



IT Survey

2008

Student Information Technology (IT) Experience Survey

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Introduction

The twelfth “Student Information Technology” Survey for students was made available from November 12-20, 2008. Data were collected using Vovici™ software. The instrument contained 58 questions and was designed by a team of IT support staff representing each technology area probed and in consultation with University Residence Halls and Apartment staff and other campus academic and service stakeholders. 3,221 total valid responses were received. This report and the survey questions with raw frequency responses are available at <http://ubit.buffalo.edu/scoreboard/surveys/>.

The purpose of this survey was to re-examine students’ technology experiences, validate trends, and to explore the introduction of new (or modification of existing) technology services. Students were encouraged to participate in the survey through the University web portal (MyUB), and by screen “pop-ups” in the CIO/University Libraries public computing sites, School of Management and Law School computing labs as part of regular academic use. Twenty gift cards were donated by Tim Horton’s and UB Campus Dining to also encourage participation in this year’s survey.

This report is organized into nine sections:

- Students’ hardware and operating system choices
- How students access technology at UB
- Students’ use and preferences for software
- Security awareness and practices
- IT in Residence Halls and Apartments
- Messaging at UB
- Public sites and printing
- Learning resources and technology classrooms
- Satisfaction with IT services and recommendations

Survey Highlights

- Fewer freshmen (and sophomores) are using public computing sites compared to juniors and seniors. Future surveys efforts will require more effective targeting of increasingly mobile students (Figure 1).
- Of freshmen who responded, fewer reported using public computing labs (69%) than any previous classes or graduate students. Of those who do use public computing sites, there is no

change from last year in the amount of time spent per week and very little change in the wait time to access a workstation from 2006.

- Survey “pop-ups” are effective in increasing departmental survey representation. Feedback from the Law School more than doubled this year.
- Convenience continues to be the most important feature desired for public computing areas: in hours, location, and printing services.
- There is a small increase in the percentage of students who have signed up for UB Alert, but the same percentage report no intention of signing up. There is an increase in percentage of students who report wanting **only** emergency notices on UB Alert.
- There is an increase of 10% in the percentage of students who use some form of anti-virus software over last year.
- Nearly 50% of respondents reported using the same password they were initially given.
- In Residence Halls and Apartments, 76% of students do not use the University telephone service and this percentage is even higher (82%) for freshmen.
- The use of instant messaging in teaching and learning dropped; 90% of respondents reported never using it for classes this year compared to 70% last year.
- Finally, nearly 80% of all returning students are satisfied to some extent with IT services compared to last year.

Demographics

The total number of respondents (N=3,221) was comparable to the previous year (Table 1). Respondents to the survey represented all schools and class levels at the University (Figures 1 and 2). Most respondents reside in New York State; international students were represented at slightly higher than enrollment (Table 2). Both residential and commuter students were proportional to the actual composition at UB (Figure 3).

Figure 1: Class Standing of Respondents

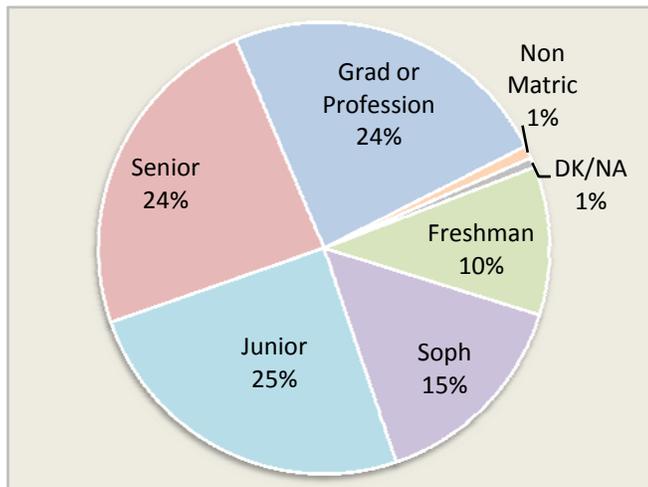
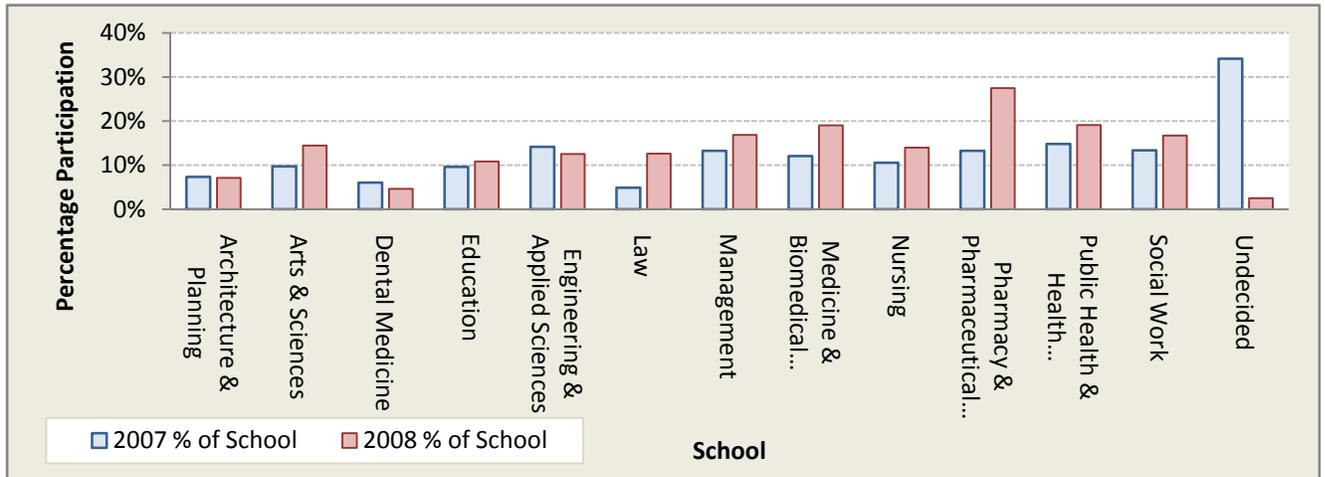


Table 1: Number of Survey Respondents

Year	N
2008-2009	3,221
2007-2008	3,434
2006-2007	1,943
2005-2006	5,548
2004-2005	2,600
2003-2004	3,262
2002-2003	2,838
2001-2002	1,315
2000-2001	1,360
1999-2000	1,101
1998-1999	670
1997-1998	371

Significant boosts in student participation were noted by School. Law, Medicine and Pharmacy concerns are better represented in this survey than in the past (Figure 2).

Figure 2: Survey Participation as Percentage of Enrollment



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. This survey included several questions that were exposed only to students who live in UB housing to explore the role of residential lab support, and how future services may be considered and configured (Figure 3).

Figure 3: Primary Residence at UB

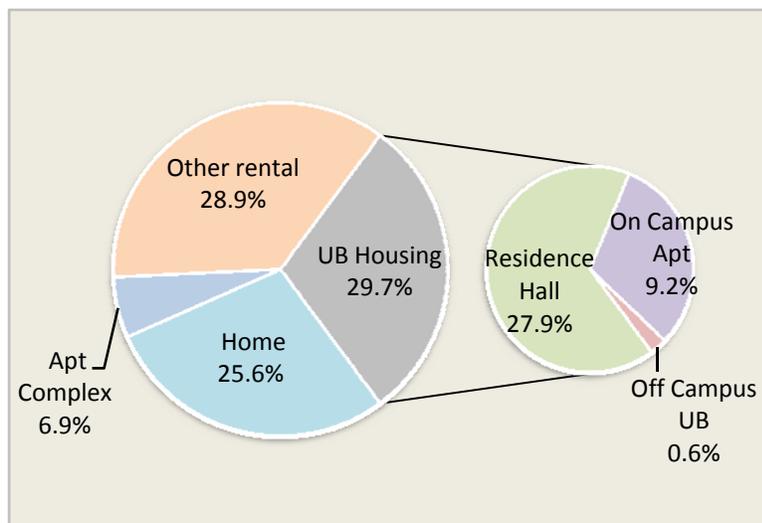


Table 1: Residency Status of Respondents

Response	Percent
New York State	77.8%
Out of State (US)	5.0%
International	16.9%
DK/NA	20.0%

Students' Hardware and Operating System Choices

Student use of laptops continues to rise, however there was little or no difference in the primary usage of laptops by incoming undergraduates compared to the total. Looking at the computers used primarily by school, The Graduate School of Education and School of Social Work lags behind others by at least 10% in primary usage of laptops (Figure 4).

Table 2: Types of Hardware Owned by Students

Hardware	Count	Percent
Laptop/notebook	2689	84%
Desktop	1158	36%
Smartphone (cell phone with computing features)	261	8%
PDA/handheld (computing features without cell phone)	109	3%
Tablet	33	1%
I don't own a computer	59	1%

UB clearly continues to migrate toward an increasingly mobile environment, which will need to be taken into consideration with current Master Planning efforts. Over 80% of all students now rely on laptops, though not all choose to bring them to class, instead enjoying the convenience of a laptop when moving back and forth from a primary residence to a campus residence (Table 2).

Figure 4: Comparative Ownership of Laptop and Desktop Computers

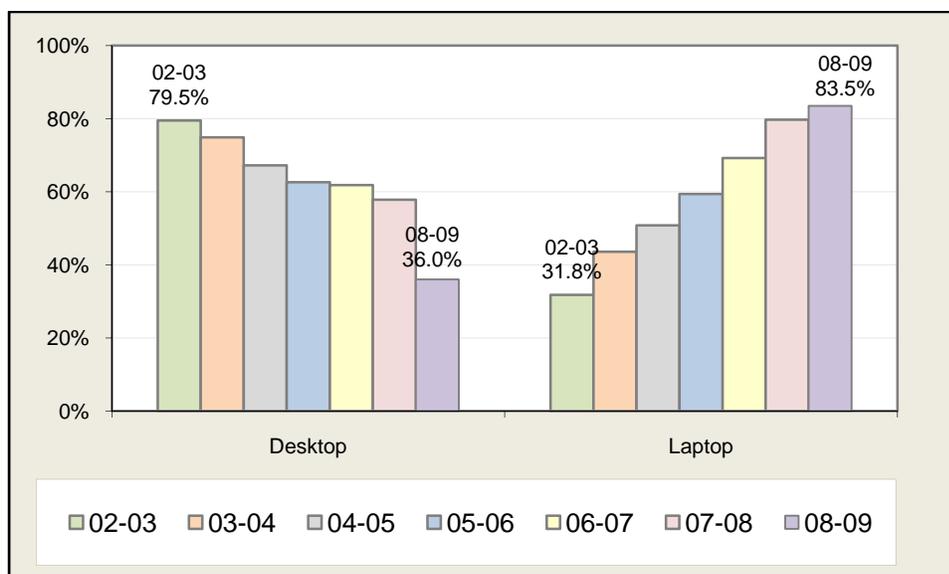


Table 3: Preferred Computer Use by Respondents from each School

School	Total from School	% Desktop	% Laptop	% Tablet	% Text/Web Cell Phone	% PDA
Architecture & Planning	59	15% (9)	83% (49)	0% (0)	2% (1)	0% (0)
Arts & Sciences	861	27% (231)	71% (610)	0% (1)	2% (18)	10% (1)
Dental Medicine	20	10% (2)	75% (15)	15% (3)	0% (0)	0% (0)
Education	164	36% (59)	62% (101)	1% (1)	1% (2)	1% (1)
Engineering & Ap Sci	415	28% (117)	70% (292)	0.5% (2)	0.5% (2)	0.5% (2)
Law	91	13% (12)	86% (78)	0% (0)	1% (1)	0% (0)
Management	551	18% (99)	79% (434)	1% (5)	2% (11)	0.3% (2)
Medicine & Bio Sci	217	17% (37)	81% (175)	2% (4)	0.5% (1)	0% (0)
Nursing	95	20% (19)	78% (74)	1% (1)	1% (1)	0% (0)
Pharmacy	150	13% (20)	85% (127)	1% (2)	1% (1)	0% (0)
PHHP	239	22% (53)	76% (182)	0% (0)	2% (4)	0% (0)
Social Work	78	35% (27)	64% (50)	0% (0)	1% (1)	0% (0)
Undecided	193	22% (43)	74% (143)	0% (0)	3% (5)	1% (2)
Total Counts	3,133	23% (728)	74% (2,330)	1% (19)	2% (48)	0.2% (8)

The above table must be considered in relation to the total hardware reported by students (Table 3). For example, 33 students report owning tablet PC's, but when observed on the whole, only 19 tablets are preferred for academic use. This table does, however, give some indication by school of how students are selecting hardware, therefore assisting in prioritization of mobile support (Table 4).

Operating system choice is influenced heavily by the timeframe in which hardware was purchased (newer hardware comes packaged with Vista when purchased for personal use). The popularity of Macintosh laptops continues to grow. OSX 10.5 (Leopard) was released shortly before the survey last year, reporting a 4% adoption rate. This year, OSX 10.5 stands at 62% of Macs. UB Micro continues to report steady increases and strong sales of Macintosh computers over the past several years (Figures 5, 7).

The University made a strategic decision to not rollout Vista at this time, continuing with the stable and well-supported Windows XP. New Windows computers are sold with Vista, with the majority of students (77%) using Vista “home” version (Figure 6). Among those who choose to use Linux OS, Ubuntu is the preferred operating system (Figure 8)...

When asked if their computer contained a 64-bit operating system, less than 24% indicated “yes.” The overwhelming majority of students either declined to answer, or reported “not knowing” whether their system was 64-bit capable.

Figure 5: Operating Systems in Use

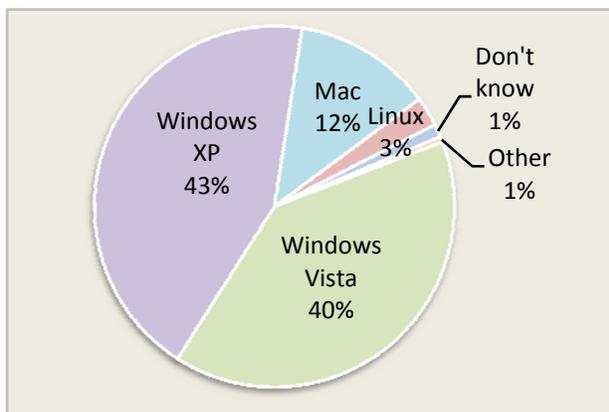


Figure 6: Versions of Windows operating systems

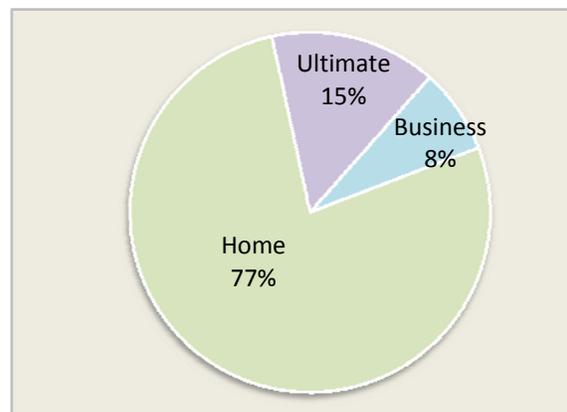
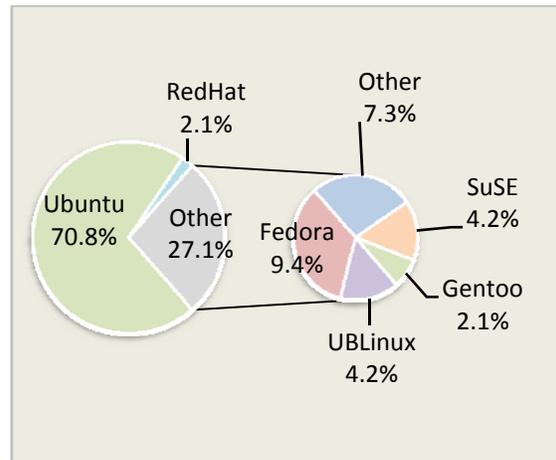
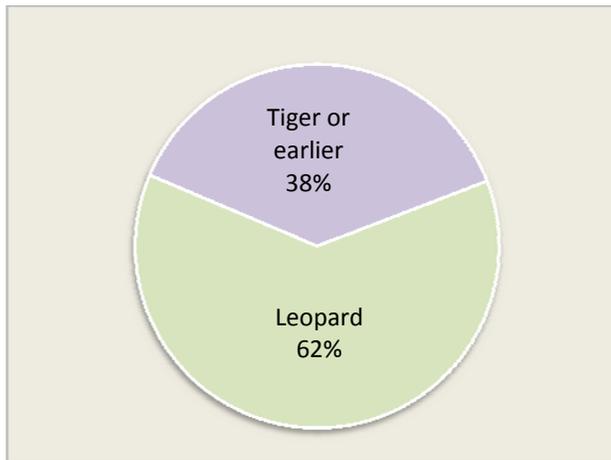


Figure 7: Versions of Macintosh operating systems

Figure 8: Linux operating systems used



How Students Access Technology at UB

Two categories probing how students connect to UB IT resources were eliminated from longitudinal tracking this year - shared wireless and satellite dish (because the nature of landlord provided access is not always known to students). FiOS, the new fiber-based delivery service from Verizon was added as an option, and a broader category to which students could report - "landlord provided."

Slight "upticks" were noted in broadband services (DSL, Cable Modem) as well as a very slight rise in use of the shared dial-up modem pool. Slightly less than 3% of students are now reporting primary connection via a mobile broadband device of some type (Figure 9).

Students connecting via these mobile devices for University business are primarily interested in access to email, and *UBlearns*. What is highly significant is that nearly three-quarters of all students responding last year expressed no interest in mobile access, and the exact inverse of this is now the case, with over 75% expressing some type of mobile device access to University services (Table 5).

Figure 9: How Students Connect to UBs IT Resources

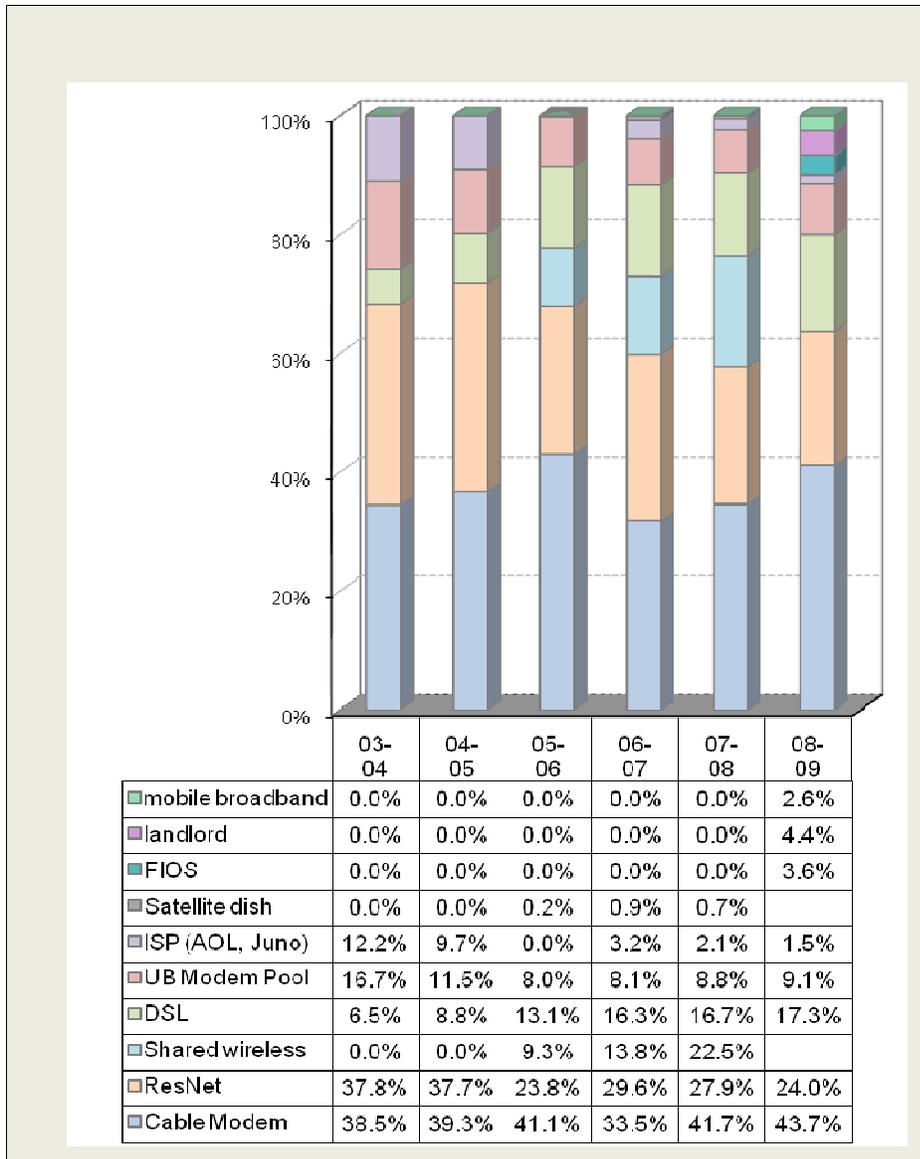


Table 4: UB Sites Accessed using PDAs or Smartphones

	2007	2008
UB webmail	9%	36%
UBlearns	9%	26%
None	70%	21%
Dept sites	4%	8%
Library sites	3%	6%
Student Resource Center Website	-	4%

Students' Use and Preferences for Software

The UB2020 Hardware and Software standards committee continues to monitor the use of various software and distribution methods across campus. It is not clear why there was a slight “uptick” in those electing not to take advantage of initially provided UB software. Firefox remains the Internet browser of choice (Table 6).

Table 5: Browsers used by Students

Response	Count	Percent
Firefox	2,121	45%
Internet Explorer	1,664	36%
Safari	452	10%
Google Chrome	282	6%
Opera	82	2%
Not sure	23	.5%
AOL explorer	7	.1%
Maxthon	5	.1%
Flock	4	.1%
Avant	3	.1%
Yahoo	3	.1%
Other	40	.9%

Students continue to prefer download as the means for receiving their initial software at UB, this year in larger numbers than last year.

Table 6: Method Received Initial Software

Response	2007	2008
Download	30%	30%
CD (UBMicro)	32%	27%
CD (orientation)	23%	19%
Do not use	12%	15%
Friend	1%	1%
Other	1%	1%
CD (Burned)	.4%	.3%
Pre-installed at UBMicro		.3%

Table 7: Preference for Initial Software

Response	Count	Pct
Download at no additional cost	2,729	87%
CD for purchase at UBMicro	347	11%
Other	41	1%
CD free	16	.5%
Both CD & download	9	.3%
Mailed CD	6	.2%

Table 8: Comparative Preferences for Initial Software 2007 and 2008

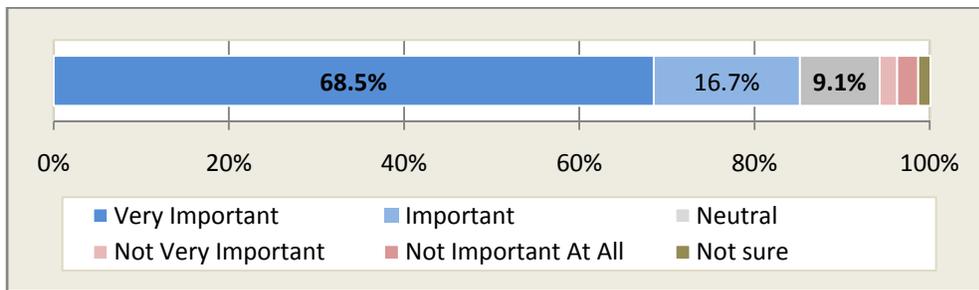
Response	2007	2008
Download	62%	87%
CD	37%	11%

Students were probed on how they use productivity software for academic use. The majority report use of UB-provided Microsoft Office to be the primary productivity tool used, followed by the same software provided through another source (30%), or use of open source software (Table 10).

Table 9: Office Productivity Software used by Students

Response	Count	Pct
MS Office software provided by UB	2,007	64%
MS Office software provided by another source	938	30%
Open Office or another freeware source	99	3%
No productivity software installed on my computer	54	2%
Doesn't have a computer	15	.5%
Tools built in to OS	11	.3%
Other	17	.5%
Google docs	2	.1%

Figure 10: Importance that UB Provides MS Office for Installation on their Computers



85% of surveyed students report that it's "Important" or "Very Important" that UB provides productivity software (Figure 10). When probing more deeply into the types of applications used within the Microsoft Campus Agreement, slightly less than half report using MS Access in course work. This is higher than expected, and may be an artifact or misunderstanding of the term "access" vs. MS Access as an application (Table 11).

Table 10: Students Required to use MS Access for Coursework

Response	Count	Pct
Yes	1,504	47%
No	1,448	45%
Not this semester, but at least one class last year.	259	8%

Security Awareness and Practices

Security and privacy are ongoing challenges in the University environment. UB continues to proactively inform students of security "best practices" and how to protect their data and hardware from malicious attacks.

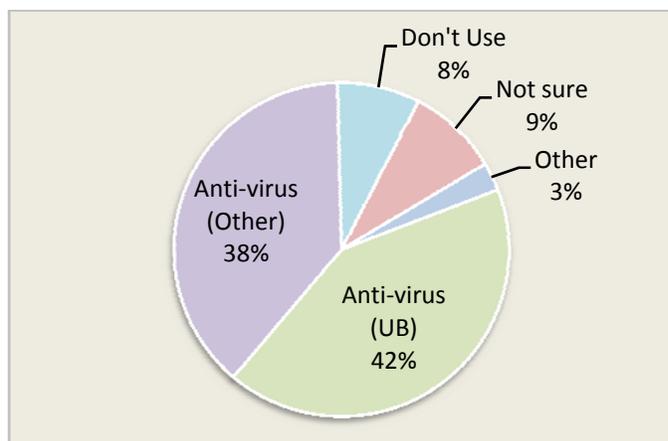
The usage of UB Virtual Private Network (VPN) software has changed slightly from last year, but a slight “uptick” in reports of not understanding what VPN is, or how it’s used, may indicate a need to re-examine education efforts so students understand the importance of using a VPN client.

Table 11: Students who used UB VPN to Connect from Home or from Off-Campus

Response	2007	2008
Yes	28%	27%
No	35%	33%
I don't know what UB VPN is	38%	41%

Use of anti-virus software and firewalls remains relatively stable and unchanged from 2007. Slightly more students use anti-virus software than a personal firewall (Figures 11 and 12).

Figure 11: Use of Anti-Virus Software



Students are encouraged to maintain anti-virus and firewall software through use of automatic updates, and approximately three-quarters of those surveyed do. When asked to indicate methods used for security, the responses about automatic vs. manual updates total the exact percentages as last year, but a few more students now use automatic updates (Table 13).

Fortunately, less than 5% of students report not updating their system, with slightly more (6%) reporting being unsure of how to maintain their computer(s) security software.

Figure 12: Use of a Firewall

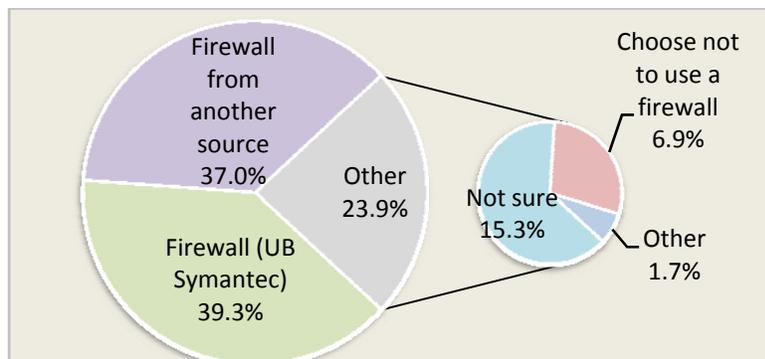
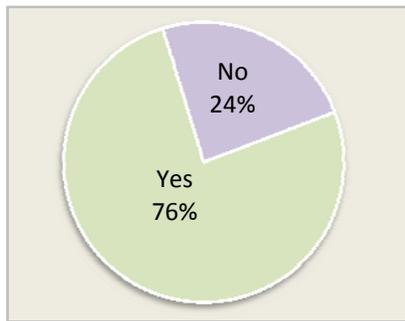


Table 12: How Students Keep Computers Updated and Secure

Response	Count	Percent
Automatic updates	2,404	75%
Manual download/ updates	589	18%
Not sure	194	6%
Install add'l Internet security software	185	6%
Do not regularly update or patch	142	4%

Figure 13: Awareness of Copyright Policy



Students' have now been probed for several years whether they are aware of policies protecting intellectual property and copyright. When specifically asked about illegal downloads of protected works, the last three years have remained stable with roughly one-quarter of students reporting lack of awareness (Figure 13).

Table 13: Frequency of Password Change

Response	Count	Percent
Never - using the original password	1,559	49%
A long time ago	1,076	33%
Sometime this semester	434	14%
Within 30 days	98	3%
This week	50	2%

Nearly half of surveyed students indicate they are still using their original password (Table 14). This may indicated a need for additional education on the importance of password updates.

IT in Residence Halls and Apartments

Some questions were directed only to residential students which represented 30% of the survey respondents. Respondents represented all residential locations. Please note that in an effort to keep all mobile device data in a single reporting place, some tables refer to all students (not just residential students) and is indicated as such.

Figure 14: Residence of Survey Respondents

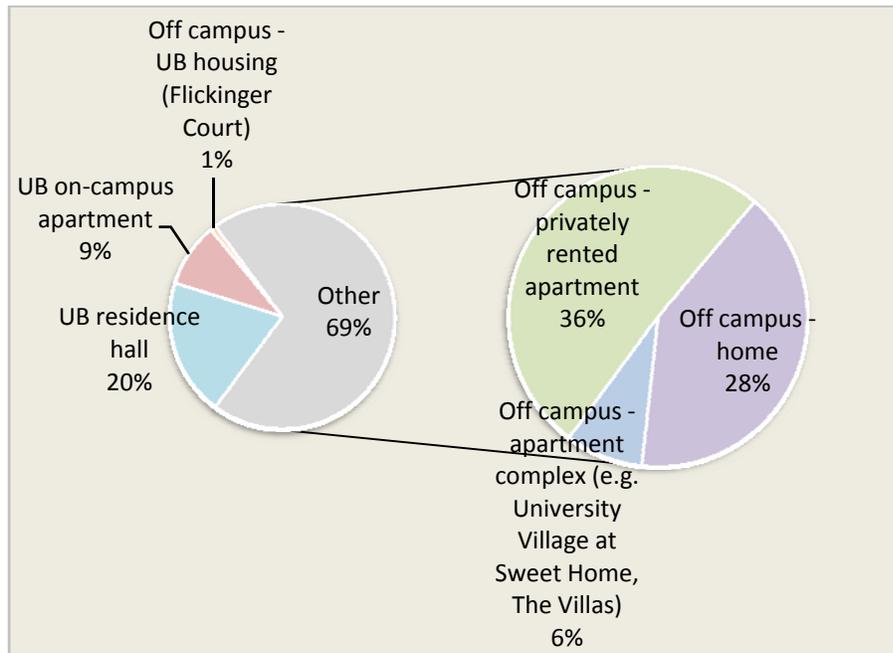


Table 14: Residences of UB residents

Response	Count	Percent
Clement	86	9%
Clinton	41	4%
Creekside Village	23	2%
Dewey	19	2%
Fargo	64	7%
Flickinger Court	29	3%
Flint Village	73	8%
Goodyear	47	5%
Hadley Village	105	11%
Lehman	30	3%
MacDonald	15	2%
Michael Hall	4	.4%
Porter	63	.6%
Pritchard	8	.8%
Red Jacket	78	8%
Richmond	66	7%
Roosevelt	28	3%
Schoellkopf	23	2%
South Lake Villa	80	8%
Spaulding	37	4%
Wilkeson	38	4%

Of the students surveyed, Figure 14 and Table 15 describe distribution of 30% (n=953) of the student respondents who live within UB Residence Halls & Apartments.

The majority of residential students do not use the University phone service (Tables 16-18). A reasonable assumption would be that younger students have greater access to mobile phones, and of those who do use Residence Hall telephones, it is primarily for incoming or local calls.

2% of the students surveyed indicate that they do not own a cell phone, and 7% indicate they can not receive a cell phone signal in their residence hall or apartment. Wireless network coverage in general has been installed according to the priorities identified by students in previous surveys: Goodyear, Richmond and Red Jacket.

Increased adoption of mobile devices is evident through class standing, as fewer students are relying on traditional “hard wired” telephone service in residence halls (Tables 16, 17 and 18).

Table 15: Use of University Phone Service by Residents

Response	Count	Percent
No	729	76%
Yes	228	24%

Table 16: Use of University Phone Service by Class Standing

Response	Freshman	Sophomore	Junior	Senior	Graduate student	Non-matric	Not sure
No	82% (183)	84% (205)	73% (166)	67% (124)	65% (45)	50% (2)	33% (1)
Yes	18% (40)	16% (38)	27% (61)	33% (60)	35% (24)	50% (2)	67% (2)
Totals	223	243	227	184	69	4	3

Table 17: Type of University Phone Service Use

Response	Count	Percent
Incoming calls	159	70%
Local calls	129	57%
On-campus calls	93	41%
Calling card calls	31	14%
Long distance calls	25	11%
Other	6	3%
RA job	3	1%

In order to provide consistent, reliable access to mobile devices, the University has been surveying and monitoring quality of cell phone reception. Although the quality of reception varies depending on the choice of service provider it is encouraging that 92% of respondents report usable reception (Table 19).

Table 18: Cell Phone Reception in Residence Hall or Apartment

Response	Count	Percent
Yes	879	92%
No	63	7%
I don't have a cell phone	15	2%

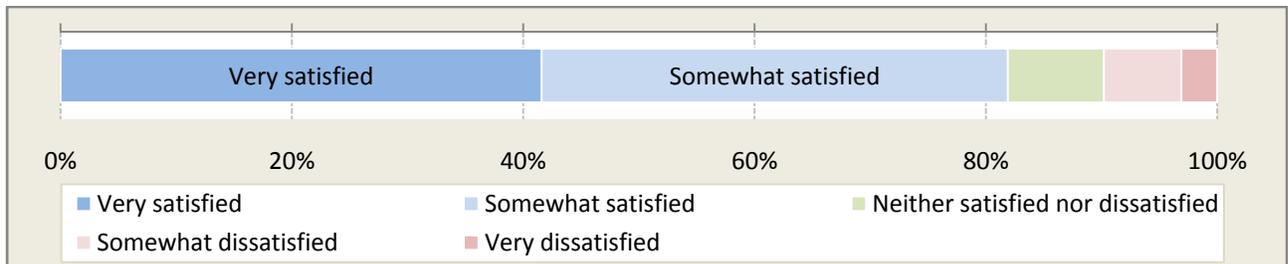
Nearly half of all students surveyed indicate they subscribe to Verizon Wireless for mobile device services, with another quarter (26%) using AT&T. The remainder use T-Mobile, Sprint-NexTel and other, non-specified providers (Table 20).

Table 19: Cell Phone Providers

Response	Count	Percent
Verizon Wireless	1,516	47.1%
AT&T	826	25.6%
T-Mobile	426	13.2%
Sprint-NexTel	281	8.7%
Other (please specify)	73	2.3%
Cricket	44	1.3%

It appears that overall, regardless of the mobile service provider of choice, students are satisfied with the quality of service and features they are receiving (Figure 15):

Figure 15: Satisfaction with Cell Phone Providers



All students surveyed ranked priorities for where they would like improved cell phone reception (Table 21). Many lecture hall entries are located within interior halls, along with food courts and library commons areas that may require some type of signal boosting or repeaters to provide reliable mobile device services.

Table 20: Top Preferences for Cell Phone Reception

Rank Item	Rank	Weighted Responses
Campus hallways outside large lecture halls	1	7,985
Indoor areas in food and cafe courts	2	6,556
Library commons areas	3	6,548
Campus bus stops	4	4,911
Student gathering spaces and meeting rooms	5	4,877
Outdoor areas near food courts	6	4,198
Residence hall room	7	3,726
Residence hall common area/lounges	8	1,950
Not sure	9	1,385
Residence hall eating establishments	10	1,074
Residence hall hallways/laundry facilities	11	991

Some students (whether living in residence halls or other locations) access phone service through computer networks, also known as voice-over-IP (VoIP) or Softphones. Over half of students surveyed report not using VoIP, but of those who do, Skype is the clear telephone software of choice (Table 22).

Table 21: Softphone (Voice over IP) Services Used

Response	Count	Percent
None	1,863	57.8%
Skype	822	25.5%
Not sure	407	12.6%
Other (please specify)	88	2.7%
Vonage	84	2.6%
Gizmo	28	0.9%

As students become increasingly mobile in general, they appreciate the convenience of not being tethered to a traditional hard-wired port. Respondents from several recent surveys indicate that they enjoy and find value in working in small groups, and that wireless connectivity is critical in meeting these objectives. It is therefore important to understand whether students in residence halls report access to UB wireless, and if not, whether they have access to a non-UB wireless network (Table 23).

Table 22: How Residential Students Receive a Wireless Connection

Response	Count	Percent
UB provided	382	40%
I can't get a wireless connection	270	28%
I don't need a wireless connection	103	11%
My own wireless router	95	10%
Someone else's router	76	8%
Not sure	27	3%

Although students residing in Goodyear, Richmond and Red Jacket residence halls received UB wireless access within the past year, the following table (Table 24) reflects how students identify their access to a wireless signal in a variety of ways.

Table 23: Wireless Access by Residential Unit

UB Unit	UB provided	My own wireless router	Someone else's router	Can't get a wireless connection	Don't need a wireless connection	Not sure
Clement	10% (37)	5% (5)	7% (5)	11% (30)	5% (5)	7% (2)
Clinton	4% (16)	1% (1)	0% (0)	6% (16)	7% (7)	4% (1)
Creekside Village	.5% (2)	6% (6)	4% (3)	3% (8)	2% (2)	7% (2)
Dewey	2% (7)	2% (2)	1% (1)	3% (7)	2% (2)	0% (0)
Fargo	5% (19)	7% (7)	7% (5)	7% (20)	9% (9)	15% (4)
Flickinger Court	3% (11)	3% (3)	7% (5)	2% (6)	3% (3)	4% (1)
Flint Village	5% (18)	7% (7)	7% (5)	10% (28)	14% (14)	4% (1)
Goodyear	10% (39)	5% (5)	1% (1)	0% (0)	2% (2)	0% (0)
Hadley Village	4% (16)	22% (21)	24% (18)	14% (39)	7% (7)	15% (4)
Lehman	2% (7)	1% (1)	7% (5)	3% (9)	5% (5)	11% (3)
MacDonald	.5% (2)	1% (1)	3% (2)	2% (6)	3% (3)	4% (1)
Michael Hall	.5% (2)	1% (1)	0% (0)	.4% (1)	0% (0)	0% (0)
Porter	7% (25)	6% (6)	4% (3)	7% (18)	8% (8)	11% (3)
Pritchard	.8% (3)	0% (0)	0% (0)	2% (4)	1% (1)	0% (0)
Red Jacket	16% (61)	5% (5)	1% (1)	.4% (1)	10% (10)	0% (0)
Richmond	15% (57)	5% (5)	0% (0)	.7% (2)	2% (2)	0% (0)
Roosevelt	1% (4)	3% (3)	13% (10)	4% (11)	0% (0)	0% (0)
Schoellkopf	2% (8)	0% (0)	1% (1)	4% (12)	1% (1)	4% (1)
South Lake Villa	5% (18)	12% (11)	5% (4)	11% (30)	14% (14)	7% (2)
Spaulding	4% (14)	1% (1)	7% (5)	4% (11)	5% (5)	4% (1)
Wilkeson	4% (16)	4% (4)	3% (2)	4% (11)	3% (3)	4% (1)
Total Counts	382	95	76	270	103	27

The cost of providing technology related services in residence halls is constantly rising. It is therefore useful to have a measure of how students value various services by hypothetically breaking them out as subscription services independent of a service package. Residence hall students clearly indicate they are willing to pay for premium network bandwidth, followed by premium and regional television access (Table 25).

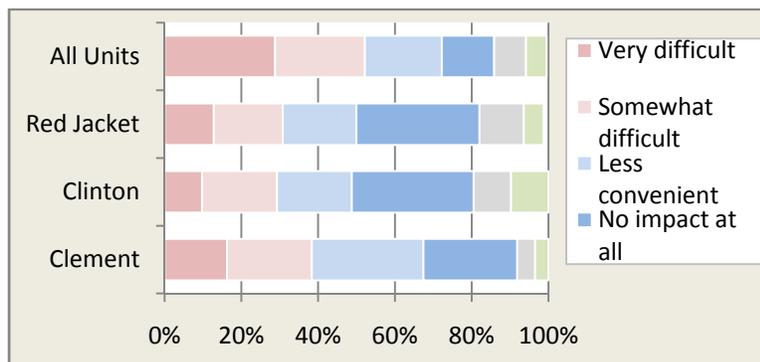
Table 24: Services to which Students would Subscribe

Response	Count	Percent
Wired Internet access (high speed)	697	22%
TV (premium channels)	237	7%
TV (regional channels)	197	6%
TV (UB channels)	180	6%
Wired internet access (basic speed)	122	4%
None	105	3%
Telephone (traditional)	62	2%
VoIP service (Voice over IP telephone)	25	.8%

Only 4% of residence hall students would find value in “basic” vs. “high speed” Internet access. It is well known that students require high capacity bandwidth for graphics intensive work, computational analysis and large file transfer - but the network is also highly valued for recreational use (e.g., interactive gaming). Less than 2% would subscribe to traditional telephone service, and less than 1% indicates they would be willing to subscribe to VoIP telephone service, presumably because they would use readily available software (e.g., Skype) across existing network availability.

Students living in areas where computer labs are located report a negative impact on the removal of student assistant consultants from these public labs (Figure 17). Of those who made use of the on-site consultants, 18% reported that it made their tasks “somewhat” to “very” difficult, with an equal number reporting that it was “less convenient.” Approximately one-third reported no impact, and 12% were not sure of the impact the loss of consultants had on their academic work in public computing labs within residence halls (Figure 16).

Figure 17: Impact of Removing Consultants from Residence Halls



Messaging at UB

As many universities consider using externally hosted services to manage student email, It is useful to understand what applications students use as their preferred email application. Over one-third (35%) indicate use of “UB Mail” as their primary client, followed closely by use of Google (Gmail), Yahoo and Hotmail accounts for an aggregate of 84% (Table 26). 4% indicated using Outlook, 3% Thunderbird - with others (Outlook Express, AOL, Mulberry, Mac Mail, Entourage, Pine, Vista Mail and “other” each registering below a 2% threshold).

Two-thirds (64%) indicate they use “@buffalo.edu” as their primary account, which is highly preferred by faculty seeking to identify students by their UB user names when receiving assignments (Table 27).

Instant Messaging (IM) remains a popular tool among students (Table 28). Over half prefer America Online AIM as the messenger of choice, followed by Windows Messenger (MSN).

Table 25: Websites or Clients used for Email

Response	Count	Percent
UBmail	2,395	36%
Gmail	1,243	19%
Yahoo	1,156	17%
Hotmail	827	12%
Outlook	239	4%
Thunderbird	188	3%
Outlook Express	152	2%
AOL	130	2%
Mulberry	105	2%
Other (please specify)	94	2%
Mac mail	94	2%
Pine	37	.6%
Entourage	34	.5%
Vista Mail	20	.3%
Not sure	10	.2%

Table 26: Use of “@buffalo.edu” as Primary Email

Response	Count	Percent
Yes	2,050	64%
No	1,171	36%

Table 27: Instant Messenger (IM) Tools Used

Response	Count	Percent
AIM	1,732	54%
MSN IM (Windows Msgr)	657	20%
Don't use (IM)	526	16%
Yahoo!	409	13%
Google Talk	385	12%
AIM Express	343	11%
Meebo	290	9%
iChat	188	6%
Other (please specify)	28	4%

Response	Count	Percent
GAIM/Pidgin	107	3%
Adium	101	3%
Trillian	77	2%
Skype	39	0.8%
Facebook	35	0.7%
Jabber	10	0.3%
Digsby	9	0.2%
Pidgin	8	0.2%
QQ	8	0.2%
Blackberry	4	0.1%

The University has invested in multiple methods for delivery of critical alert messages. The primary alert service is self-selected as “opt-in” by students to receive emergency information about school closings

or other immediate safety related concerns. At present, only 38% of those responding to the survey indicate they have elected to receive these messages (Figure 18). This represents a 10% increase over last year when the service was first introduced (Table 29). The number of students indicating they do not intend to “opt-in” to the service remains the same at approximately 28%.

Figure 18: "Opt-in" for UB Alert Service

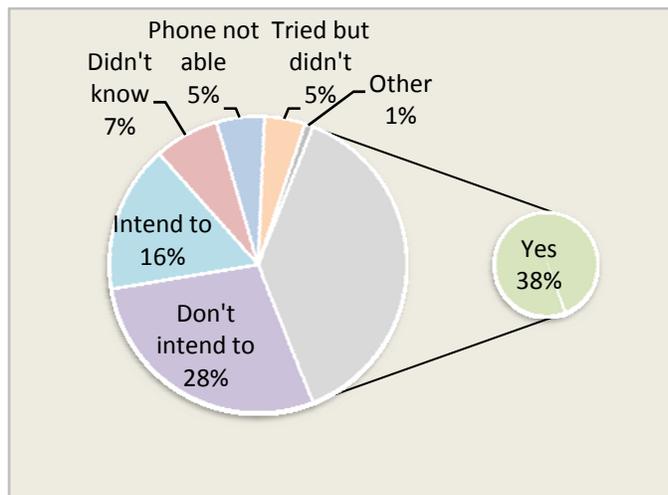


Table 28: UB Alert "Opt-In" 2007-2008

	2007	2008
Yes	29%	38%
Don't intend to	28%	28%
Intend to	18%	16%
Didn't know	11%	7%
Phone not able	7%	5%
Tried but didn't	5%	4%
Other	1%	0.9%

Of the 29 “other” responses received, the majority of comments indicated that texting was not compatible with “pay as you go” mobile service plans (Table 30).

Table 29: Other Responses for UB Alert Service

Response	Count
Not compatible with pay-as-you-go service plans	8
Don't have a cell phone	5
Don't remember/don't know	5
Get email alerts instead	3
Didn't know there was something like that	2
Not interested unless messages are free	2
It didn't work	2
Doesn't seem useful	2

Additional qualitative comments and data (Tables 31, 32) offer insight to the type of notification preferred by students. The majority prefers to limit UB Alert messages to emergency notification only. Other types of messages that students prefer deal with time-critical information such as class cancellations or school closing.

Table 30: Comparative Responses for UB Alert 2007 - 2008

Response	2007		2008	
	Count	Percent	Count	Percent
None - I want emergency notifications only	1,372	31%	1,741	38%
Campus news & events	752	17%	736	16%
Shuttle bus schedule & tracking	827	19%	725	16%
Departmental text messages	629	14%	574	13%
Athletic news & scores	443	10%	412	9%
Assistance with library research	306	7%	239	5%
Other (please specify)	112	3%	109	2%
Total	4,441	100%	4,536	100%

Table 31: Other Message “Opt-In” Requests

Response	Count
Class cancellations/school closing	16
Traffic advisory	2
Email	2
Fire Drill	1

Respondents were asked to rank the top five ways in which they prefer to receive official university communications (Table 33). Email and MyUB consistently rank as the top preferred ways in which to receive official messages, but texting is now the third most preferred method. It also appears that students are paying less attention to traditional broadcast media for message dissemination.

Table 32: Top Rankings of Official UB Communication Preferences

	2006	2007	2008
Email	1	1	1
MyUB	2	2	2
Text messaging	8	3	3
Paper mail		4	4
Instant Messaging		5	5
TV	3		
UB Web Site	4		
Radio	5		
Cell phone	6		
645-NEWS	7		

Public Sites and Printing

When viewed according to class rank, freshmen report using the public computing sites less than other classes (Table 34). Features ranked in order of preference and the amount of hours used from last year to present are described below (Tables 35, 36).

Table 33: Use of Public Computing Sites by Class Standing

Response	Freshmn.	Sophmr.	Junior	Senior	Grad	Non-matric	Not sure	Overall
Yes	69% (234)	81% (390)	81% (648)	83% (637)	82% (632)	73% (22)	79% (19)	80%
No	31% (106)	19% (93)	19% (150)	17% (132)	18% (136)	27% (8)	21% (5)	20%
Totals	340	483	798	769	768	30	24	3,221

Table 34: Top Ranked Features Preferred in Public Computing Sites

Rank Item	Rank	Weighted Responses
Convenient hours	1	6,751
Convenient location	2	5,946
Convenient printing services	3	5,139
Reasonable iprint allocation	4	1,882
Laptop friendly work space	5	1,620
Up-to-date hardware	6	1,427
Group study space	7	1,365
Helpful staff	8	860
Not sure	9	186

Table 35: Public Computing Site Use Comparisons 2007 and 2008

Response	2007		2008	
	Count	Percent	Count	Percent
2-4 hours a week	1,202	37%	1,054	41%
5-10 hours a week	896	28%	723	28%
Less than 1 hour a week	566	18%	419	16%
More than 10 hours a week	500	16%	355	14%
Don't know/Not applicable	59	2%	24	0.9%
I never use public site computers	69	2%		

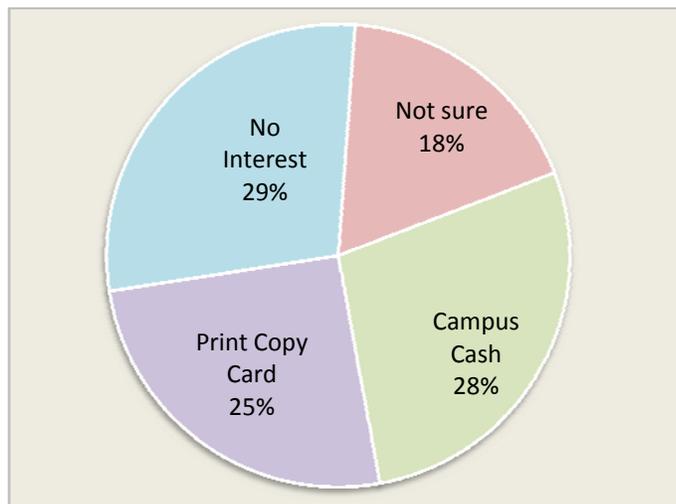
It appears that in spite of improvements made to public computing sites through the addition of wireless printing and iprint, wait times persist during heavy periods of use and public sites remain popular (Table 37).

Table 36: Comparative Wait Time for Public Site Computer 2006 and 2008

Response	2006		2008	
	Count	Percent	Count	Percent
No wait	336	18%	328	13%
Less than 10 minutes	932	50%	1200	47%
10-20 minutes	423	23%	712	28%
20-30 minutes	101	5%	182	7%
Between 1/2 hour and an hour	46	3%	72	3%
More than an hour	18	1%	28	1%
I never use public sites			13	0.5%
Not sure			42	2%

When asked how students would prefer to pay for color printing if it were made available, there was a fairly even distribution among those who had no interest in color printing, campus cash, or print copy cards (Figure 19).

Figure 19: Preferred Payment Method for Color Printing



Learning Resources

Although this survey is primarily concerned with the hardware and systems that support Information technology (infrastructure), it is important to understand how much of that infrastructure is directly supporting learning technologies. The 2007 Student “Learning with Technologies” survey probed these issues at greater depth, in part to prepare for learning spaces as part of Master Planning efforts. Of particular interest are Web 2.0 technologies and the demand for “anytime/anywhere” learning. Respondents were asked about the number of courses requiring use of popular learning technologies (Table 38).

Table 37: Number of Courses Requiring use of Various Learning Technologies

Technology	Four or more	Three	Two	One	None	Not sure
Email	56% (1,786)	17% (555)	11% (361)	7% (210)	8% (251)	2% (57)

Course management system (e.g. UBLearn)	45% (1,453)	21% (668)	13% (433)	9% (284)	10% (325)	2% (58)
Course website	21% (681)	11% (352)	13% (413)	23% (731)	30% (971)	2% (73)
View assigned video streams/webcasts	3% (109)	4% (142)	9% (275)	19% (623)	62% (1998)	2% (74)
Listen to audio streams	2% (69)	3% (100)	7% (233)	18% (594)	67% (2155)	2% (70)
Wiki	4% (131)	2% (76)	4% (133)	8% (247)	79% (2536)	3% (98)
Blogs	1% (38)	1% (43)	2% (59)	9% (273)	84% (2708)	3% (100)
Online social networks (e.g. Facebook, SL)	1.6% (53)	1.4% (44)	2.7% (86)	7% (209)	86% (2754)	2% (75)
iTunes U.	1% (37)	1% (35)	2% (51)	3% (100)	90% (2910)	3% (88)
Instant messaging	2% (57)	1% (45)	2% (52)	3% (82)	90% (2898)	3% (87)

Compared to 2007, technology used for course work has remained stable, with the exception of instant messaging. In 2007, 69% of students reported that IM was not required for classes; in 2008, 90% report the same. It is also useful to note that UB has been testing iTunes U. and expects to rollout its use for production during the Spring 09 semester; it's likely that rapid growth will be realized once this project is complete.

With a myriad of devices, protocols and semantics to navigate, respondents were asked to categorize how they receive rich media content (Tables 39, 40 and 41).

Table 38: Devices used to Connect to Audiovisual Streams

Response	Count	Percent
Laptop/notebook	960	30%
Personal desktop computer	346	11%
iPod (any model)	295	9%
Public or departmental computer	269	8%
MP3 or MP4 device (other than iPod)	117	4%
None of my classes require me to access content this way	105	3%
Smartphone/PDA	54	2%
Tablet	28	.9%
Other (please specify)	11	.3%

Table 39: Do Students use iTunes?

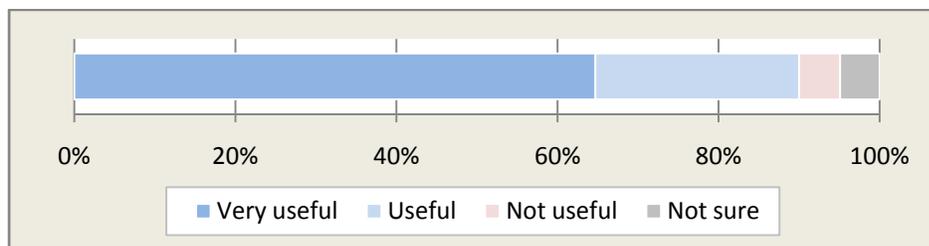
Response	Count	Percent
Yes	2,062	64%
No	1,120	35%
I don't know what iTunes is	39	1%

Table 40: How Students use iTunes

Response	Count	Percent
Standalone media player	1,532	48%
To buy/download media	980	30%
Educational material from other schools	91	3%

Students were asked whether they found it useful to refer to digital recordings of class sessions for tutorial applications. An overwhelming 90% reported that post lecture recordings were either very useful or useful (Figure 20).

Figure 20: Usefulness of Digital Lecture Recording



Satisfaction with IT Services and Recommendations

Overall it appears that students are generally satisfied with the IT services they receive from the University, with nearly one-third reporting “very” satisfied (Figure 21). Only 2-3% report being “very” dissatisfied. Responses from class to class were comparable. It is significant that those reporting “very” satisfied jumped from 12% in 2007 to 22% in 2008.

Figure 21: Compared to last year how satisfied are you with IT services?



Qualitative Responses –Suggestions and Critical Feedback

Six questions were included in this year’s survey to investigate use of the University portal (MyUB), whether respondents preferred email clients other than UBmail, how they felt about the quality of technology classrooms, UBlearns and general feedback on how UB could improve services and be more efficient with resources.

The initial theme analysis for each of these probes was divided into positive, negative or neutral/irrelevant responses. Positive responses were then set-aside so a deeper analysis could be done regarding critical responses. The survey design team held concern that grouping many open ended questions toward the end of the survey instrument would result in a low response rate, but when compared to previous surveys, the response rate is similar.

A separate file is posted with this report on the UBIT Scoreboard website which contains the complete thematic sort of unedited comments.

MyUB

Comments regarding the University portal, MyUB , registered the least number of comments (115). A trend analysis suggests that 40% of the comments seek better “smartphone” access, 15% felt the content needed to be streamlined or organized differently. Four comments suggested a change in display options (customizability, organization, fonts, colors, etc.).

Two comments that captured some of the prevailing concerns were,

- *I couldn't find a calendar, and I think it should have one. I think you should have the option of making UB links available on MyUB instead having to pick from the ones provided (a lot of programming, I know) but it would be useful.*
- *It should be more Smartphone friendly; (and a second comment) It will be great if I can get an application for my iphone to directly access UBmail*

Many comments categorized as “positive” reflected service satisfaction,

- *I like MyUB - I am a Canisius College transfer and they used blackboard. It was not as in depth and could not be used for nearly as much as MyUB can be.*
- *I like the service of MyUB... (the same respondent continues the comment, suggesting confusion regarding software access) and I was hoping we also should get free software online since we have to use that software almost in every class.*

Email

Comments regarding use of email at UB garnered a considerably higher response with 1,040 responses. Out of 374 negative responses, 40% prefer the features and interfaces of other providers (Gmail, Yahoo, Hotmail, etc.). One-third did not like that like that their UBmail address expired after graduation. Much lower comment counts pointed to spam filters, “clunky” interface or security concerns (whether unwanted people could read mail transmitted via UB email clients).

Of the preferred features in externally used clients, most cited spam filters and storage space to be superior to what was offered through UB, followed by ease of account management, ability to function on mobile devices and “conversation” grouping. Several comments expressed a desire to keep their “academic” functions separate from personal email.

A sample of comments (both negative and positive):

- *(UB Mail) It is my secondary email. I prefer my yahoo.com account better because it has more features.*
- *When I'm done with school, I would have to change my e-mail address. Also, I found it's easier for people to remember my hotmail e-mail.*
- *The mail has only a limited amount of storage space, compared to hotmail or Gmail that allows at least 5gb of space, and UBmail might not be able to get a few large attachments.*

- *I use (UB Mail) primarily for school related purposes and want to keep it separated from my other mail*
- *Currently, I receive so many advertisements from all kinds of retail stores, (that) I want those ads to be separated from emails from school*
- *I am returning to UB after a two-year break between undergrad and grad, and find that the changes in the system are confusing and are not accessible everywhere. I don't like the UB mail at all.*
- *Too small. Gmail way better. Switch (from) UBmail to Gmail.*
- *I don't want to fill my inbox up with needless emails about offers, coupons, (and other) information. I prefer to leave it for school usage.*

Technology Classrooms

Technology in classrooms and learning spaces was far and away the most commented upon. Over 2,354 responses were received, with positive comments outnumbering negative feedback by a ratio of over 2:1 (1211 positive responses to 507 negative).

- *I have no complaints about UB's technology classrooms except for two things: 1) it is a problem when classes that require these technologies are placed in classrooms that are not up-to-date, and 2) although the school provides seminars to teach professors how to use the technology, there should be a level of proficiency with something simple like the Internet required of the professors so that when they are carrying a tech-heavy class, they are able to move forward without fumbling.*

Out of the 507 comments of concern (coded “negative”), the greatest concern was that of audio quality in large lecture halls, and that for a variety of reasons, students have a difficult time consistently hearing content.

- *I can hear the instructors better on the recordings than I can over the speakers while in class. Sometimes this is the only way I know what they said.*
- *In big lecture rooms, I can't hear the professor very well and I can't write the notes (from what) he says - and sometimes the mic doesn't work and he just speaks loud in front of 300 students.*

A nearly equal number of the 507 comments of concern surrounded digital course capture. Students have increasingly been requesting access to courses “anytime – anywhere” for review and tutorial applications. Many comments point to issues of consistency in how classes are recorded and delivered.

- *Sometimes, I cannot rewind or fast-forward the sessions. The video gets stuck and I have to begin all over again. Downloading would be a much better option than streaming.*

- *I wish the camera would focus on what the teacher is writing on the board or teaching on power point instead of on him walking back and forth to the computer. It would be nice to stop pausing and rewinding because they spent 2 seconds focusing on the board. The picture is not very clear as well.*

Several students pointed out that professors seem to have difficulty understanding and using the technology available to them.

- *I am all around happy with the aforementioned. Never encountered any problems in my five years here. Good job guys. Though a lot of professors seem baffled by whatever is going on under those glass podium casings. Maybe a mandatory tech course for anyone who wants to use it in his or her class? It's obnoxious to sit there and wait and wait and wait while somebody fumbles around without even a clue what they're looking for let alone how to get it... just my opinion.*

Video projection and lighting were also considered by a number of students.

- *We (should) have the projector machines with HD VISIBILITY not the poor quality ones we currently have.*
- *It seems that the color and sharpness of a lot of the classroom projectors could be better*
- *It would be nice if professors had more control over the lighting instead of just turning off every other row of lights.*

UBlearns

The ratio of positive (866) to critical feedback (346) was closer to 3:1 for UBlearns. A total of 1439 comments were offered, the overwhelming majority concentrating on how all classes should use it to some extent (replacing individual course websites) and that both instructors and students need to better understand how it functions in order to maximize it's effectiveness as a course management tool.

At the time of this survey, the new blog and web tools had not yet been released. Many comments expressed concern about the ability to use interactive tools for group work and other types of assignments. Other concerns focused on the user interface issues and ability to reach material quickly.

- *One of the best tools at UB. I wish ALL of my professors would use it. It allows me to stay more organized in my classes.*
- *Please offer color coding options for each class or order the classes through alphabetization to make it easier to find material.*
- *Please require all teachers to use it. I don't want to use course web sites. I want everything in one place. My main beef is with (my class) where his site can only be accessed on campus.*
- *Require professors to learn how to use it optimally and how to manipulate it to their desires. Maybe a help center for them?*

- *All professors need to learn how to properly use UB Learns. It's a great tool when documents are uploaded and labeled correctly--otherwise it becomes more of a hassle than anything else. UB Learns classes ought to be mandatory for all instructors.*

Efficiency and Waste Reduction

1415 comments were received and categorized as: *eliminating waste* (209), *Improving Efficiency* (446) or *Neutral/irrelevant responses* (760). Three themes emerged for waste elimination: 1) Recycling of the print job cover sheets at the public computing sites; 2) A means to allow multiple print jobs to be released under a single cover sheet; and 3) additional recycling bins strategically placed around campus to make it easier to recycle waste.

- *Don't drop the prices for the printouts. I know (people) might complain, but making it cheaper would make students feel like they can print anything all the time*
- *Are all the blue papers needed? I know it makes it easy and fast, but if I print 5 things in a row, I don't need 5 blue sheets. Could come out all at the same time under 1 sheet?*
- *Don't give out software CDs to incoming students unless they request it- have it as a free download from the website instead.*

Several suggestions were made regarding improved efficiency, though it's not always clear from which perspective. A major theme was to make more public computers available to improve apparent student use efficiency.

- *I would say that there should be more computers in Capen and Lockwood. Besides that, everything is great!*
- *Could be more resources at peak times of printing. It would be helpful if I just needed to print something before class there were more short term use computers available.*
- *Occasional monitoring of computer resources to assure that occupied seats are actually being used. I often see people sitting at a terminal, reading the paper with no applications open on the desktop. Having had to wait for access to a machine, this is often a very frustrating thing to see.*
- *Eliminate waste? Make sure the printers in the clement computer lounge are working properly so I don't have to reprint my copies and throw out my messed up copies. Make sure there is ink and paper in printers.*
- *Make sure all computers are actually functioning. It's hard enough to find an open one during peak hours, we don't need to get disappointed when we think there is an open one and it's really broken.*

Additional Suggestions to Administration

Slightly more than 1,000 respondents took the opportunity to provide additional comments to IT administrators. Not surprisingly, by the nature of the question, more negative than positive comments were received. Other than comments regarding email, it is noteworthy that this is the only category in which negative feedback outweighed positive comments. The overwhelming majority of comments were directed to resource issues, and a desire for increased services (printers, computers, iprint quotas, color printing, wireless penetration, more and better staffing, and increased Mac support).

- *I think you guys do a great job, keep going with the updates and such that really makes computing a college experience, you know the latest technology, and fast computers.*
- *Anti virus software is great, but more updates/help about that type of stuff would be useful. More recommendations/suggestions with how to keep your computer running efficiently would be good to hear from the IT staff.*
- *Being able to print wirelessly through a Mac!*
- *Color printing would be very helpful when printing charts and graphs that are difficult to read with plain black and white. Making more computers available would be very helpful in giving students the opportunity to get work done. For example, I'm currently at Capen 3rd floor and I can honestly count about 15-20 people waiting for computers.*
- *I have a lot to say because I live off campus with a new desktop but no Internet service, so UB is my place to go always to use a computer. I do not like that not all of the computers have MS WORD. I do not like that I have to wait so long to get a computer, and most of all more than anything in the entire world I HATE that people talk out loud and on their cell phones when I'm trying to write my papers. UB is where I come to write papers and although I would prefer a silent place to use my computer, not having internet at home means I have to come to UB and sit with other kids talking and with multiple people at one computer, chatting on their phones and being rude. There should be a SILENT computer area so that it doesn't take me SO long to write papers at this school. Thanks for the survey. Thanks for the opportunity to give feedback.*
- *I ran out of printing money VERY early in the semester but I really don't feel like I used an exorbitant amount - definitely much less than last semester, but in Spring 08 my print quota lasted me until the final week of school. This made it extremely difficult to get my notes because I do not have a printer available to me at my apartment.*
- *I'm pretty satisfied, however I don't like that I cannot use certain computers for certain applications. I don't like the Cybraries usually because they're too loud and I lose focus.*
- *It would be great if an assistant was available at least some of the time in public printing areas (esp. governors) to fix printers when they break down; color printing would also be great and should come out of iprint.*
- *Make it so that everyone can print from home and release it when they get to an iprint station.*

Conclusions

Longitudinal data suggests that overall, the breadth and quality of IT services at UB are increasing, as is reported student satisfaction. Areas in which UB may need to consider further investment, not surprisingly are those coupled with adoption of newer technologies, and meeting the demands for ever-increasing bandwidth and service convenience.

Respondents remind us however, that convenience should not necessarily be considered a luxury. Seemingly equating convenience with efficiency in their busy lives, students offer insight into an increasingly competitive environment, they express how it's critical to provide them the tools necessary to achieve success in their academic careers.

This survey was a cooperative effort among The Office of the Provost, University Residence Halls, Office of the CIO, Academic Services, CIT and other UB stakeholders seeking to better understand the needs of UB students. Questions regarding this survey may be directed to Dr. Richard Lesniak, Director of Academic Services, Computing and Information Technology (lesniak@buffalo.edu).