

NEW ACCOUNTANT[®]

Student Technology Use: A Survey for Educators and Employers

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Introduction

The use of technology is pervasive in our daily lives and in business, and we constantly introduce and utilize new technologies in a bid to improve effectiveness and efficiency. Many people are quick to adopt newer technologies, while others are more reticent. Over time, though, even the stodgiest of individuals move away from the rotary phone and become part of the digital age. In academia, we often cater to both ends of the technology spectrum, students and faculty alike. We introduce and implement technologies that we believe may be beneficial to students, but often we make assumptions as to how quickly they are adopted and to the degree to which they are utilized. A technology that, in the eyes of the faculty, may seem as an unquestionable benefit to the student may go unused or under-utilized for great lengths of time. This article examines the use of technology by students as a synopsis of one class. It provides a snapshot insight as to which technologies are utilized, to what extent they are used, and to what degree they are perceived to be beneficial. The article may also prove useful to employers in that it illuminates technologies employed by today's student, tomorrow's employee.

We find that nearly all the subjects have access to a computer and the internet, all subjects have a cell phone, most subjects have an MP3 player with audio capabilities, and statistically the most effective method of course content delivery as rated by subjects is through in-person lecture. Subjects do, though, indicate that academics could be improved with greater technological integration into course content delivery, such as technologies to create video and audio captures of lectures to the web and electronic text books, to name a few.

This article proceeds in the following fashion. First, we provide a brief disclosure of the technological abilities of the course instructor and the nature of the accounting course. Next, we provide information from the survey (Appendix A) beginning with data pertaining to the subject participants. This is then followed by a technology tools inventory section. To better understand which technologies are being used and what degree of effectiveness they are perceived to have, the subject data is broken into five tool categories: general technological abilities, general hardware, general internet usage, social networks usage, and media player usage. Following this inventory, a measurement section on technology in academic delivery is presented. Lastly, we close with observations relating to the course, the technology, and implications for stakeholders, including students, potential employers, and faculty.

Instructor and Class Background

As a matter of full disclosure, the instructor notes the following technologies in personal and professional use: e-mail, the web, a cell-phone, a laptop, a desktop computer, and an mp3 player. The instructor is a member of one social on-line network

and has a social network group established for the class that allows for expanded office hours beyond the traditional office hours. The instructor utilizes a personal open internet website for general course materials and a closed college website for copyrighted course materials for the students. The instructor also utilizes the text book publisher’s website for on-line practice homework and quizzes for the students. The college and university are both supporters of Apple’s iTunes University and Facebook. The instructor is not considered to be an early adopter or even particularly technologically savvy, but does utilize technology if it could make life easier or more efficient, and make instruction and research more effective.

Participants

The class is an undergraduate cost accounting class at a large mid-Atlantic university. Forty-two undergraduate accounting students participated in the anonymous pencil and paper survey and each received extra-credit based upon the day’s attendance. The brief demographic breakdown of participants is shown in Table 1.

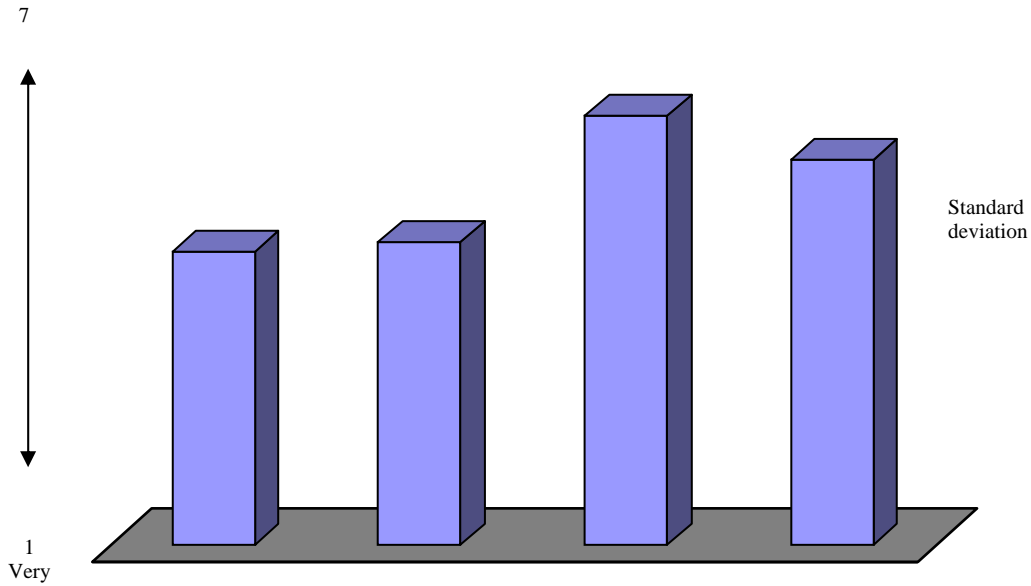
	Juniors	Seniors	Total	Age
Male	4	19	23	21.48
Female	4	14	18	21.50
Missing	1	0	1	
Total	9	33	42	21.45

General Technological Abilities

This section is designed to ascertain the general self-reported level of technological skills of the subjects as compared to their peers, parents, and expectations of potential employers. Using a Likert scale of 1 to 7, where 1 equals “very little” or “less” and 7 equals “very much” or “more”, subjects consider themselves to be technologically savvy significantly above the mid-point ($t = 4.120, p < 0.001$); and statistically speaking, significantly above the mid-point when assessing their technological abilities as compared to their peers ($t = 5.758, p < 0.001$) and parents ($t = 28.232, p < 0.001$). Furthermore, the subjects rate fairly high above the mid-point their abilities to adequately meet the expectations of today’s employers ($t = 11.979, p < 0.001$). The results of subjects assessing their general abilities to be greater than that of their peers perhaps suggests a Garrison Keillor “Lake Wobegon” effect where “everyone is better than average”. The potential then exists that subjects in general may over-estimate their abilities and expectations when it comes to potential employers and their requirements. This effect may be of interest to students and employers, alike. Table 2 and Graph 1 display the self-reported means and standard deviations for the results as discussed above.

	Mean *	Standard Deviation *
Do you consider yourself to be tech savvy?	4.81	1.27
Are your technological abilities greater or less than your peers?	4.93	1.05
Are your technological abilities greater or less than your parents?	6.57	0.59
Are your technological abilities adequate for today’s employers?	6.00	1.08

Scores from a Likert scale where 1 = “very little” or “less” to 7 = “very much” or “more”.



General Hardware

This section is designed to ascertain the general hardware inventory and internet availability of the subjects. Not surprisingly, a majority of students have access to a personal computer and/or a laptop, all of which have internet access. Somewhat surprising, though, is the results of “access to another computer”. Three students responded that they did not have access, but in reality all student-subjects have access to the computer labs available on this campus. It may be that campus computer availability is not communicated with complete effectiveness across the student population.

All subjects possess cell phones, but only 18 of 42 (42.9%) have access to the internet through their cell phones. Although widely available, the limited use of this technology suggests an inhibiting adoption factor, perhaps cost. MP3 players are also popular with students with 35 of 42 (83.3%) subjects possessing one. Of those with MP3 players, nearly half have photo or video beyond simple audio capabilities. Table 3 contains the general hardware survey results.

Table 3. General Hardware			
	Yes	No	Missing
<i>Question: Do you have a...</i>			
Personal Computer?	33	9	
With internet access?	33	6	3
Laptop?	35	7	
With internet access?	35	3	4
Access to another computer?	39	3	
With internet access?	39	3	
Cell phone	42		
With internet access?	24	18	
MP3 player	35	7	
Photo capability?	16	24	2
Video capability?	17	23	2

General Internet Usage

The internet has become a near essential part of everyday life, but the purpose of usage and the degree to which it is used by students may not be apparent. Subjects were asked questions relating to internet usage for entertainment, communication, academics, socialization, and current events, and were also asked to estimate the hours per week of use. Not surprisingly, the use of the internet for entertainment purposes had the highest ranking (mean = 5.29) with an average usage rate of 6.56 hours per week. What was surprising, though, is that the use of the internet for socialization had the lowest mean score (mean = 4.40), yet had the third highest use in hours (4.52). The results are interesting and also a bit complex. For example, the Likert means are significantly different between the use of the internet in socialization and the use of the internet in academic course content, with content scoring higher (5.10 versus 4.40), yet the hours of usage for course content is only 2.10 average hours versus 4.52 for socialization. This implies that users apply a different norm to what is considered to be average use in different situations or tasks. For course content, 2.10 hours per week may lean heavily toward “very much” in usage, while for socialization 4.40 hours per week may seem a bit more common place. Or, in the minds of the subjects, 2.10 hours per week on course content may seem like considerable use (or an eternity). Table 4 contains the means and standard deviations of the items, Table 5 shows the correlations between the items, and Table 6 displays the significant differences between items.

Table 4. General Internet Usage				
	Mean*	Standard Deviation*	Hours per week	Standard Deviation
Do you use the internet for entertainment?	5.29	1.54	6.56	5.45
Do you use the internet for communication?	5.17	1.53	5.30	4.79
How often do you visit academic websites?	4.93	1.40	4.49	3.36
Do you use the internet in academics for general information?	4.88	1.49	3.98	3.77
Do you use the internet in academics for course content?	5.10	1.39	3.89	2.10
Do you use the internet in academics for research?	4.62	1.90	2.36	1.79
Do you use the internet for socialization?	4.40	1.88	4.26	4.52
Do you use the internet for current events (news)?	4.79	1.75	3.70	3.25
*Scores from a Likert scale where 1 = “very little” to 7 = “very much”				

Table 5. Pearson Correlations for General Internet Usage Items

	Comm	Acad Web	Acad Gen Info	Acad Content	Acad Research	Social	News
Ent	0.249 (0.111)	-0.160 (0.311)	0.411 (0.007)**	0.226 (0.149)	0.281 (0.072)	0.298 (0.055)	0.542 (0.000)**
Comm		0.210 (.181)	0.589 (0.000)**	0.061 (0.701)	0.426 (0.005)**	0.572 (0.000)**	0.498 (0.001)**
Acad Web			0.253 (0.106)	0.378 (0.014)*	0.081 (0.610)	0.160 (0.313)	0.163 (0.303)
Acad Gen Info				0.336 (0.030)*	0.451 (0.003)**	0.421 (0.006)**	0.479 (0.001)**
Acad Content					0.235 (0.134)	0.116 (0.466)	0.279 (0.073)
Acad Research						0.366 (0.017)*	0.504 (0.001)**
Social							0.414 (0.006)**

Legend:

Do you use the internet for entertainment? (Ent)

Do you use the internet for communication? (Comm)

How often do you visit academic websites? (Acad Web)

Do you use the internet in academics for general information? (Acad Gen Info)

Do you use the internet in academics for course content? (Acad Content)

Do you use the internet in academics for research? (Acad Research)

Do you use the internet for socialization? (Social)

Do you use the internet for current events (news)? (News)

Pearson Correlations shown without parentheses, P values shown in parentheses.

** Correlation is significant at the 0.01 level (two-tailed).

* Correlation is significant at the 0.05 level (two-tailed).

Table 6. T-Test Scores for Differences Between Items for General Internet Usage							
	Comm	Acad Web	Acad Gen Info	Acad Content	Acad Research	Social	News
Ent	0.411 (0.683)	1.033 (0.307)	1.601 (0.117)	0.677 (0.502)	2.077 (0.044)*	2.800 (0.008)**	2.049 (0.047)*
Comm		0.836 (.408)	1.355 (0.183)	0.231 (0.819)	1.904 (0.064)	3.076 (0.004)**	1.494 (0.143)
Acad Web			0.175 (0.862)	0.692 (0.493)	0.884 (0.382)	1.575 (0.123)	0.451 (0.655)
Acad Gen Info				0.836 (0.408)	0.938 (0.354)	1.679 (0.101)	0.371 (0.713)
Acad Content					1.487 (0.145)	2.031 (0.049)*	1.052 (0.299)
Acad Research						0.654 (0.517)	0.593 (0.556)
Social							1.258 (0.215)
Legend:							
Do you use the internet for entertainment? (Ent)							
Do you use the internet for communication? (Comm)							
How often do you visit academic websites? (Acad Web)							
Do you use the internet in academics for general information? (Acad Gen Info)							
Do you use the internet in academics for course content? (Acad Content)							
Do you use the internet in academics for research? (Acad Research)							
Do you use the internet for socialization? (Social)							
Do you use the internet for current events (news)? (News)							
T scores shown without parentheses, P values shown in parentheses.							
** Correlation is significant at the 0.01 level (two-tailed).							
* Correlation is significant at the 0.05 level (two-tailed).							

Social Network Usage

Social networks provide an efficient means to stay in contact and network with individuals of similar characteristics, interests, or backgrounds. Of the 42 survey participants, 38 belong to social networks while 4 do not. Of the 38 social network users, 12 (31.6%) belong to multiple social networks. The most commonly used social network is clearly Facebook, with 37 of the 38 users (97.4%) choosing this network. Table 7 below provides a synopsis of the network usage.

Table 7. Social Networks Used By Survey Participants

		Yes	No	Single Network Users	Multiple Network Users
Do you belong to a social network?		38	4	26	11
Facebook	MySpace	Twitter	Other		
37	10	1	3		

The reasons most commonly cited as why the individual chose the social network in which they are most active is and what they like best include:

- It is the network most commonly used by friends
- It is a way to keep track of current and old friends
- It is a way to meet new friends
- It is the easiest to use, navigate, communicate
- Invited by friends
- Able to see pictures

The reasons most commonly cited as to what the individual likes least about the particular social networks include:

- Privacy issues on personal information
- Others are able to track who you talk to and what you are doing
- Others are able to post pictures and/or tag you, post content not within your control
- Information is open to everyone, including employers
- Time waster, time consuming
- Too many add-ons, excess applications, advertising
- Too many E-mail notifications, spam messages
- Potential for stalkers, non-friends trying to add you as a friend
- Poor web design

Table 8 below outlines the Likert means of items used within the Social Network section of the survey. Social networks are used more for communication, socialization, and entertainment; less for academic purposes and for current events.

Table 8. Social Network Usage				
	Mean*	Standard Deviation*	Hours per week	Standard Deviation
Do you use social media for entertainment?	4.02	1.85	3.42	4.79
Do you use social media for communication?	4.56	2.06	3.05	4.15
Do you use social media for academic purposes (content knowledge)?	2.83	1.61	0.95	0.99

Do you use social media for general socialization?	4.05	2.04	2.69	4.17
Do you use social media for current events (news)?	2.34	1.44	0.86	1.30
*Scores from a Likert scale where 1 = “very little” to 7 = “very much”				

Media Player Usage

Although generally labeled as MP3 players, portable media players typically play media in a compressed audio MP3 or compressed video MP4 format, and some play in non-compressed WMA, WMV, or other formats. They can also hold non-media files. They are, in essence, portable memory with a media playback (and sometime record) function. They have evolved and grown in popularity as digital storage capacity has increased and prices have decreased. Of the 42 participants, 35 (83.3%) own MP3 players (Table 3).

Although many have multiple media capabilities, most MP3 players appear to be primarily used for music and audio, and less for photo or video viewing. From Table 3 we see that of the 35 participants who own MP3 players, only 16 have photo capabilities and only 17 have video capabilities. While computers and laptops can also play the before mentioned formats for audio and video, the data suggests that the use of MP3 players for video delivery may be useful for less than half of the users. This information may be useful for educators who place an emphasis on creating video podcasts for content delivery. Content for digital media often flows directly from a web site, is extracted from a CD, DVD, or other storage media, or flows through an intermediary,

such as Apple’s iTunes. Apple, in coordination with various institutions of higher learning, developed a segment of their iTunes store for educators to post course content, lectures, discussions, debates, etc., for student or public access, most often for free. From Table 9, though, we note that subjects had very little familiarity with university content available through Apple’s iTunes University and as a mean for the group registered zero hours of weekly usage. While in general the subjects do not use MP3 players extensively for anything but music, the data suggests that improved marketing of the availability of educational content may be warranted. Table 9 outlines the Likert means and usage of MP3 players on the topics as mentioned above.

Table 9. General Media Player Usage				
	Mean *	Standard Deviation *	Hours per week	Standard Deviation
How often do you use your mp3 player in general?	4.08	2.10	4.68	5.16
How often do you use your mp3 player for music?	5.11	2.00	4.56	4.77
How often do you use your mp3 player for video such as television shows, music, or short video clips?	1.47	1.18	0.32	0.95
How often do you use your mp3 player for viewing photos?	1.26	0.66	0.12	0.41
How often do you use your mp3 player for informational audio podcasts, such as the news?	1.34	1.08	0.15	0.44
How often do you use your mp3 player for informational video podcasts, such as the news?	1.14	0.55	0.15	0.44
Are you familiar with the University’s iTunes site?	1.81	1.41		
How often do you use the University iTunes site?	1.03	0.17	0.00	0.00
*Scores from a Likert scale where 1 = “very little” to 7 = “very much”				

Academic Delivery

For the academic delivery section, we chose to analyze the subject's perception of effectiveness of the traditional lecture and a myriad of technologically enhanced delivery methods. For this particular class, the technology supplements the traditional lecture and does not replace it. Audio lectures posted to a web site or iTunes are in-person lecture captures, while audio with slides are instructor developed slides of topics with a narration overlay. Video of lectures are video captures of actual lectures, posted to either a web site or iTunes. While technology has its purpose and place, subjects prefer the in-person lecture for content delivery. In-person lecture, with a mean of 6.07, is significantly higher than the mid point ($t = 14.574$, $p < 0.001$) and all other delivery modes (Table 11). Interestingly, only three of the methods measured have a mean above the mid point: in-person lecture, audio with slides posted to a web site, and video of lectures posted to a web site. The content equivalent of web site posts, posts to iTunes, actually ranked below the mid point and is statistically significantly different (Table 11). The implication is that subjects may be more likely to use a delivery mode they think is better, even when the content is exactly equivalent. Table 10 displays the Likert means and standard deviations of the delivery modes, and Table 11 contains the t-test scores for differences between the delivery modes.

	Mean*	Standard Deviation*
<i>For academic content delivery, please rate the effectiveness of the following for learning:</i>		
In person lecture	6.07	0.92

Audio lecture captures posted to a web site	3.50	1.40
Audio lecture captures posted to iTunes	3.15	1.29
Audio with slides posted to a web site	4.38	1.59
Audio with slides posted on iTunes	3.37	1.53
Video of lectures posted to a web site	4.40	1.40
Video of lectures posted to iTunes	3.70	1.65
*Scores from a Likert scale where 1 = “very poor” to 7 = “very good”		

	Audio Web	Audio iTunes	Audio Slides Web	Audio Slides iTunes	Video Web	Video iTunes
Lecture	9.495 (0.000)**	10.712 (0.000)**	5.951 (0.000)**	8.689 (0.000)**	6.440 (0.000)**	7.198 (0.000)**
Audio Web		2.177 (0.036)*	3.685 (0.001)**	0.467 (0.643)	4.156 (0.000)**	0.808 (0.424)
Audio iTunes			4.730 (0.000)**	1.711 (0.095)	5.743 (0.000)**	2.676 (0.011)*
Audio Slides Web				3.795 (0.001)**	0.106 (0.916)	1.918 (0.062)
Audio Slides iTunes					3.950 (0.000)**	1.484 (0.146)
Video Web						3.538 (0.001)**
Legend: <i>For academic content delivery, please rate the effectiveness of the following for learning:</i>						
In person lecture (Lecture)						
Audio lecture captures posted to a web site (Audio Web)						
Audio lecture captures posted to iTunes (Audio iTunes)						
Audio with slides posted to a web site (Audio Slides Web)						
Audio with slides posted on iTunes (Audio Slides iTunes)						
Video of lectures posted to a web site (Video Web)						
Video of lectures posted to iTunes (Video iTunes)						
T scores shown without parentheses, P values shown in parentheses.						
** Correlation is significant at the 0.01 level (two-tailed).						
* Correlation is significant at the 0.05 level (two-tailed).						

Participants also had the opportunity to comment on which technologies should be *integrated* more into academics. Their comments include the following:

- Podcasts / iTunes
- On-line audio of class lectures
- On-line video of class lectures
- Facebook groups for classes
- Electronic books
- Integration of business computer software
- In-class “clickers” to anonymously respond to questions
- On-line homework
- Text messages and e-mails from faculty

Participant’s comments on technology to include or use more of in the *delivery* of academic course content include:

- More audio and video podcasts available on line
- Electronic texts and audio texts
- More PowerPoint and PowerPoint with audio
- Integrated course web sites with audio, video, homework

- On-line homework
- Sample quizzes, sample tests
- Whatever they use in the workplace
- Digitizing of old homework examples, old tests
- More person-to-person, more Q&A, less PowerPoint
- Cell phones, e-mail
- Integration of multiple on-campus systems
- Real life video examples of practical applications
- On-line testing with flexibility for timing
- Stay “as is”
- Social networking sites

Conclusion

While the use of technology grows both inside and outside the classroom and the workplace, the perceived effectiveness of the technologies varies. Not every technology will be effective, due to slow adoption, incompatibilities with the task at hand, or complexity of use. Academicians and employers often know this, but in an anecdotal fashion. This survey highlights which technologies are employed by the subjects and which they find effective. Nearly all subjects have access to a computer and the internet. All subjects have a cell phone. Most subjects have an MP3 player with audio capabilities. And, although the wish list is long for technologies subjects would like to see integrated into academics, the indication is, though, that the most effective method of course content delivery is through in-person lecture, the analogue method.

Universities, colleges, and employers invest time and money in the adoption of new technologies in the hope of improving efficiency and effectiveness. How might then the institutions improve the perception among users? First, create awareness as to the technologies that are available. As noted previously, a small portion of students indicate that they do not have access to a computer, yet all students have access to computer labs on the campus in which this survey was administered. Communication as to location and availability of technologies is important for adoption by users. Secondly, provide training for users to improve effectiveness. If users do not understand how to use the technology, then they will not use it. A brief, yet thorough, demonstration of the technology and why and how it is used can be beneficial. Third, do not adopt all new technologies just because they are available. Create a *pull* market where the customers or employees suggest technologies for implementation. Once demand is high enough and potential users reach a critical mass, then the institution can react by introducing the *wanted* technology. If technology has been introduced early, repeat steps one and two. If the technology is not being adopted by users after a reasonable period, consider dropping the technology and saving support resources. Lastly, do not under-estimate the power of the non-digital technology, in this case, the in-person delivery of lecture content.

Appendix A

General Technology and Delivery Assessment

Demographic Section

1. Age (in whole years) _____
2. Major _____

Please indicate by circling:

2. Freshman Sophomore Junior Senior Grad student

3. Male Female

4. Do you have a personal computer? Yes No

5. Does it have access to the internet? Yes No

6. Do you have a laptop? Yes No

7. Does it have access to the internet? Yes No

8. Do you have access to another computer? Yes No

9. Does it have access to the internet? Yes No

10. Do you have a cell phone? Yes No

11. Does it have access to the internet? Yes No

12. Do you have an mp3 player? Yes No

13. Does your mp3 player have photo capability? Yes No

14. Does your mp3 player have video capability? Yes No

15. Do you belong to a social network (e.g. MySpace)? Yes No

16. Please list the social networks to which you are a member from most active (top) to least active (bottom):

Most active _____

Least active _____

17. If you are a member of a social network(s), please describe why you chose the network in which you are most active.

18. Please describe what you like best about the social network in which you are most active.

19. Please describe what you like least about the social network in which you are most active.

20. If you are a member of more than one social network, please describe what you like best about the social network in which you are the least active.

21. If you are a member of more than one social network, please describe what you like least about the social network in which you are the least active.

Social Media Section

If you have any form of social media (e.g., MySpace), please circle one number on the scale below each question and answer any additional questions.

22. Do you use social media for entertainment?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

23. Do you use social media for communication?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

24. Do you use social media for academic purposes (content knowledge)?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

25. Do you use social media for general socialization?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

26. Do you use social media for current events (news)?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

General Internet Section

If you have any form of internet connectivity, please circle one number on the scale below each question and answer any additional questions.

27. Do you use the internet for entertainment?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

28. Do you use the internet for communication?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

29. How often do you visit academic websites?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

30. Do you use the internet in academics for general information?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

31. Do you use the internet in academics for course content?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

32. Do you use the internet in academics for research?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very little Very much

Please estimate the number of hours per week: _____

33. Do you use the internet for socialization?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very little Very much

Please estimate the number of hours per week: _____

34. Do you use the internet for current events (news)?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very little Very much

Please estimate the number of hours per week: _____

Media Player Section

If you have an mp3 player or cell phone capable mp3 player, please circle one number on the scale below each question and answer any additional questions.

35. How often do you use your mp3 player in general?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

36. How often do you use your mp3 player for music?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

37. How often do you use your mp3 player for video such as television shows, movies, or short video clips?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

38. How often do you use your mp3 player for viewing photos?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

39. How often do you use your mp3 player for informational audio podcasts, such as the news?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

40. How often do you use your mp3 player for informational video podcasts, such as the news?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

41. Are you familiar with WVU iTunes?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

42. How often do you use WVU iTunes?

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very little Very much

Please estimate the number of hours per week: _____

General Technology Questions

43. Do you consider yourself to be tech savvy?

1 2 3 4 5 6 7
Very little Very much

44. Are your technological abilities greater or less than your peers?

1 2 3 4 5 6 7
Less More

45. Are your technological abilities greater or less than your parents?

1 2 3 4 5 6 7
Less More

46. Are your technological abilities adequate for today's employers?

1 2 3 4 5 6 7
Definitely No Definitely Yes

Academic Delivery Questions

For academic content delivery, please rate the effectiveness of the following for learning.

47. In-person lecture

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very poor Very good

48. Audio lecture captures posted to a web site.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very poor Very good

49. Audio lecture captures on iTunes.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very poor Very good

50. Audio with slides posted to a web site.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very poor Very good

51. Audio with slides posted on iTunes.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very poor Very good

50. Video of lectures posted to a web site.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
Very poor Very good

52. Video of lectures posted on iTunes.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7
Very poor Very good

53. What technology do you think should be integrated more into academics?

54. What technology would you like to see used more in the *delivery* of academic course content?
