Abstract

For the past two years students at Slippery Rock University have been surveyed to determine their engagement with and attitude towards technology on campus. As anticipated, students are avid consumers of technology and technology services. The first year survey provided a baseline of data for comparison. The second year results show that student interest and consumption of technology continues to increase. Subjects are more satisfied with their access to and the appropriate use of technology on campus. In addition researchers are attempting to begin the identification of specific technology traits of high achievement students. Initial data results support that there are some characteristics that are more prominent in students who achieve academic success.

Introduction

The current media provide a perception that today’s students display a high level of technological aptitude (Oblinger 2003), however the researchers for this study are skeptical that these levels may be overstated. As a rural, mid-sized, state-system school, Slippery Rock University is comprised of students of varying demographics, yet homogenous in many ways. The majority of students are middle class, first generation college students coming from Western Pennsylvania. They have access to technology, but how many have fully embraced and integrated these tools into their daily lives? Are the students who are engaged in technology usage struggling because these behaviors are distracting to academic success or are they succeeding because of their engagement?

Technology appears to have become an integral part of every day life on campus. However, do all have similar or baseline skill levels? Are they all using technology the same way or is there a wide range of behaviors? What are their attitudes toward their access to technology and the effective use of technology on their campus by their faculty? We have seen that each new freshman class to the university has brought with them a stronger aptitude for technology. They have used computers and computing devices in their personal lives and in their K-12 education, but what impact is this having on their college experience?

As faculty members or administrators, answers to these questions will assist in the planning of curriculum, the dissemination of information, and the allocation of new technology resources. If we can identify trends in the students’ behaviors, we can better plan how to effectively integrate these elements into our instruction and provide the types of peripheral services that make our campus attractive to prospective students. If usage of specific technologies or applications can be correlated to academic success, we can push harder for students to master these skills.

Many institutions have increased their emphasis and course offerings in distance education and computer assisted courses (Guidera 2003-2004). Using course management tools like Blackboard or WebCT, increasingly faculty are supplementing their instruction with on-line materials, in addition to the courses that have gone to a completely on-line environment. While a great number of studies have looked at the effectiveness of on-line instruction (Guidera 2003-2004), this study looks at students’ ability to access that information through available campus and personal resources. What percentage of our students own computers? If they don’t own a computer, are there adequate campus resources for them to access materials? Which tools do they own and how are they using these tools?

Management of campus technology continues to be a challenge on most campuses. Rising costs, increased user expectations, and continual equipment replacement cycles force IT directors to make recurring decisions on resource allocations. With more data on student preferences and behaviors, the decisions on which services to reduce or discontinue, as well as which new initiatives warrant investment will be easier to justify. By comparing annual statistics, trends in preference and behaviors can be identified. Emerging technologies can be
nurtured, and those that have not reached the potential of their early hype can be phased out.

Methods

For the past two years, this study surveyed all the students taking the university-wide, required liberal studies public speaking course, giving a representative cross-section of the student population across all majors of the University. Seventy-five questions regarding demographics, inventory of their own current technology uses, and attitudes and behaviors concerning technology were asked. Two additional questions were added to the 2006 instrument at the request of Information Technology administration concerning wireless technologies. Appendix A provides a complete list of questions with the percentage of responses for each question for both 2005 and 2006.

Questions consisted of what types of communication technology were owned, purchased in the past six months, or were anticipated to be purchased in the next six months. Questions also focused on students’ use of computers: types of activities, hours spent on a computer, and types of software used. The researchers also queried the students’ attitudes toward Slippery Rock’s e-mail account and asked several questions about e-mail account preferences or options. Finally, questions focused on students’ attitudes toward technology on campus and their satisfaction with services and the integration of technology. Specifically, they were asked their opinions on faculty’s use of technology and the appropriateness of this use.

A total of 432 students completed the instrument in 2005 and 498 in 2006. The majority of students were sophomores and juniors (92% in 2005, 93% in 2006) and represented a cross section of majors and varying QPA averages. Summaries of responses and related percentages were calculated for each year. The 2006 data were further analyzed using crosstabulations to determine if there was a relationship between the students’ grade point average and their responses to a range of the technology attitudes and behaviors.

Analyses

Initial summary results offer insight into several of the research questions posed. As anticipated, 94% of the students in 2005 owned a computer with that number increasing to 98% in 2006. Clearly students see owning a computer as an integral part of their personal life and educational experience. (Carey, Chisholm, & Irwin 2002, Laird & Kuh 2005) The 2003 National Survey of Student Engagement (NSSE) reports that 51% of first year students use computers to communicate with group members to complete assignments. Faculty can clearly assume that students have access to and know how to operate a personal computer.

<table>
<thead>
<tr>
<th>Ownership</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>94%</td>
<td>98%</td>
</tr>
<tr>
<td>Cell Phone</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>MP3 Player/iPod</td>
<td>32%</td>
<td>57%</td>
</tr>
<tr>
<td>PDA/Palm Pilot</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Flash/Jump Drive</td>
<td>37%</td>
<td>53%</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>49%</td>
<td>63%</td>
</tr>
</tbody>
</table>

Table 1. “Do you currently own a …:” Percentage that responded “Yes.”

<table>
<thead>
<tr>
<th>Plan to Purchase</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Cell Phone</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>MP3 Player/iPod</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>PDA/Palm Pilot</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Flash/Jump Drive</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>20%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Table 2. “Do you plan on purchasing ____ in the next 6 months?“ Percentage that responded “Yes.”

Perhaps no more surprising is that cell phone ownership is another technology that students see as a necessity with 95% of students owning a cell phone in 2005 and 96% in 2006. In contrast PDA and Palm Pilot ownership slipped from 7% to 6%. Cell phones have begun incorporating many of the features that once made PDAs popular. Often called a “smartphone,” these devices have keyboards and the ability to e-mail, browse the Internet, view multimedia, instant message and word process. Smartphones have the ability to turn off the phone feature so the device is used only for its other features (Baig 2006). It is anticipated that PDA ownership will
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continue to slip as cell phone features continue to be expanded and made available.

Ownership of iPods/MP3 players, digital cameras, and Flash storage drives all saw significant increases in comparison from the 2005 to the 2006 survey. The survey accurately documented the coming change in 2005 in iPod/MP3 ownership. In 2005, Apple reported that almost thirty-two million players were sold. In the first three quarters of 2006, there have already been over twenty-five million iPods sold, this is an increase over the seventeen million that were sold by the third quarter in 2005 (Osorio 2006). The 2005 survey reported that 20% of the students indicated they would be purchasing or replacing a player. The actual increase shown in the 2006 study was 24%.

The ownership in flash drive storage was not as clearly anticipated. Students reported a 16% increase while only 7% indicated they were planning to purchase the device in 2005. The convenience and ease of use of these storage drives appears to not be fully recognized by campus students. Since all students are provided storage space on the University server, this is not a significant problem for many students. As prices continue to drop on these devices and awareness increases, researchers feel that this number will continue to increase.

Interestingly 20% of those surveyed in 2005 planned to purchase a digital camera and ownership only increased by 14%. The researchers expect that the small increase shown in the survey may reflect some purchases that were replacements for lower quality cameras. The second impact in digital camera ownership may be due to the popularity of camera phones with over 300 million being sold last year. According to James Fallows (2006), “For at least three years, camera phones have outsold ‘normal’ digital cameras” (133). For the same reason we see PDA ownership dropping, we may at least see a leveling of digital camera ownership. Technology continues to merge applications while increasing the ease of use along with the quality of final product produced. Cell phones appear to have the early lead in capturing the market for combined devices.

The percentage of students who use a computer daily increased during the past year from 92% to 95%. In both studies 99% of the students indicated that they use a computer at least

<table>
<thead>
<tr>
<th>Frequency</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>92%</td>
<td>95%</td>
</tr>
<tr>
<td>Several times per week</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Once per week</td>
<td>1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Once a month</td>
<td>&lt;1%</td>
<td>0</td>
</tr>
<tr>
<td>Rarely or never</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3. “How often do you use a computer?”

<table>
<thead>
<tr>
<th>Frequency</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>1-3 hours</td>
<td>42%</td>
<td>47%</td>
</tr>
<tr>
<td>3-5 hours</td>
<td>32%</td>
<td>29%</td>
</tr>
<tr>
<td>5-7 hours</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>More than 7</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 4. “If daily, how many hours a day do you estimate you use a computer?”

In 2005, 42% students responded that they spend one to three hours per day on a computer. That number increased to 46% in 2006. The majority of data collected for the first two years clearly shows that technology ownership and usage by students continues to increase. Students indicated that they “most often” used their computers for communication (53%); while, the percentage that indicated their computer use was primarily for coursework was only 28%.

<table>
<thead>
<tr>
<th>Types of Use</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicate</td>
<td>53%</td>
<td>58%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>44%</td>
<td>47%</td>
</tr>
<tr>
<td>Coursework</td>
<td>28%</td>
<td>24%</td>
</tr>
<tr>
<td>Research</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Other</td>
<td>27%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Table 5. “Thinking about the types of computer use, how would you describe your type of computer activities.” Percentage of Students who responded “Most Often” or “Often.”

Findings from the 2003 NSSE report that only 38% of first year students spend more than five
hours a week online for academic purposes (Laird & Kuh 2005). The most recent USC-Annenberg Report indicates that the average American uses the computer just over one hour per day (Annenberg 2006). As might be expected, the student sample is considerably higher than the general population.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>66%</td>
<td>68%</td>
</tr>
<tr>
<td>Several times per week</td>
<td>23%</td>
<td>22%</td>
</tr>
<tr>
<td>Once per week</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Once a month</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Rarely or never</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table 6. How frequently do you use e-mail?

Even use of e-mail continues to rise with 68% of the students indicating they check their e-mail every day as compared to 66% in 2005. The percentage of students who use their university account as their primary account rose from 67% to 75%. While this is a positive move, it is still a concern that 25% of the student population do not regularly access their university e-mail account. Faculty will need to account for this if they are distributing materials or updates via e-mail. Either alternative addresses will need to be collected, or course instructions should indicate their need to access the university account regularly.

The number of students with Facebook or MySpace accounts increased from 73% to 88% in the past year. The popularity of the social networking tool continues to grow rapidly. Some faculty are beginning to explore the potential of using these spaces as academic environments.

Usage of the campus course management system Blackboard™ jumped from 53% to 71%. While initial reaction might be that this increase is related to administrative or faculty policy changes, the course management tool has been in place for eight years. While software upgrades from the vendor have been installed regularly, no significant changes have taken place with regards to policy or requirement of use.

The 2006 USC-Annenberg Digital Future Project reported that the numbers of blog users in the US population increased from 3.2% (2005) to 7.4% (2006). Conversely, university students surveyed reported in 2005 that 20% posted to a blog and that number decreased to 15% in 2006.

Students were queried about the types of software applications they have used to create materials. These ranged from general Microsoft™ applications to specialized production software. Responses for the two years were quantitatively very similar. The vast majority of students have experience with the Microsoft Office™ products.

<table>
<thead>
<tr>
<th>Applications</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Word™</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>Microsoft PowerPoint™</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td>Microsoft Excel™</td>
<td>78%</td>
<td>82%</td>
</tr>
<tr>
<td>Digital Imaging Software</td>
<td>63%</td>
<td>65%</td>
</tr>
<tr>
<td>Desktop Publishing</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td>Video/Audio Editing</td>
<td>16%</td>
<td>21%</td>
</tr>
<tr>
<td>Macromedia Director/Flash™</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>Web page Creation</td>
<td>31%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Table 7. “Have you ever created materials on a computer using:” Percentage that responded “Yes.”

A growing proportion of students have facility with digital processing software---a trend that seems to correspond with the growing use of digital cameras and smart phones with digital imaging capability. Experience with other more specialized software such as multimedia and desktop publishing was considerably less; however, showing that these media functions remain less used by all but the more esoterically interested. Use of these latter software products will be monitored in subsequent years to see if there is an increase in their use.

Statistical tests were conducted with cross tabulations of student QPA (grade average) with the ownership of the various technologies, experience with the software, and hours of computer use. Table 8 shows that ownership was significantly different for the lowest QPA category for only PDAs and Digital Cameras. Other tests showed that the number of hours spent using the computer was consistent across all QPA categories, although the data suggests that students in the lowest QPA category spent fewer hours per day on the computer. For the software, there was no significant difference in experience with any of the software among the
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QPA categories. The same was true for the active use of Facebook or MySpace or blogging.

<table>
<thead>
<tr>
<th>QPA</th>
<th>Computer</th>
<th>Cellphone</th>
<th>MP3 or iPod</th>
<th>PDA/ Palm*</th>
<th>Flash/ Jump Drive</th>
<th>Digital Camera**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 2.0</td>
<td>100%</td>
<td>65%</td>
<td>35%</td>
<td>25%</td>
<td>60%</td>
<td>35</td>
</tr>
<tr>
<td>2.0-2.49</td>
<td>95</td>
<td>98</td>
<td>47</td>
<td>5</td>
<td>45</td>
<td>57</td>
</tr>
<tr>
<td>2.5-2.99</td>
<td>97</td>
<td>98</td>
<td>57</td>
<td>7</td>
<td>45</td>
<td>57</td>
</tr>
<tr>
<td>3.0-3.49</td>
<td>99</td>
<td>99</td>
<td>64</td>
<td>5</td>
<td>57</td>
<td>64</td>
</tr>
<tr>
<td>3.5 or higher</td>
<td>99</td>
<td>97</td>
<td>75</td>
<td>3</td>
<td>57</td>
<td>75</td>
</tr>
</tbody>
</table>

* Chi Sq = 16.04  p=.003  ** Chi Sq = 18.11  p=.001

Table 8. Ownership of Technology cross tabulated to Quality Point Average

Summary

Some may argue that technology usage has reached a plateau after the explosive growth of personal computing use and the Internet in the late 1990’s and early 2000’s. The data collected clearly shows that the curve of the technologically engaged student continues to swing upward. Students have become more reliant on technology for educational and personal uses. They continue to own and purchase more technology and respond that they are more satisfied with their relationship to these technologies. Evidence indicates that this trend should continue as students are planning similar numbers of purchases in the coming six months as they did in the previous survey.

With only two years of data, the findings are still preliminary to identify any sweeping trends, but much of the data already appears consistent. The cross tabulation done is inconclusive at this point. Although a level of significance was identified between grade point average and the ownership of a PDA/Palm Pilot or digital camera. Interestingly, the lower the QPA, the more likely a student is to own a PDA, and the less likely to have a digital camera.

Suggestions for Further Research

Researchers anticipate replicating the study for the next several semesters to identify trends and patterns. Additional demographic data may be collected to identify and stratify student groups who show patterns of behaviors. Additional categories may include: age, major, and gender. Some questions may need to be broken out further to distinguish between computer use and Internet use. Current questions only address computer use, and as we continue to evaluate students’ academic performance distinguishing between the two types of behaviors may be important. Cell phone types will also be broken out in future surveys to identify the additional features that are incorporated in the types of phones students own (i.e., cameras, web access, calendars, etc.)

The survey instrument has been modified and distributed to students at a similar sized institution in Australia for data comparison. This data is being used to see if there are cultural differences in behavior and attitude of students. In addition to foreign institutions, other US schools could be surveyed to provide appropriate comparison data. Institutions in different geographic locations, of different size, private schools, and others would provide an interesting analysis to identify “typical” students.
## APPENDIX A

Statistical summary of survey data collected in percentages.  (2005 N=432, 2006 N=498)

1. **Age**
   - 2005:
     - (a) 18: 0.70%
     - (b) 19: 35.35%
     - (c) 20: 38.37%
     - (d) 21: 19.53%
     - (e) 22+: 6.05%
   - 2006:
     - (a) 18: 1.41%
     - (b) 19: 44.18%
     - (c) 20: 33.53%
     - (d) 21: 12.85%
     - (e) 22+: 7.83%

2. **Class Status**
   - (a) Freshman: 46%
   - (b) Sophomore: 60.56%
   - (c) Junior: 31.55%
   - (d) Senior: 7.19%
   - (e) Other: 0.23%

3. **Current Overall GPA**
   - (a) under 2.0: 4.43%
   - (b) 2.0 – 2.49: 12.59%
   - (c) 2.5 – 2.99: 26.81%
   - (d) 3.0 – 3.49: 44.06%
   - (e) 3.5 or higher: 12.12%

Do you currently own:

4. **A computer**
   - (a) yes: 93.75%
   - (b) no: 6.25%

5. **A cell phone**
   - (a) yes: 94.68%
   - (b) no: 5.09%

6. **A MP3 player or iPod**
   - (a) yes: 32.25%
   - (b) no: 67.29%

7. **A PDA/Palm Pilot/Pocket PC**
   - (a) yes: 6.96%
   - (b) no: 93.44%

8. **A Flash/Jump drive**
   - (a) yes: 37.27%
   - (b) no: 62.73%

9. **Digital Camera**
   - (a) yes: 49.31%
   - (b) no: 50.69%

10. **Other communication technology**
    - (a) yes: 28.31%
    - (b) no: 71.69%

Have you purchased _________ in the past 6 months?

11. **A computer**
    - (a) yes: 14.39%
    - (b) no: 84.69%

12. **A cell phone**
    - (a) yes: 32.02%
    - (b) no: 66.82%

13. **A MP3 player or iPod**
    - (a) yes: 16.24%
    - (b) no: 83.29%

14. **A PDA/Palm Pilot/Pocket PC**
    - (a) yes: 1.62%
    - (b) no: 98.38%

15. **A Flash/Jump drive**
    - (a) yes: 14.19%
    - (b) no: 85.35%
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<table>
<thead>
<tr>
<th>Question</th>
<th>(a) yes</th>
<th>(b) no</th>
<th>(c) maybe</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 12.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Other communication technology</td>
<td>10.44</td>
<td>88.63</td>
<td></td>
</tr>
<tr>
<td>(a) 9.64</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you plan to purchase _________ in the next 6 months?

<table>
<thead>
<tr>
<th>Question</th>
<th>(a) yes</th>
<th>(b) no</th>
<th>(c) maybe</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. A computer</td>
<td>5.59</td>
<td>90.91</td>
<td>3.5</td>
</tr>
<tr>
<td>(a) 5.42</td>
<td></td>
<td></td>
<td>3.21</td>
</tr>
<tr>
<td>19. A cell phone</td>
<td>16.98</td>
<td>77.21</td>
<td>5.58</td>
</tr>
<tr>
<td>(a) 17.27</td>
<td></td>
<td></td>
<td>6.43</td>
</tr>
<tr>
<td>20. A MP3 player or iPod</td>
<td>20.0</td>
<td>68.6</td>
<td>11.16</td>
</tr>
<tr>
<td>(a) 16.67</td>
<td></td>
<td></td>
<td>9.64</td>
</tr>
<tr>
<td>21. A PDA/Palm Pilot/Pocket PC</td>
<td>3.26</td>
<td>94.19</td>
<td>2.56</td>
</tr>
<tr>
<td>(a) 2.01</td>
<td></td>
<td></td>
<td>1.61</td>
</tr>
<tr>
<td>22. A Flash/Jump drive</td>
<td>7.44</td>
<td>86.51</td>
<td>5.81</td>
</tr>
<tr>
<td>(a) 8.63</td>
<td></td>
<td></td>
<td>8.03</td>
</tr>
<tr>
<td>23. Digital Camera</td>
<td>19.77</td>
<td>70.23</td>
<td>9.77</td>
</tr>
<tr>
<td>(a) 17.48</td>
<td></td>
<td></td>
<td>8.39</td>
</tr>
</tbody>
</table>

Thinking about the types of computer use, how would you describe your types of computer activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>(a) 27.67</th>
<th>(b) 30.00</th>
<th>(c) 36.74</th>
<th>(d) 3.26</th>
<th>(e) 2.33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Often</td>
<td>(a) 23.90</td>
<td>(b) 31.73</td>
<td>(c) 39.56</td>
<td>(d) 8.63</td>
<td>(e) 4.42</td>
</tr>
</tbody>
</table>

26. If daily, how many hours a day do you estimate you use a computer?

<table>
<thead>
<tr>
<th>Hours per Day</th>
<th>(a) 8.5</th>
<th>(b) 41.99</th>
<th>(c) 32.04</th>
<th>(d) 14.32</th>
<th>(e) 3.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>(a) 10.84</td>
<td>(b) 46.59</td>
<td>(c) 28.71</td>
<td>(d) 9.44</td>
<td>(e) 2.21</td>
</tr>
</tbody>
</table>

27. Work directly related to my coursework

<table>
<thead>
<tr>
<th>Coursework</th>
<th>(a) 27.67</th>
<th>(b) 30.00</th>
<th>(c) 36.74</th>
<th>(d) 3.26</th>
<th>(e) 2.33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Often</td>
<td>(a) 23.90</td>
<td>(b) 31.73</td>
<td>(c) 39.56</td>
<td>(d) 8.63</td>
<td>(e) 4.42</td>
</tr>
</tbody>
</table>

28. Research

<table>
<thead>
<tr>
<th>Activity</th>
<th>(a) 17.48</th>
<th>(b) 28.67</th>
<th>(c) 41.49</th>
<th>(d) 8.39</th>
<th>(e) 3.73</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Often</td>
<td>(a) 16.47</td>
<td>(b) 21.29</td>
<td>(c) 48.80</td>
<td>(d) 8.39</td>
<td>(e) 3.73</td>
</tr>
</tbody>
</table>

29. Entertainment

<table>
<thead>
<tr>
<th>Activity</th>
<th>(a) 43.95</th>
<th>(b) 24.19</th>
<th>(c) 23.95</th>
<th>(d) 3.26</th>
<th>(e) 4.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Often</td>
<td>(a) 47.19</td>
<td>(b) 28.51</td>
<td>(c) 18.88</td>
<td>(d) 3.21</td>
<td>(e) 1.81</td>
</tr>
</tbody>
</table>

30. Communication

<table>
<thead>
<tr>
<th>Activity</th>
<th>(a) 52.56</th>
<th>(b) 21.40</th>
<th>(c) 19.07</th>
<th>(d) 2.79</th>
<th>(e) 4.19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Often</td>
<td>(a) 57.83</td>
<td>(b) 21.29</td>
<td>(c) 13.65</td>
<td>(d) 3.01</td>
<td>(e) 3.82</td>
</tr>
</tbody>
</table>
31. Other use (choose one)  
(a) 10.26  (b) 16.78  (c) 47.09  (d) 9.79  (e) 16.08  
(a) 6.02  (b) 15.06  (c) 43.17  (d) 13.05  (e) 21.49  
Most Often  Sometimes  Rarely

32. How frequently do you use an external storage device (H: drive, Flash/Jump drive, CD-R, etc.)?  
(1) daily  (b) several times a week (c) once a week  (d) once a month  (e) rarely or never  
(a) 10.70  (b) 29.77  (c) 24.88  (d) 22.09  (e) 12.56  
(a) 10.44  (b) 24.90  (c) 26.91  (d) 16.67  (e) 20.28

33. What is your preferred method of external storage?  
(a) Campus H: drive  (b) CD-R/CD-RW  (c) Flash/Jump Drive  (d) Zip Drive  (e) 3 ½” Floppy Disk  
(a) 33.25  (b) 15.33  (c) 29.48  (d) 9.43  (e) 12.50  
(a) 29.92  (b) 13.65  (c) 44.78  (d) 3.41  (e) 7.23

34. If the University offered you a choice, would you prefer a Flash/Jump drive over the University’s H: drive for storage?  (a) yes  (b) no  
(a) 61.85  (b) 36.02  
(a) 67.07  (b) 29.92

35. How frequently do you use e-mail?  
(1) daily  (b) several times a week (c) once a week  (d) once a month  (e) rarely or never  
(a) 65.58  (b) 23.49  (c) 7.67  (d) 1.63  (e) 1.63  
(a) 68.27  (b) 21.89  (c) 7.63  (d) 1.00  (e) .6

36. Do you currently use your SRU e-mail as your primary account (i.e. the account that you distribute and check most frequently)?  (a) yes  (b) no  
(a) 66.82  (b) 32.24  
(a) 74.70  (b) 23.49

If NO, would you use that account as your primary if:  
37. You were guaranteed that account for life?  (a) yes  (b) no  
(a) 54.79  (b) 44.68  
(a) 61.36  (b) 38.07

38. If it were easier to access?  (a) yes  (b) no  
(a) 60.44  (b) 39.01  
(a) 58.58  (b) 41.42

39. If you were provided additional storage space?  (a) yes  (b) no  
(a) 55.25  (b) 43.65  
(a) 63.47  (b) 35.93

40. If you were provided additional security?  (a) yes  (b) no  
(a) 59.89  (b) 39.56  
(a) 64.85  (b) 35.15

41. If you could choose your own account name?  (a) yes  (b) no  
(a) 58.33  (b) 41.67  
(a) 62.65  (b) 36.75

42. If there were improved spam filtering?  (a) yes  (b) no  
(a) 67.40  (b) 32.04  
(a) 69.70  (b) 30.30

43. If there was increased reliability of the system?  (a) yes  (b) no  
(a) 72.93  (b) 27.07  
(a) 71.86  (b) 27.54

44. If there were mail forwarding options?  (a) yes  (b) no  
(a) 67.22  (b) 32.78  
(a) 62.50  (b) 37.50

45. If other improvements were provided?  (a) yes  (b) no  
(a) 74.59  (b) 24.86  
(a) 69.28  (b) 30.12
46. I would never use it as my primary account. (a) Agree (b) Disagree
   (a) 34.97   (b) 63.93
   (a) 30.12   (b) 69.28

Have you ever created material on a computer using:
47. Microsoft™ Word? (a) yes (b) no
   (a) 97.88   (b) 1.89
   (a) 98.39   (b) .40
48. Microsoft™ PowerPoint? (a) yes (b) no
   (a) 96.24   (b) 3.53
   (a) 95.38   (b) 3.41
49. Microsoft™ Excel? (a) yes (b) no
   (a) 78.12   (b) 21.41
   (a) 81.73   (b) 16.47
50. Adobe™ Photoshop or other digital imaging software? (a) yes (b) no
    (a) 63.44   (b) 36.32
    (a) 65.26   (b) 33.13
51. Adobe InDesign™, Aldus Pagemaker™, Microsoft Publisher™ or other
    Desktop publishing software? (a) yes (b) no
    (a) 30.59   (b) 69.41
    (a) 28.51   (b) 69.88
52. Non-linear video/audio editing software? (a) yes (b) no
    (a) 16.00   (b) 83.76
    (a) 21.29   (b) 76.91
53. Macromedia Director™ or Flash™? (a) yes (b) no
    (a) 21.41   (b) 78.35
    (a) 18.88   (b) 78.71
54. Webpage creation software? (a) yes (b) no
    (a) 30.82   (b) 68.71
    (a) 32.13   (b) 65.86
55. Do you currently have an active account in Facebook, MySpace, or similar site? (a) yes (b) no
    (a) 73.49   (b) 26.28
    (a) 88.35   (b) 10.24
56. Do you currently have an active blog to which you post? (a) yes (b) no
    (a) 19.07   (b) 80.23
    (a) 15.06   (b) 83.33
57. Do you currently have discussion boards on web sites to which you regularly post? (a) yes (b) no
    (a) 19.30   (b) 80.00
    (a) 14.86   (b) 83.33

58. As an SRU student, I have adequate access and availability to technology.
   (choose one) (a) 36.53   (b) 32.08   (c) 24.59   (d) 5.15   (e) 1.64
   (a) 43.98   (b) 36.35   (c) 14.66   (d) 2.61   (e) 1.20
   Strongly Agree  Neutral  Strongly Disagree
59. There are enough computer labs on campus to meet student needs.
   (choose one) (a) 16.86   (b) 21.78   (c) 26.00   (d) 22.25   (e) 13.11
   (a) 20.28   (b) 26.91   (c) 26.31   (d) 15.46   (e) 9.64
   Strongly Agree  Neutral  Strongly Disagree
60. Lack of technology resources is a big problem on campus.
    (choose one) (a) 8.67   (b) 18.74   (c) 39.11   (d) 25.06   (e) 8.43
    (a) 4.62   (b) 11.04   (c) 38.96   (d) 28.71   (e) 15.06
    Strongly Agree  Neutral  Strongly Disagree
61. SRU faculty use technology effectively in the classroom.
    (choose one) (a) 14.29   (b) 32.32   (c) 39.81   (d) 11.01   (e) 2.58
    (a) 20.68   (b) 34.34   (c) 32.93   (d) 8.03   (e) 2.41
    Strongly Agree  Neutral  Strongly Disagree
62. Faculty’s inability to use technology is a large problem on campus.  
(choose one)  
(a) 7.51  (b) 13.62  (c) 42.49  (d) 29.81  (e) 6.57  
(a) 5.02  (b) 12.65  (c) 36.75  (d) 29.72  (e) 13.65  
Strongly Agree  Neutral  Strongly Disagree

63. The appropriate use of technology is a large problem on campus.  
(choose one)  
(a) 4.94  (b) 11.53  (c) 53.88  (d) 22.82  (e) 6.82  
(a) 4.02  (b) 7.83  (c) 43.37  (d) 28.31  (e) 14.26  
Strongly Agree  Neutral  Strongly Disagree

64. Inadequate facilities are a large problem with technology on campus.  
(choose one)  
(a) 9.86  (b) 23.47  (c) 39.67  (d) 20.42  (e) 6.57  
(a) 6.83  (b) 15.66  (c) 39.36  (d) 23.29  (e) 12.05  
Strongly Agree  Neutral  Strongly Disagree

65. There are no significant problems with technology use in the classroom.  
(choose one)  
(a) 5.63  (b) 23.00  (c) 45.07  (d) 19.48  (e) 6.81  
(a) 10.64  (b) 25.50  (c) 41.97  (d) 15.46  (e) 3.82  
Strongly Agree  Neutral  Strongly Disagree

66. There is adequate technology support for students on campus.  
(choose one)  
(a) 8.69  (b) 26.53  (c) 39.44  (d) 17.84  (e) 7.51  
(a) 12.65  (b) 27.71  (c) 37.55  (d) 13.86  (e) 5.22  
Strongly Agree  Neutral  Strongly Disagree

67. I would prefer a single access point or portal to retrieve all my SRU information (e-mail, registrations, grades, news, etc.).  
(choose one)  
(a) 36.47  (b) 27.29  (c) 29.88  (d) 4.24  (e) 2.12  
(a) 43.78  (b) 20.08  (c) 27.11  (d) 3.82  (e) 2.01  
Strongly Agree  Neutral  Strongly Disagree

68. How often do you access the Blackboard™ course management system?  
(choose one)  
(a) daily  (b) several times a week (c) once a week (d) once a month (e) rarely or never  
(a) 16.98  (b) 36.32(c) 22.41  (d) 17.69  (e) 6.60  
(a) 23.29  (b) 48.19(c) 16.67  (d) 4.42  (e) 4.42

69. If you have accessed Blackboard™, do you prefer being able to access course & university information through the software or via other methods like the I: drive, e-mail, or printed copy?  
(choose one)  
(a) blackboard  (b) I: drive  (c) e-mail  (d) printed copy  (e) other methods  
(a) 48.57  (b) 23.81  (c) 16.19  (d) 9.05  (e) 1.43  
(a) 56.83  (b) 14.86  (c) 14.86  (d) 6.63  (e) 1.81

If you have accessed Blackboard™, do you regularly use:  

70. Course information?  
(choose one)  
(a) yes (b) no  
(a) 74.87  (b) 24.10  
(a) 74.30  (b) 18.88

71. Grade book?  
(choose one)  
(a) yes (b) no  
(a) 73.91  (b) 25.58  
(a) 79.92  (b) 14.66

72. Communication?  
(choose one)  
(a) yes (b) no  
(a) 24.81  (b) 75.19  
(a) 24.30  (b) 70.68

73. Discussion board?  
(choose one)  
(a) yes (b) no  
(a) 30.43  (b) 69.31  
((a) 21.89  (b) 72.29

74. Other  
(choose one)  
(a) yes (b) no  
(a) 41.60  (b) 58.41  
(a) 43.98  (b) 50.00

75. Have you ever used Rocktalk?  
(choose one)  
(a) yes (b) no  
(a) 96.62  (b) 3.14  
(a) 92.97  (b) 3.61
College Student Behaviors and Attitudes Toward Technology on Campus

If yes, have you used it to access:

76. Student financial accounts? (a) yes (b) no
    (a) 54.25 (b) 45.50
    (a) 50.60 (b) 44.78

77. Enrolled course information? (a) yes (b) no
    (a) 89.67 (b) 10.08
    (a) 88.82 (b) 10.97

78. Grade/transcripts?
    (a) yes (b) no
    (a) 96.23 (b) 3.77
    (a) 95.76 (b) 4.03

79. Registration?
    (a) yes (b) no
    (a) 94.21 (b) 5.54
    (a) 90.25 (b) 9.53

80. Other information/resources (a) yes (b) no
    (a) 71.13 (b) 28.61
    (a) 63.48 (b) 36.09

81. Do you own a computer that has wireless connectivity capabilities? (a) yes (b) no
    (a) 66.26 (b) 29.12

82. If yes, have you ever connected to the University’s wireless network? (a) yes (b) no
    (a) 23.62 (b) 76.13
References


