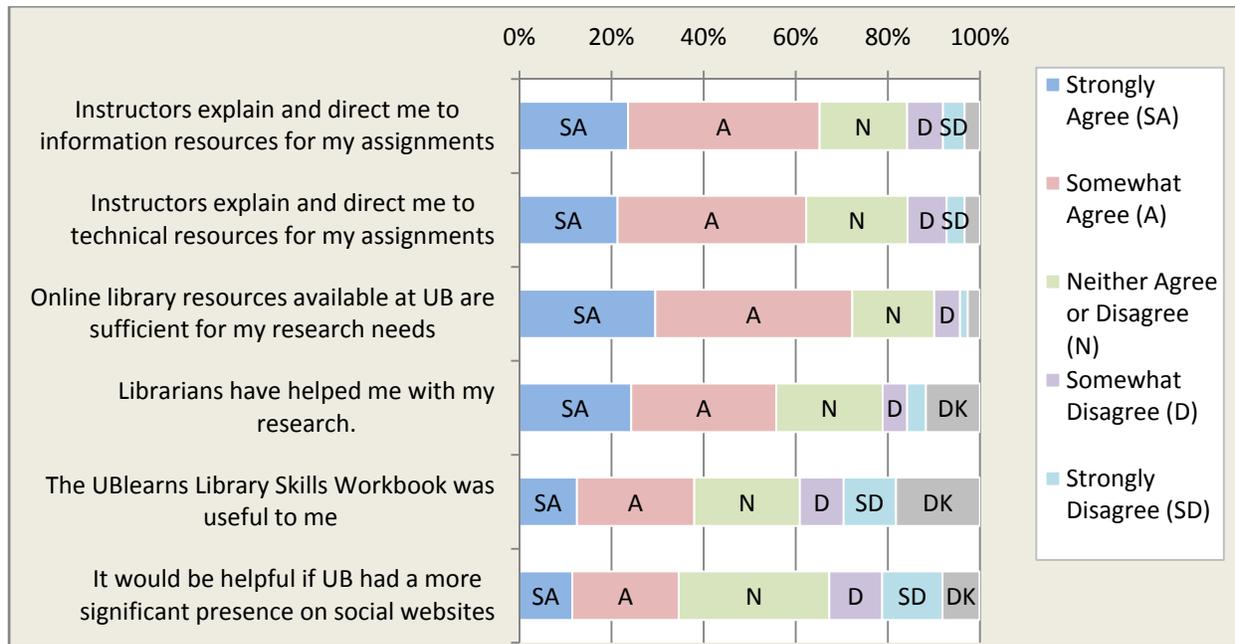
Many students indicated a robust degree of information literacy skills in the qualitative comments regarding their ability to search for information.

“I use Yahoo answers; while often filled with a lot of irrelevant information, it has, at times, produced a few very good sources of reliable information.”

"I consult the Internet. It may seem odd to "consult" the Internet, but it makes sense when you consider interactive services such as message boards."

The second quote, and many like it, calls into question the level of student understanding for proper citation, which may be worthy of additional research and scrutiny.

Figure 9: Resource Effectiveness



Students were asked to rate their level of agreement with probes concerning how effectively instructors explained and directed them to resources, the usefulness of real-time or online library resources, (including the *UBlearns Library Skills Workbook*) and whether it would be helpful for UB to have a greater presence on social networking websites. Two-thirds of the respondents reported that their instructors effectively point them to information (including computer or technical resources) and library resources necessary to complete assignments. Three-quarters agree that UB Libraries have sufficient online library resources (with only 1.7%, or 40 students, strongly disagreeing). Over half report that librarians have been helpful with their research.

The *Library Skills Workbook*, on *UBlearns*, for undergraduates may not be as effective as hoped, with only 13% indicating they “strongly agreed” it was useful, roughly half indicating they “somewhat agreed” or indicated neutrality on its usefulness. One quarter thought it was “somewhat” useful.

The probe regarding the usefulness of UB having a stronger presence on a prominent social networking site (e.g., Facebook, MySpace, Linked-in or Ning) was met with the strongest response: 13% indicated they strongly disagreed with this idea, with 12% strongly agreeing. One-third indicated neutrality, with only one-quarter somewhat agreeing it would be helpful if UB had a more significant present on a social networking website.

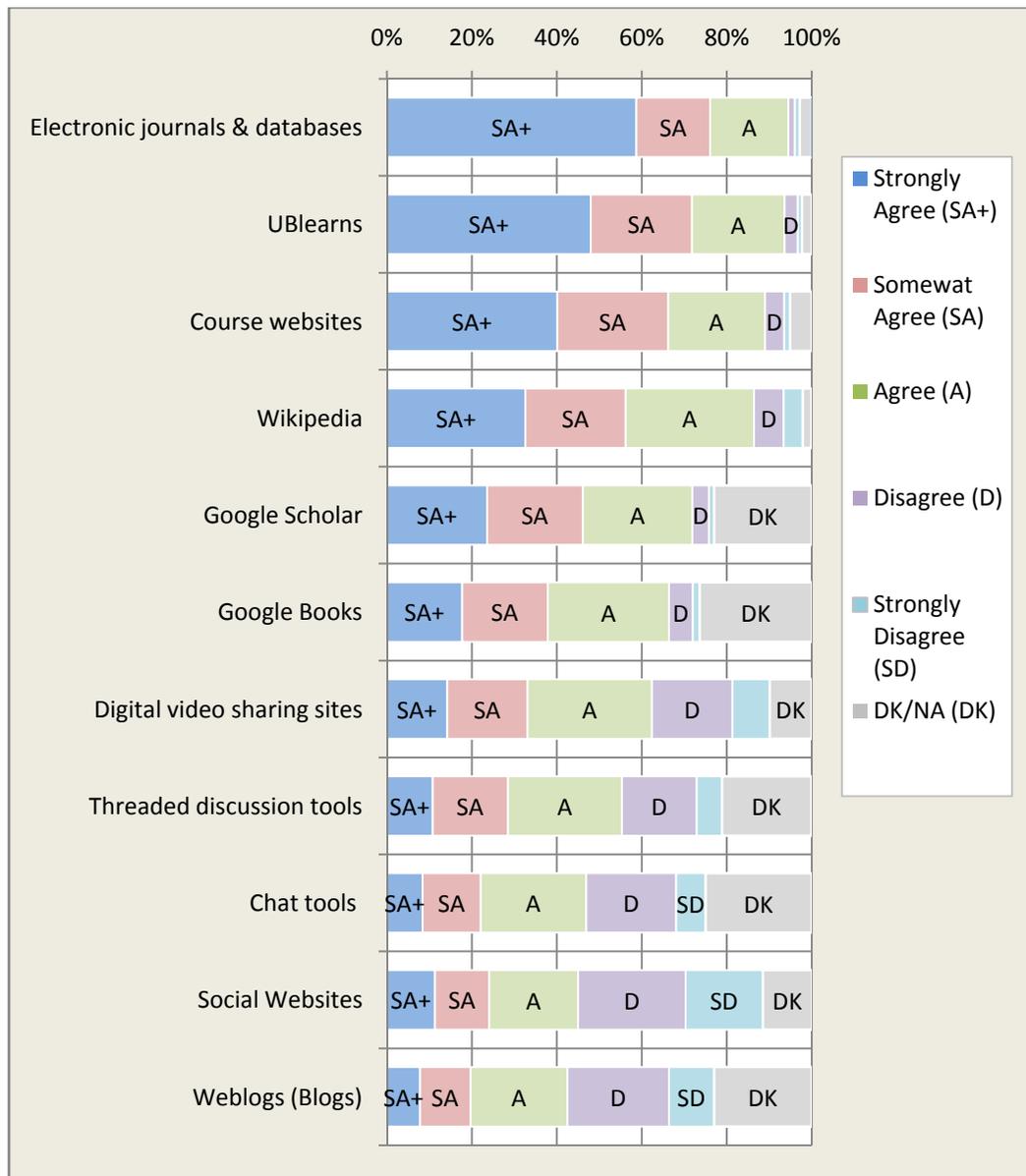
One student summarized a pattern of comments by suggesting:

“Let the students worry about Facebook, MySpace, etc. UB, as a school, should worry about their classroom quality instead of spending time working with social sites.”

Effectiveness of Technology Resources

We asked students the extent to which several learning resources were useful to them.

Figure 10: How effective are technology resources?



More than 60% of students (Figure 10) who responded agreed that many technology resources were effective to some degree.

- Electronic journals and databases (95%)
- U*Blearns*(90%)
- Course websites (89%)
- Wikipedia (86%)
- Google Scholar (72%)
- Google Books (66%)
- Digital video sharing sites (e.g. YouTube) (62%)

Many universities are weighing the potential benefit of having a presence on social websites (e.g., Facebook, MySpace, etc.). Continuing the theme of the effectiveness of social networking websites, a qualitative question specifically asked for feedback regarding these tools and 827 students chose to provide comments regarding the potential effectiveness of social websites for academic use. Slightly more than one-quarter (26%) suggested that use of social networks would be effective in facilitating group work and provide easy notice of school events. A nearly equal number (21%) suggested they are not relevant to academic work and should not be used in an official capacity. One-third (31%) did not express an opinion, with the remainder suggesting that new tools in U*Blearns* to accommodate collaboration would be sufficient.

Two examples from the qualitative comments regarding Web 2.0 and collaboration software illustrate the spirited debate even among students regarding the usefulness and application of these new technology tools:

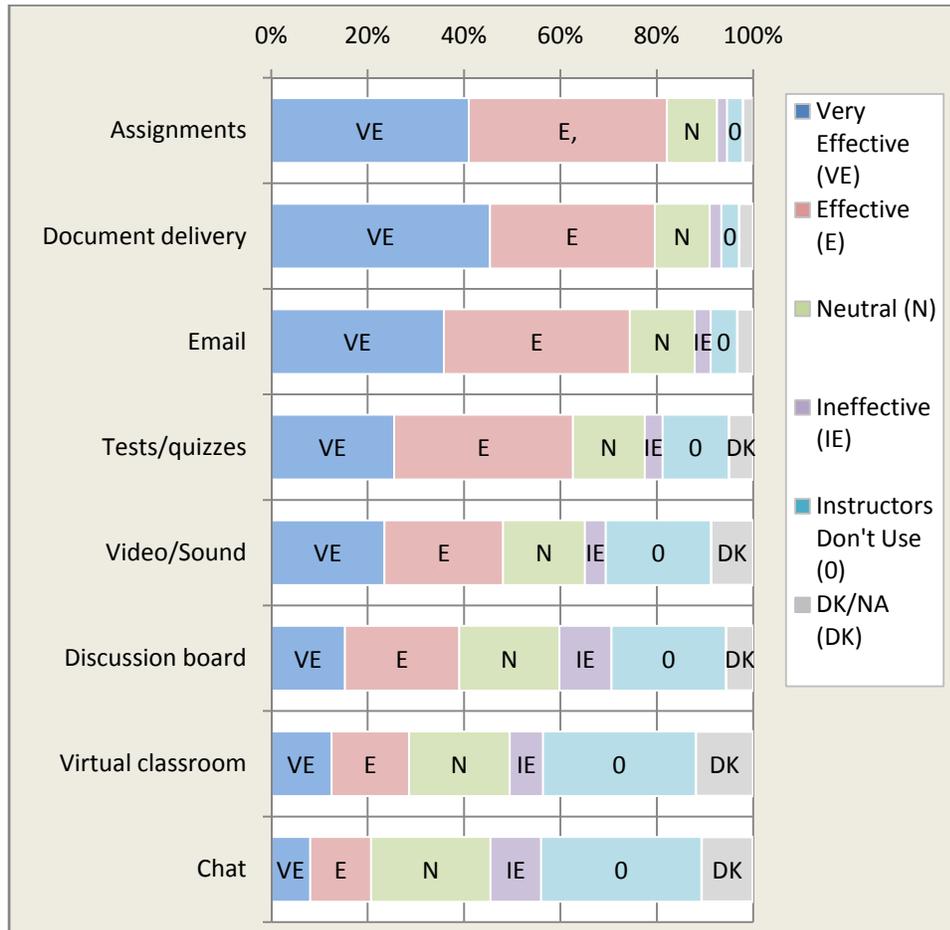
“Don't you dare rely on Facebook or blogs. Those sources are a deterioration of education. Would I dare list MySpace on my bibliography? No, I wouldn't and academia should not allow that either.”

“I could use Facebook for notifications from instructors since everyone is always on Facebook. Podcasting would be helpful in showing videos relating to the course, for example ,in my physiology course, showing the function of a certain organ in an animated video with audio.”

The effectiveness of the tools in U*Blearns* was specifically probed (Figure 11). When the instructor chose to use a tool within U*Blearns*, students thought the tool was generally useful except when it came to collaboration through the discussion board, virtual classroom and chat tools. Of the additional comments received (n=635), 27% indicate that all courses should be required to use U*Blearns*, but concern was expressed that the system performance was often “sluggish” and that enhanced collaborative features such as chat should be added. Students agreed with the faculty data that strongly suggested enhancements of the gradebook feature. Many of these issues have been addressed in the most recently installed system upgrade which occurred after this data was collected. Other suggestions included integration with some type of file sharing system and better instruction for instructors who

choose to utilize *UBlearns*. Many students access video links through *UBlearns* and also commented on the quality of video in this section, suggesting that the video resolution should be higher.

Figure 11: Effectiveness of *UBlearns* Tools



Over 634 responses were received to the question seeking additional comments and suggestions regarding the quality of help and IT support at UB. Of the comments that spoke to quality of service, the number of supporters (n=219) vs. detractors (n=111) of services at various help points (e.g., CIT/Cybrary Help Desk and UBMicro) weighed nearly 2:1 in favor of positive comments. Many comments indicated that 24x7 help is needed given the size of UB’s undergraduate population. Concern was also raised specifically regarding the need for more “off hours” UB residential apartments network. The remaining comments were distributed to minor categories of concern, or declining to comment in a manner that could be categorized (e.g., “don’t know” n=177).

Table 6: First Resource Choice for Help for Common Problems

CIT Help Desk	Personal Friend/Family	Library/Cybrary
		
<ul style="list-style-type: none"> ● Difficulty connecting to UB networks ● Email problems ● Installing UB-related software (from UBMicro or download site) ● Logging on to a UB service (e.g. <i>UBlearns</i>, <i>MyUB</i>) ● Getting started with technology at UB 	<ul style="list-style-type: none"> ● Installing software obtained elsewhere ● Computer is "not working right" ● Suspected virus infection 	<ul style="list-style-type: none"> ● Difficulty connecting to UB Library databases ● Difficulty printing

Several examples of IT problems were presented to students who were asked to whom they would first approach to get help with a technology related problem. The most frequently chosen resources are shown in Table 6. Of particular interest were the “other” frequently chosen help resources. Although many take advantage of the CIT Help Desk, many students rely on family or friends as their resource. Similarly, when they did not choose a friend or family member, students chose the CIT Help Desk. The outstanding exceptions were help with connecting to library databases and printing problems, both of which are library situated services.

Communication of help resources remains a challenge. Most indicate that they are able to eventually find the help they need, but many of the comments indicate confusion of where to go for the right kind of help:

"I never know where to ask people on this campus! And I am always afraid of the most common response, which is to 'go online'."

Table 7: Top Three Choices for Help with IT Problems

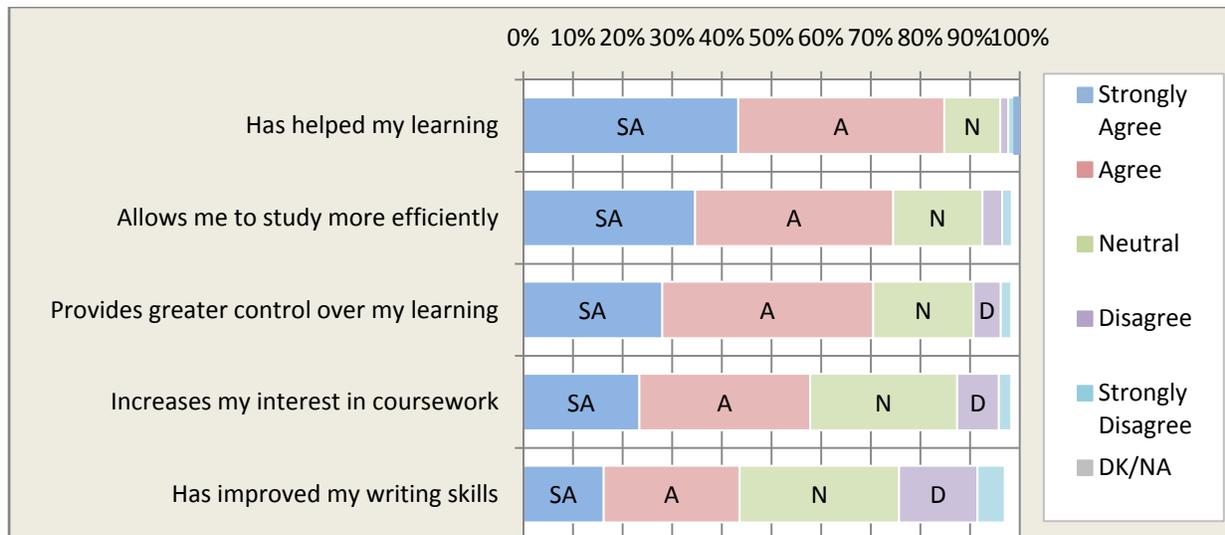
	1st most frequent choice		2nd most frequent choice		3rd most frequent choice	
	Resource	Pct	Resource	Pct	Resource	Pct
Difficulty connecting to UB networks	CIT Help Desk	41.2%	Friends or family	25.4%	Cybrary or Library staff	13.3%
Email problems	CIT Help Desk	45.9%	Friends or family	27.7%	Cybrary or Library staff	9.4%
Installing UB-related software (from UBMicro or download site)	CIT Help Desk	32.5%	Friends or family	24.3%	UBMicro	18.3%
Logging on to a UB service (eg UBlearns, MyUB)	CIT Help Desk	44.5%	Friends or family	22.5%	Cybrary or Library staff	14.8%
Getting started with technology at UB	CIT Help Desk	34.0%	Friends or family	23.1%	Cybrary or Library staff	12.9%
Installing software obtained elsewhere	Friends or family	38.0%	CIT Help Desk	21.8%	Non-UB web pages	15.1%
Computer is "not working right"	Friends or family	33.3%	CIT Help Desk	24.3%	UBMicro	11.3%
Suspected virus infection	Friends or family	32.6%	CIT Help Desk	25.2%	UBMicro	11.1%
Difficulty printing	Cybrary or Library staff	40.6%	CIT Help Desk	29.4%	Friends or family	18.1%
Difficulty connecting to UB Library databases	Cybrary or Library staff	40.9%	CIT Help Desk	28.5%	Friends or family	15.9%

Impact and Needs Assessment

This section investigates the impact technology has on students and what their recommendations are to enhance or improve services.

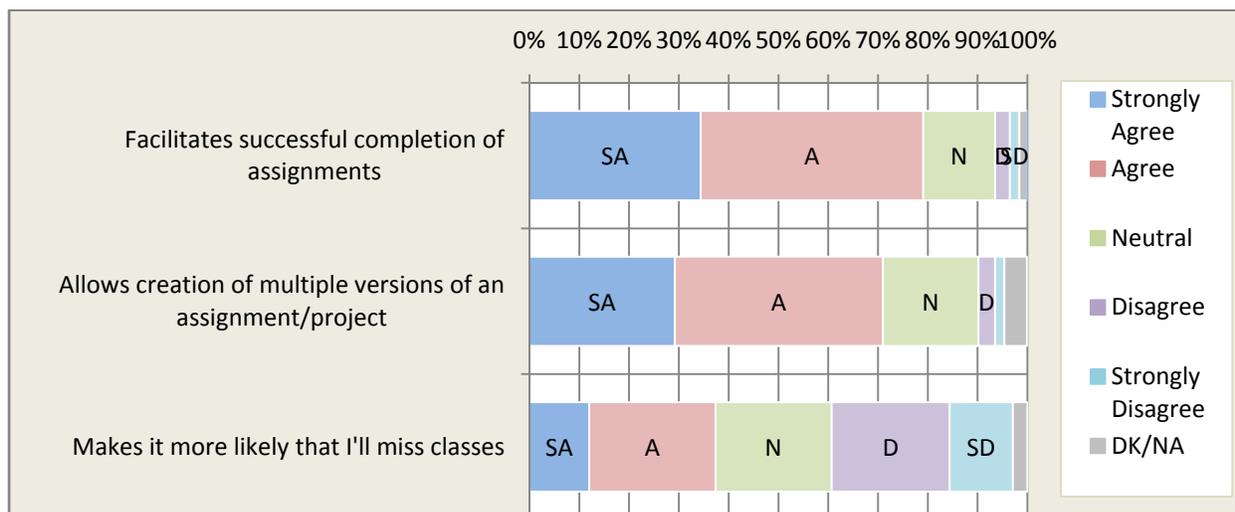
Students were asked to rate the level of agreement with several technology impact statements. There was overall agreement that to some extent technology benefits overall learning. They were unsure or disagreed, however, on whether technology has improved their writing skills.

Figure 12: Overall Impact of Technology on Learning and Instruction



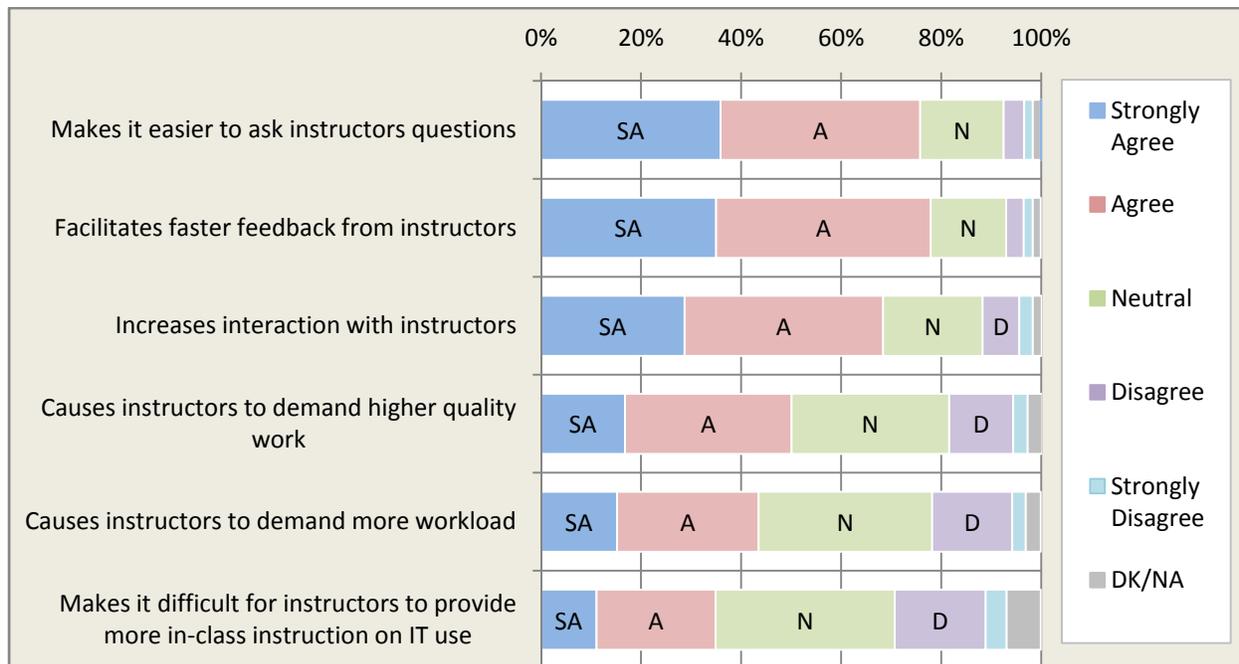
Students were positive about technology facilitating the completion of assignments, in particular creating multiple versions. There is a fairly even distribution of agreement vs. disagreement as to whether technology impacted the likelihood of missing classes.

Figure 13: Impact of Technology on Assignments and Attendance



Students agreed that interaction with instructors-- asking questions, getting feedback, and interaction frequency-- was enhanced by technology. They were less in agreement that technology demanded higher quality work or increased the workload. Finally, they disagreed or were unsure about whether technology made it difficult for instructors to provide in-class instruction on IT use.

Figure 14: Impact of Technology on Interaction with Instructors



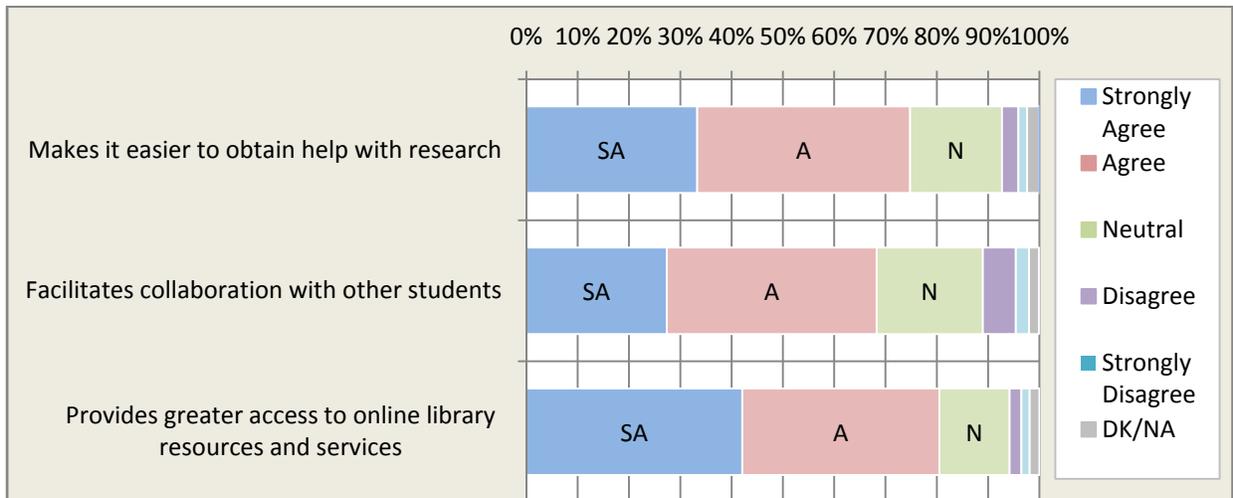
There is evidence that many students struggle with the value of some types of technology. They are supportive of the use of course-capture technology and provided rich data regarding the proper application of that technology.

“I’m more likely to miss class if lectures are recorded, but that means I can make it up online. Often, I can pay better attention when listening alone, but that also creates risk that I won’t complete the lecture at all.”

There were several spirited comments about the need for instructors to be technology savvy enough to avoid “wasting valuable lecture time” by not being familiar enough with the technology to successfully navigate it. Several students suggested compulsory technology training for instructors. Others were very supportive in describing their experiences with faculty blending technology into curriculum that enabled a richer learning experience outside of the traditional classroom walls.

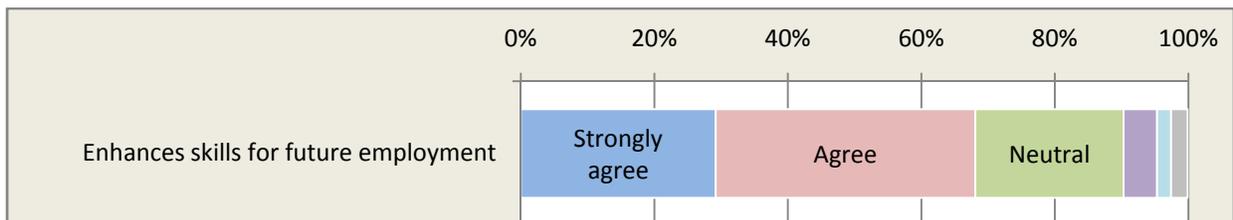
Students agreed that technology made it easier to get help, collaborate with others, and gain access to library resources and services (Figure 15). Many requested access to blogs and wikis, while remaining cautious of how these new tools could be used directly to benefit academic work.

Figure 15: Impact of Technology on Interaction with Others



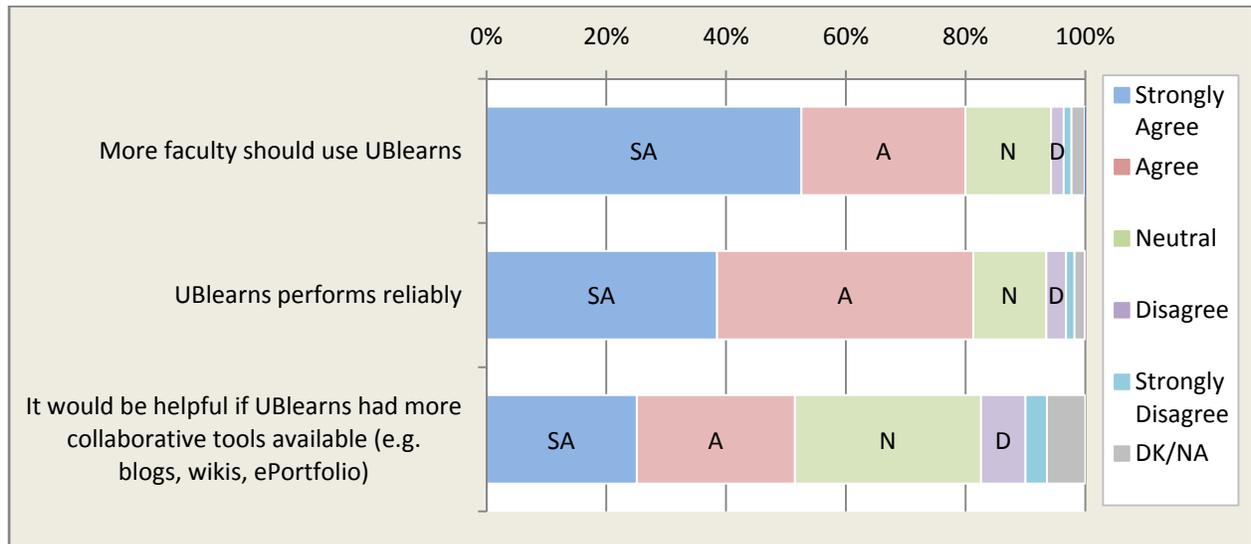
Lastly, students agreed to a large extent that technology had enhanced their skills for future employment.

Figure 16: Impact of Technology on Students' Future



Students were asked specifically for recommendations about *UBlearns*. Eighty percent either agreed or strongly agreed that more faculty should use *UBlearns*. Half agreed it would be helpful if *UBlearns* had more collaborative tools and, regardless of some concerns specifically expressed and detailed in qualitative comments detailed earlier, there was strong agreement that *UBlearns* performs reliably (Figure 17).

Figure 17: Recommendations for UBlearns



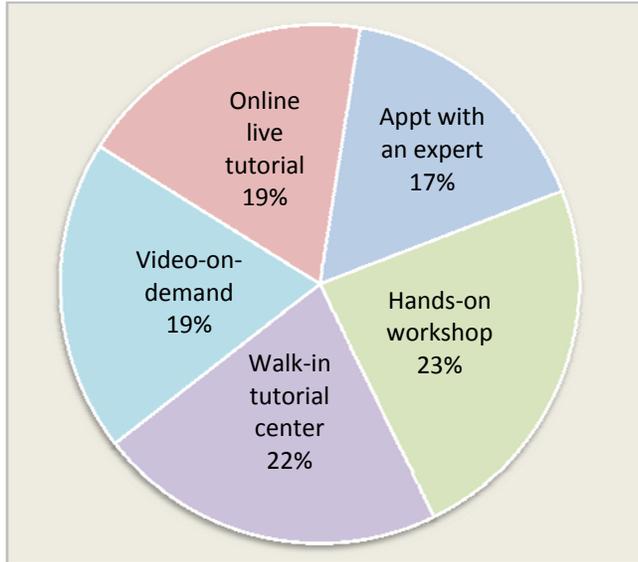
As a follow-up to an earlier question about students' IT skills self-assessment, we asked for what skills they needed training. Students' responses (Table 8) indicate training needs that correspond generally to the skills for which they rated themselves lowest, for example web design, graphics, and programming.

Table 8: IT Skills for which Students want Training

Response	Percent
Web design (e.g. Dreamweaver)	48.1%
Graphics and animation (e.g. Photoshop, Illustrator, or Flash)	41.2%
Program language (C++)	40.0%
Statistics (SPSS, SAS)	38.9%
Databases (e.g. Access)	34.1%
e-Portfolio development (creating an online resume & work samples)	33.2%
Desktop publishing (e.g. InDesign, Quark Xpress)	30.7%
Hardware (installing, fixing, or upgrading your computer)	28.6%
Multimedia (e.g. Premier, Vegas, or iMovie)	27.7%
Spreadsheets (e.g. Excel)	27.5%
Emerging technologies (e.g. creating wikis, blogs, or podcasts)	26.2%
Security/anti-virus (e.g. security workshop with your computer)	24.9%
Operating systems (e.g. Windows, Mac OS X, or Linux)	17.6%
Library research	17.4%
Presentations (e.g. PowerPoint)	13.8%
Individual library databases or subjects	10.1%
Evaluating information on the Internet	9.5%
Word processing (e.g. Word)	9.2%
Social networking/collaboration (Second Life, Facebook, MySpace, Linked-In)	7.5%
Other	1.6%

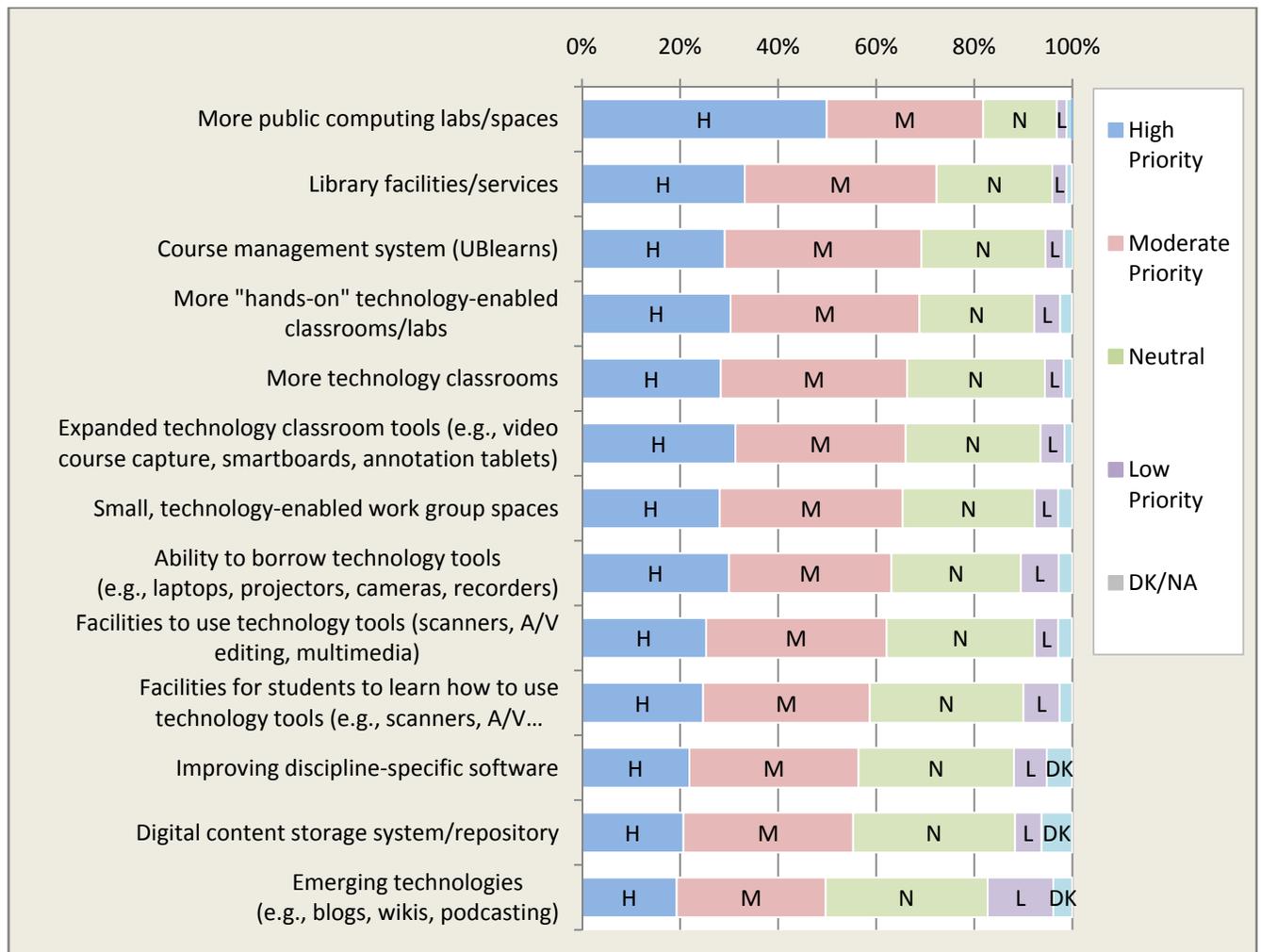
Students immersed in an “on demand” technology world may have new preferences for how they view the effectiveness of training delivery. When probed for their top five preferences, 62% still prefer to receive training in real time, either one-on-one or in a hands-on environment. The remainder (38%) would appreciate the option of receiving help in a mediated fashion.

Figure 18: Preferred Ways to Receive Training



We offered students the opportunity to select priorities for allocating budget resources for IT services. This same question was offered to faculty last spring in a similar survey. Students’ priorities are displayed in Figure 19.

Figure 19: Students' Priorities for Allocating IT Resources



Not surprisingly, students' priorities were in line with where they spend the majority of time and effort, in public computing sites and libraries, for example. Comments detailed the need for new collaborative learning spaces and enhanced course capture. Of the 1183 comments received, nearly half were evenly divided addressing the need for access to power for laptops, collaborative tools/spaces for group work (including project storage and retrieval) as described in the "Future of Public Computing" report; and the need for "all" classes to be digitally recorded on video.

"All classrooms need to be modernized like those in Baldy [200-G]. Also lectures should be posted online for students who miss class. If too many students start missing class, attendance could be taken. But if you miss one class, there should be an easy way to catch up."

One respondent addressed a range of topics when an open-ended question probed for detail on how students would like to see instructors incorporate the tools and services [students] identified as "high priority":

“Allowing a wider range of people to borrow laptops and other equipment would increase students' interest in taking on projects and researching. We could make presentations special instead of run-of-the-mill. More libraries would make students go to the library. UBlearns helps so much in understanding the class. So many items are located there such as syllabi, grades, course work, etc., It just makes life easier. Teaching students to use different software and equipment is essential to success. Most students are increasingly well versed in Facebook instead of the new version of Microsoft Word.”

A gap analysis between the student and faculty instructional technologies survey results found their identified needs were more similar than dissimilar. Table 9 shows the services where priorities were similar.

Table 9: Similar Service Priorities for Students and Faculty

	High priority		Moderate priority		Low priority	
	Student	Faculty	Student	Faculty	Student	Faculty
Library facilities/services	33%	32%	39%	36%	3%	3%
Expanded technology classroom tools (e.g., video course capture, smartboards, annotation tablets)	31%	34%	35%	28%	5%	12%
Course management system (UBlearns)	29%	33%	40%	33%	4%	8%
Facilities to use technology tools (scanners, A/V editing, multimedia)	25%	27%	37%	31%	5%	10%
Improving discipline-specific software	22%	23%	35%	28%	7%	11%
Digital content storage system/repository	21%	25%	35%	29%	5%	10%
Emerging technologies (e.g., blogs, wikis, podcasting)	19%	23%	30%	28%	13%	13%

Students identified some services as having a higher priority than faculty. These include services that directly impact students such as small, technology-enabled workspaces and facilities for students to learn technology tools (Table 10).

Table 10: Service Priorities Higher for Students than Faculty

	High priority		Moderate priority		Low priority	
	Student	Faculty	Student	Faculty	Student	Faculty
More public computing labs/spaces	50%	19%	32%	31%	2%	11%
Ability to borrow technology tools (e.g., laptops, projectors, cameras, recorders)	30%	20%	33%	29%	8%	11%
Small, technology-enabled work group spaces	28%	23%	37%	26%	5%	10%
Facilities for students to learn how to use technology tools (e.g., scanners, A/V editing, multimedia incorporation)	25%	15%	34%	32%	7%	14%

Lastly, there were services for which faculty chose higher priorities than students. These were the primary workplaces for faculty: technology classrooms and hands-on technology classrooms (Table 11).

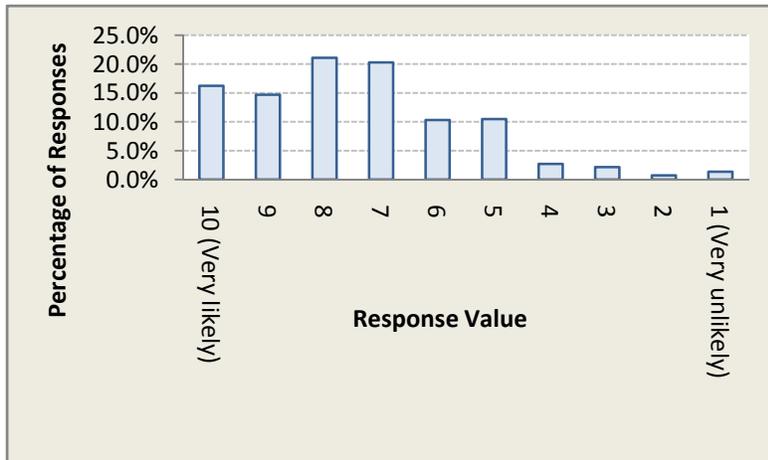
Table 11: Service Priorities Higher for Faculty than Students

	High priority		Moderate priority		Low priority	
	Student	Faculty	Student	Faculty	Student	Faculty
More technology classrooms	28%	56%	38%	26%	4%	5%
More "hands-on" technology-enabled classrooms/labs	30%	42%	39%	27%	5%	6%

The last survey question probed whether students were likely to promote UB to friends and family based, in part, on the quality of instructional technology available at the University. Reichheld (2003) recommends that one useful measure of a successful operation is a “net promoter” score. Students were asked how likely it would be for them to recommend UB to a friend based on its effectiveness in using information technologies “...for furthering and enhancing learning and instruction.” The distribution of responses on a 10-point scale can be seen in Figure 20. The majority of students responded positively. Used another way, this question can help calculate the percentage of net promoters or the percentage of customers (in this case – students) who are promoters of an institution minus the percentage who are detractors. ¹

¹ Reichheld, Frederick (2003). “The One Number You Need to Grow.” *Harvard Business Review*, December. 2003.

Figure 20: Likelihood of recommending IT at UB



Overall our net-promoter score was 3.2%. The scores from each class of respondents may be the most interesting. The sophomore class has the highest score, while seniors had the lowest. (Seniors and Graduate Students each represented only 10% of the responses to this question, however.)

Table 12: Net Promoter Score for each Class

Class	Score
Freshman	6.8%
Sophomore	7.9%
Junior	6.2%
Senior	-3.8%
Graduate	2.5%

Conclusion & Recommendations

This report suggests that the campus is responding positively to student needs, while remaining sensitive to future needs. It is clear that investment must continue to support collaborative learning of all types, and that a cautious tone is justified before engaging in any strategic alliances between commercially available social networking tools and University resources.

Future efforts should continue to take track longitudinal progress for whether students will continue to be “net promoters” of UB technology resources, and measure progress in relation to the execution of planned expansion of collaborative tools and facilities to support newer pedagogical models.

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Any comments, questions or corrections should be directed to Lisa Stephens – stephens@buffalo.edu