Student use of library computers in an application-rich study environment

DO THEY MEET THE UNIVERSITY’S ACADEMIC GOALS?

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Introduction

- California State University San Marcos 20 years old
- Library built in 2004
Introduction

- Technology goal for the new library was to encourage students to use the library for their entire research process.
Introduction

• **Assess status of technology in the library**
  - Did we succeed in meeting our goal?
  - Were the decisions we made 7 years ago still relevant?
  - Has the increase in mobile computing changed the need for desktop computers in the library?
  - Has the availability of a wide variety of applications distracted from the academic and library research focus?
  - Does the use of technology in the library impact use of other library services?
Purpose of the Study

- **Goals of the study**
  - Analyze how students use library computers
    - Type of applications used
    - Amount of academic vs. personal use
  - Identify computer-related study habits and computer preferences
  - Determine if library technology services are meeting student needs
- **Data will be used in planning for library technology needs over the next 3-5 years**
Methodology

- Study conducted over 2 weeks during spring term
- Study conducted twice to determine if the type of student activities were affected by the study cycle in the term
  - 2009 study conducted at the end of the term
  - 2010 study conducted near the beginning of the term
- Used the same locations, days of the week, and time of day
  - Data collection was conducted twice for each factor during each study
Methodology

- Two methods used to gather data
  - **Survey of library computer users**
    - Used to directly solicit student feedback about library technology
  - **Observation of software application usage and selected study habits**
    - Used to record actual student actions and behaviors
    - Also served to verify information provided by students
  - **Both were administered together**
    - Survey handed out to students at computers
    - While waiting for surveys to be completed, administrator walked behind students computers and observed their screens
Methodology

- Student survey
  - 5 minutes to fill out
    - __ indicated multiple answers
    - □ indicated pick one answer
  - Survey asked about:
    - Type of work computer being used for
    - Amount of library computer use
    - Library computer preferences
    - Other activities done in the library
    - Other technology owned
Methodology

Observation
- Observations represented a snapshot of computer use
- The form listed all the applications and behaviors being studied
- Each user was given one tic mark for most prominent application used
- If more than one application open, ‘multi-tasking’ was also ticked.
Methodology

- Analyzing the survey answers in conjunction with the observation data powerful technique for clarifying results and better understanding student research behaviors.

- For example,
  - Observed usage of the library Web services appeared to be very small.
  - Survey responses showed many more students reported using the library Web site.

<table>
<thead>
<tr>
<th>Library Web site usage</th>
<th>Observation results</th>
<th>Survey results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7%</td>
<td>64%</td>
</tr>
</tbody>
</table>

- Discrepancy may be due to quick look-up nature of most library applications.
Results

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td>1,452</td>
<td>2,501</td>
</tr>
<tr>
<td>Survey requests</td>
<td>1,525</td>
<td>2,042</td>
</tr>
<tr>
<td>Survey completed</td>
<td>1,141</td>
<td>1,121</td>
</tr>
<tr>
<td>% Survey response</td>
<td>75%</td>
<td>55%</td>
</tr>
<tr>
<td>survey ‘dups’</td>
<td></td>
<td>619</td>
</tr>
<tr>
<td>% response w/o dups</td>
<td></td>
<td>79%</td>
</tr>
</tbody>
</table>

Distributing the surveys revealed that we had many repeat customers at library computers. Each student only given survey once, but observed computer use each time.
Results

Observation of Computer Use
Percent of students using an Application April 15 - May 3, 2009

- MS Word: 28.79%
- Surf Web: 16.67%
- Email/Chat: 11.78%
- Campus WebCT: 8.61%
- Facebook/Social Network: 6.06%
- Campus Web Site: 5.17%
- Videos/Images/Tunes: 4.61%
- MS Powerpoint: 4.06%
- Library Databases: 4.06%
- Google or Search: 2.89%
- MS Excel: 1.79%
- Library Catalog: 1.72%
- Library Web Site: 0.83%
- Games: 0.69%
- Statistical Packages: 0.48%
- Media/Graphics: 0.48%
- Acrobat Reader: 0.34%
- GIS: 0.28%
- Academic Programs: 0.28%
- Library Course/Subject Guides: 0.21%
- Vbrick Player/Internet TV: 0.07%
- Programming: 0.07%
- Library Eres: 0.07%
- Image/Media Players: 0
Results

- Type of computer use
  - 60% clearly academic
  - 30% mostly academic (Web, media, and email)
  - 7% clearly non-academic
Results

1. While you have been using this computer, have you:

- Class Assignment: 77%
- Worked in WebCT or Cougar Courses: 76%
- Google/Search: 73%
- Used Microsoft Office Applications: 65%
- Visited the library Website: 55%
- Facebook/Myspace/Social Networking Site: 54%
- Discussed Personal Things: 45%
- Discussed School Work: 40%
- Media: 30%
- Searched for books or journal articles: 37%
- Academic Apps: 21%
- Asked for Library Help: 21%
- Other: 2%

2010 survey results
Additional criteria were added to the 2010 study to clarify student multitasking behavior.

Results made it clear that, while students focus on school work, they do it in a social environment:

- 55% Facebook/MySpace/other social network
- 46% Used email/chat to discuss personal things
- 41% Used email/chat to discuss academic things.
Results comparison of 2009-2010

Observation of Computer Use
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- Email/Chat: 8.61%
- Facebook/Social Network: 6.06%
- Campus Web Site: 5.17%
- Videos/Images/Tunes: 4.61%
- MS Powerpoint: 4.06%
- Library Databases: 2.89%
- Google or Search: 2.89%

Observation of Computer Use
Percent of Students using an Application February 4-18 2010

- MS Word: 19.75%
- Surfing the Web: 13.95%
- WebCT/Coursera Courses pages: 12.96%
- Facebook/social network sites: 9.21%
- Email/chat: 7.38%
- Media-Videos/Images/Tunes: 5.84%
- Full Text/pdf/Adobe Readers: 5.84%
- Academic Programs (programming, accounting, etc): 5.62%
- MS Powerpoint: 3.41%
- Google (or other) search engine: 3.34%
- Campus Web Site (CSUSM): 2.82%
- MS Excel: 2.24%

Games: 1.65%
Databases: 1.25%
Results

- Students are very frequent users of library computers
- Students strongly prefer library computers over other computer locations on campus

**Computer Use Survey**
April 15 - May 3, 2009

6. Do you prefer to use computers in the library over other labs on campus?

- Yes, 80%
- No, 20%

**Computer Use Survey**
April 15 - May 3, 2009

2. How often do you use the computers in the library?

- Daily When on Campus, 49%
- Several Times a Week, 32%
- Several Times a Month, 11%
- Rarely use Computers in Library, 8%
Results

- Despite a high ownership of laptops and other mobile devices, over 75% of students prefer to use library desktop computers.
Results

- What else students do in the library when they use the computers
  - Study
  - Meet others
  - Use or create media
  - Use traditional library services

Computer Use Survey
April 15 - May 3, 2009

7. What else do you plan to do in the library today besides using the computer?

- Study: 70%
- Meet With Others: 35%
- Use Media: 20%
- Checkout a Book: 16%
- Look for Journals/Newspapers: 15%
- Ask Questions/Get Help: 10%
- Use a Reserve Book: 8%
- Create a Video/Web Page: 6%
- Pick up Interlibrary loan/Circuit: 3%
- Other: 0%
Conclusion

- **Type of work done on library computers**
  - Primarily academic
  - Top applications: online course, Web, and Microsoft Word
  - Over half used library applications
  - Writing papers most common activity

- **Study habits**
  - Primarily use the library for study and working with groups
  - Use other library services in addition to computers
  - Multi-tasking and social networking are integral parts of academic work
Conclusions

- **Computer preferences**
  - Students prefer to use library computers and do so frequently
  - Most students own laptops and often several portable devices
  - Most students prefer to use traditional library desktop computers
Conclusion

- The study showed that, despite the opportunity to use computers for non-academic purposes, the majority of students’ library computer use met the academic goals of the university.