# University of Hawaii at Manoa Undergraduate Library Technology Survey

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The UHM Undergraduate Library Technology Survey was one of two student needs assessments (the other targeted graduate students) conducted in the fall semester of 2009. The goal of both of the needs assessment was to help understand better what tools students use for their research and in what kind of place they want to do their research.

## BACKGROUND FOR SURVEY

Over the past several years, the University of Hawaii at Manoa Library has experimented with emerging technologies to better serve our student populations. Investigating, learning, adopting, and maintaining these technologies require expending a great deal of time and resources that becomes more challenging with limited budgets and reduced staffing. As a result, it has become essential for the Library to thoroughly assess what services and resources best serve our users and to avoid what Michael Stephens has described as **technolust**, the "irrational love for new technology combined with unrealistic expectations for the solutions it brings" (Stephens, 2008).

The 2009 UHM Student Library Technology Surveys are an attempt to accurately evaluate the needs of our student populations and to provide a concrete assessment of their learning needs and the services and environment the Library can provide to meet those needs.

The survey instrument was based on a Library Technology Survey created by Char Booth at Ohio University. The original instrument contained generally-worded questions and answer choices that were then tailored to the specific context of UHM undergraduate students and for Hamilton Library. The instrument takes a more formal tone, striving for neutrality and balance in both language and response options.

The likert scale was used for recording responses because it offers five degrees of rating choices. For some questions two additional options were added to give more meaning to the responses: "I didn't know about this." and "N/A I'm a new student".

A first draft of the questionnaire was created, and then underwent numerous reviews and modifications. Subsequent drafts were reviewed by a library administrator, three library faculty members, a graduate student, and four undergraduate students ranging from first year to upper division. Suggestions were incorporated and changes made after feedback was given in each of the pre-testing reviews.

The final version was then formatted into an online version, and this version underwent further review and modification. The software used for the online survey is Surveyor, a Visage Services product. See Appendix D for a print version of the online form. Application was made to the Committee for Protection of Human Subjects (CHS) at the University of Hawaii at Manoa for a Declaration of Exemption as the plan was to conduct "exempt" research involving human subjects. The exemption was granted by the CHS in August, 2009.

The Survey was available online with a link from the library's home web page from September 1, 2009 to October 30, 2009. The survey was advertised via emailings to listservs and a broadcast email from UH announce. Most of the respondents reported learning of the survey from an email, so the sample is not completely randomized.

## RESULTS WITH OBSERVATIONS

### Questions #1 - #4
There were an average of 630 completed undergraduate respondents, ranging from first-year undergraduates to fifth-year and special situation undergraduates. The majority of respondents (93.26%) were local, UHM-based students, as opposed to 6.74% distance education students.

### Question #5 - 6
Students reported that a majority (56.54%) visited Hamilton Library the most, as opposed to 34.41% who visited Sinclair the most. Students visiting Hamilton Library reported they did so with varying frequency: 22.8% visited from one to three times a semester; 22.31% visited from one to three times per month; 29.8% visited from one to three times per week; while 10.42% reported visiting Hamilton Library daily.

### Question #7
When presented with a list of library-related activities, students were asked how often they engaged in those activities. The more significant numbers were consistently recorded in the **Never** or the **1-3 times per semester** category, summarized in the brief table below as **Infrequent**. One reason for the higher percent of disuse of the Maps and GIS computers and microforms is that more students reported not knowing about these services than any other library service.

| #7. When you are at the library, how often do you engage in the following? | INFREQUENT | FREQUENT |
|---|---|---|
| Use library computers | 60% | 30% |
| Use your laptop | 61% | 29% |
| Do research for an assignment | 68% | |
| Search for items in the Catalog | 74% | |
| Use the library website to find articles | 73% | |
| Ask a librarian for help | 85% | |
| Use reference books | 81% | |
| Use maps or GIS computers | 76% | |
| Use microforms | 77% | |
| Check out books or journals | 81% | |
| Use a group study room | 75% | |
| Socialize with friends | 75% | |
| Sleep | 78% | |

**Table 1 Responses to Question #7**

As shown in Table 1, the highest use for "daily" activities was the use of a laptop. The order for reported activities in the "1-3 times per week" category were as follows in decreasing extent: use library computers, use laptop, do research for an assignment, search for terms in catalog, with an equal amount recorded for using the library website to find articles. "Socializing with friends", "Use a group study room" and "Sleep" were among the high ranking activities for daily or 1-3 times per week. (See Appendix A for the complete Question #7 Table.)

*Observations for Question #7*
The data shows that students prefer to use their own laptops to using the library computers in Hamilton Library. The use of laptops is the number one highest daily and weekly activity, and DNS is aware of this trend. Almost every single open space now provides wireless access. DNS is adding one more access point to boost the first floor wireless, and is currently replacing older access points with more powerful new ones in many Hamilton locations. See Appendix C for a current list of Wireless AP Locations.) This will support compatibility with the new ITS wireless controller/gateway system. Based on the free-text comments it appears that students are not aware of the extent of wireless coverage. How best can we make students aware of the extensive availability of wireless service in the Library?

***Question #8***
This question asked students about how they use computers in Hamilton Library. The highest daily use was to check email, followed by accessing a UH account, then browsing the Internet, and then accessing a course webpage, like Laulima. This was almost the same pattern for those using Hamilton's computers from one to three times per week.

Almost 37% of the students responded that they never use the various computer-related services listed in that question, such as scanners, specialized software (Endnote), Chat.

(See Appendix B for the Table of Responses for Question #8.)

***Observations for Question #8***
The fourth-highest activity for using Hamilton Library's computers was recorded as accessing a course webpage, for example a Laulima course page. This might provide a good opportunity to partner with instructors to push the availability of library resources and services both within the Laulima course pages and from instructors' personal course webpages. Links could be added to context-sensitive Library services and resources, such as Library Subject and Course Guides.

***Question #9***
Students reported conducting the majority of their computer-based research at home (71.24%) followed far behind by conducting computer-based research on their own laptops within the library (13.56%) and then using the library's computers for their research (9.31%).

***Observations for Question #9***
These statistics support the idea of making the Library's resources available remotely as much as possible. It also suggests that the Library should focus more on creating ways to help provide remote assistance to students when they are doing their research rather than increasing computer hardware/software in the physical building. Reference services such as phone and chat reference, online tutorials and guides, and context-based help systems should probably be made more consistent, well-known and ubiquitous.

***Question #10***
Question number ten asked about adequate availability of certain items in Hamilton Library. The type of items rated were scanners, seating, desk and tables as well as study spaces, power outlets, and copy machines. There was a greater than 50% perception that enough quiet study space was available. Other items that had a high "No" (not available) response were "Desks and Tables", "Group Study Rooms" and "Power Outlets" (most likely to support laptops). About one-third of the respondents felt there was not enough seating or social/collaborative space in Hamilton Library.

A large percentage of students, 27%, didn't know about the availability of scanners in the Library.

| 10 | In your opinion, are there enough of the following available in Hamilton Library? | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | % | No | % | No opinion | % | Didn't know about this | % | N/A as I am a new student | % |
| Scanners | 108 | 17% | 72 | 12% | 192 | 31% | 168 | 27% | 72 | 12% |
| Seating | 291 | 47% | 216 | 35% | 43 | 7% | 8 | 1% | 57 | 9% |
| Desks/Tables | 275 | 45% | 238 | 39% | 37 | 6% | 6 | 0.90% | 57 | 9% |
| Quiet Study Space | 338 | 55% | 168 | 27% | 39 | 6% | 8 | 1% | 61 | 10% |
| Social/Collaborative Space | 202 | 33% | 196 | 32% | 124 | 20% | 27 | 4% | 63 | 10% |
| Wireless Internet Coverage | 237 | 39% | 176 | 29% | 100 | 16% | 35 | 6% | 65 | 11% |
| Power Outlets | 174 | 28% | 230 | 37% | 112 | 18% | 34 | 6% | 65 | 11% |
| Study Carrels | 251 | 41% | 155 | 25% | 92 | 15% | 45 | 7% | 69 | 11% |
| Group Study Rooms | 144 | 23% | 228 | 37% | 123 | 20% | 49 | 8% | 70 | 11% |
| Copy Machines | 304 | 50% | 80 | 13% | 125 | 21% | 31 | 5% | 71 | 11% |

**Table 2 Responses to Question #10**

*Observations for Question #10*

A large proportion of respondents expressed a need for one or more physical-space related items, i.e. tables, seats, study rooms. Students also reported a need for more power outlets to support the use of laptops. This problem might be addressed by the Library As Space committee reviewing the placement of library study spaces and the arrangement of study tables for easier access to outlets.

In addition the committee may want to think about how to add more desks, tables and general seating possibly serving a dual purpose to create more social and collaborative spaces within the library.

The availability of scanners for use within the Library might be promoted more since a large percentage of students reported they didn't know about them. Maybe there could be mentioned during the Library Orientation sessions. There is a library webpage on our site addressing the availability of scanners found at http://library.manoa.hawaii.edu/about/computing/scanners.html .

*Question #11*

Students were asked about the awareness of certain services offered by Hamilton Library. Though students were most aware of the possibility of talking with a librarian in person, which rated the highest of the services at 11.5%, they were least aware that they could talk with a librarian via a chat service. This service had the lowest score of 3.21%. Another resource of which students are not widely aware is the existence of full-text books online. The next least-aware services were the availability of online tutorials and full-text books online.

| 11 | How many of the following options do you think Hamilton Library currently offers? Check all that apply. | | % |
|----|------------------------------------------------------------------------------------------------------|--|---|
| | | | |
| | Group Study Rooms | | 10.43% |
| | Full-text articles online | | 9.55% |
| | Talk with a librarian via chat | | **3.21%** |
| | Research and library help classes | | 6.41% |
| | Online tutorials | | 4.89% |
| | Online article databases | | 9.28% |
| | Subject guides | | 5.39% |
| | Talk with a librarian in person | | 11.05% |
| | Scanners | | 8.10% |
| | Request items from other libraries | | 8.14% |
| | Full-text books online | | **4.83%** |
| | Online book renewals | | 8.01% |
| | Online library catalog | | 10.70% |

**Table 3 Responses to Question #11**

*Observations for Question #11*

The Ask-A-Librarian Live Chat service could be promoted more thoroughly. This appears to need a lot more exposure since students appear to be least aware of it than any other Library options listed in this question. Is it promoted when the English 100 special classes are taught and when Library liaisons interact with their faculty and during course presentations?

In addition, resources such as the availability of online full-text books, tutorials and library subject guides could be given greater exposure.

**Question #12** was free-text and will be discussed in the next section.

*Question #13*

When asked about visiting the Library's website to complete various tasks or to access various resources, almost 46% of students reported never visiting the website. Approximately 26% reported visiting only one to three times per semester, and almost 13% reported not knowing there was a Library website. Only approximately 15% visited the website from one to three times per month, week or on a daily basis.

For students reporting in this 15% grouping, generally the highest use was in searching the online catalog for books and journals and accessing electronic resources.

| 13. How often do you visit the Library's website to do the following? (http://library.manoa.hawaii.edu/index.html) | Never | Any use at all | 1-3 per Semester | Combined day-month | 1-3 per month | 1-3 per week | Daily |
|---|---|---|---|---|---|---|---|
| Find library information (i.e. hours, librarian contact information) | 210 | 382 | 275 | 107 | 83 | 19 | 5 |
| Search the catalog (Hawaii Voyager) for books and journals | 157 | 429 | 227 | 202 | 135 | 60 | 7 |
| Access electronic resources (i.e. databases, online journals) | 157 | 425 | 231 | 194 | 131 | 52 | 11 |
| Access e-books | 309 | 220 | 131 | 89 | 63 | 21 | 5 |
| Use subject guides or tutorials | 397 | 139 | 92 | 47 | 36 | 7 | 4 |
| Ask a librarian for help via Ask-A-Librarian | 414 | 101 | 76 | 25 | 2 | 1 | 4 |
| Access UH Manoa digital collections (i.e. ScholarSpace, Hawaiian Language Newspapers) | 363 | 163 | 118 | 45 | 36 | 5 | 4 |
| Access online reserves | 312 | 223 | 143 | 80 | 58 | 15 | 7 |

**Table 4 Responses to Question #13**

The top resources available from the Library's website of which students were least likely to have ever used were the Ask-A-Librarian service, subject guides and the digital collections.

*Observations for Question #13*
This question did not have an option for N/A-New student, therefore some of the "Didn't Know" answers may be from new students. Further investigation should take place about why students don't visit the Library's website. Are they unaware of the various resources available via this service or do they access resources directly via bookmarks? Would a federated search application (i.e. more "google like") increase visits to the web site? Is the website promoted as a gateway to many resources in classes across campus?

Once again, students report that they don't use the Ask a Librarian service. Approximately 66% of students report never using the service, and another 18% said they didn't know about the service. How should this service be promoted, or is it not useful enough to justify continuing to offer the service?

*Question #14*
Students reported that when they **start** their research they are "extremely likely" to start with a general Google search and a Wikipedia search and then to ask their instructor or go to Google Scholar. Students are likely and somewhat likely to go to their instructors first to begin their research. Sixty percent of students reported that they most likely won't begin a search by asking a librarian.

| 14 | How likely are you to use each of the following to START your research for an assignment? | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N/A - I don't use this | % | Extremely unlikely | % | Unlikely | % | Somewhat likely | % | Likely | % | Extremely likely | % |
| Google | 14 | 3% | 9 | 1% | 9 | 1% | 71 | 11% | 128 | 20% | 406 | **64%** |
| Wikipedia | 39 | 6% | 55 | 9% | 72 | 11% | 162 | 26% | 120 | 19% | 187 | **29%** |
| Library catalog | 56 | 9% | 51 | 8% | 107 | 17% | 172 | 27% | 156 | 25% | 88 | 14% |
| Article database | 73 | 12% | 46 | 7% | 99 | 16% | 167 | 27% | 153 | 24% | 92 | 14% |
| Google Scholar | 188 | 30% | 36 | 6% | 94 | 15% | 113 | 18% | 93 | 15% | 105 | 16% |
| Ask friends/family | 84 | 13% | 77 | 12% | 153 | 24% | 175 | 28% | 94 | 15% | 45 | 7% |
| Ask my instructor | 27 | 4% | 20 | 3% | 83 | 13% | 228 | **36%** | 167 | **26%** | 107 | 17% |
| Ask a librarian | 101 | 16% | 103 | 16% | 180 | 28% | 154 | 24% | 68 | 11% | 27 | 4% |

**Table 5 Responses to Question #14**

### *Observations Question # 14*

Students report that they are more likely to turn to their instructors in order to begin their research if they seek out a person and are extremely unlikely or unlikely to ask a librarian for help as they begin their research.  This indicates that the traditional Library and librarians in their traditional role are not where students first turn to begin their research. The Library may want to explore the following question: How can we include Library links into all the places that students DO turn? Possible approaches might be to work to establish a consistent presence in all Laulima course pages; to market library services and resources to all instructors; and to develop supporting Library Guides for courses.  Other possibilities mike include making sure that all library resources are indexed and linked via Google, Google Scholar and Google Books and that relevant links and footnotes to library resources are included in Wikipedia articles.

### *Question #15*

Students report it is extremely easy to find information in Google (47%), Wikipedia (35%) and via their instructors (18%). They also report they never use Google Scholar nor ask a librarian.

| 15 | How easy is it to use the following to **FIND** resources for your assignments? | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N/A - I don't use this | % | Extremely difficult | % | Somewhat Easy | % | Easy | % | Extremely Easy | % |
| Google | 14 | 2% | 13 | 2% | 130 | 21% | 176 | 28% | 300 | 47% |
| Wikipedia | 66 | 10% | 24 | 3.80% | 136 | 22% | 184 | 29% | 222 | 35% |
| Library catalog | 117 | 19% | 59 | 9% | 230 | 37% | 164 | 26% | 54 | 9% |
| Article database | 130 | 21% | 75 | 12% | 230 | 37% | 145 | 23% | 49 | 8% |
| Google Scholar | 284 | 46% | 24 | 4% | 131 | 21% | 119 | 19% | 65 | 10% |
| Ask friends/family | 163 | 26% | 73 | 12% | 203 | 32% | 105 | 17% | 81 | 13% |
| Ask my instructor | 83 | 13% | 26 | 4% | 201 | 32% | 212 | 33% | 111 | 18% |
| Ask a librarian | 228 | 36% | 30 | 5% | 151 | 24% | 157 | 25% | 60 | 10% |

**Table 6 Responses to Question #15**

*Observations for Question #15*
The top two resources selected from the survey reported to be the easiest in which to find information were Google and Wikipedia. Should this be an indication that it would best serve our undergraduate population if the Library could provide a federated search portal for our scholarly resources, a portal mimicking a Google search? Should Google Scholar be promoted as an even better alternative to Google, and if so, how?

Asking the instructor was rated somewhat easy or easy. One student lamented that the UH has not taken the time to guide students to where they can find resources for their papers. The data shows that 36% of undergraduate students never ask a librarian for help in finding information for their assignments. Where should librarians be physically and/or virtually so that they can be easily queried? How might librarians be considered at least as easy to query as the instructor? How could students be encouraged to seek out librarians for help with their class assignments (or is the library irrelevant to the majority of class assignments)?

*Question #16*
Students were asked to rate the overall quality of the information found in the sources they said they used in Question #15. The highest quality was found via asking instructors and by using the Library Catalog. Though 39% of the students reported never using a Librarian, the quality rating for those that did utilize a Librarian was almost equally divided between "Fair" and "High".

| 16 | What is the overall QUALITY of information you find using the following? | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | N/A - I don't use this | % | Very low | % | Low | % | Fair | % | High | % | Very high | % |
| Google | 10 | 2% | 13 | 2% | 38 | 6% | 247 | 39% | 209 | 33% | 117 | 18% |
| Wikipedia | 42 | 7% | 54 | 9% | 99 | 15% | 259 | 41% | 120 | 19% | 60 | 9% |
| Library catalog | 125 | 20% | 11 | 1% | 10 | 1% | 155 | 25% | 242 | 39% | 85 | 14% |
| Article database | 155 | 25% | 9 | 1% | 10 | 1% | 117 | 19% | 208 | 33% | 132 | 21% |
| Google Scholar | 288 | 46% | 5 | 1% | 13 | 2% | 110 | 18% | 130 | 20% | 82 | 13% |
| Ask friends/family | 153 | 24% | 41 | 6% | 85 | 14% | 251 | 40% | 66 | 11% | 32 | 5% |
| Ask my instructor | 76 | 12% | 15 | 2% | 10 | 1% | 145 | 23% | 244 | 39% | 143 | 23% |
| Ask a librarian | 243 | 39% | 12 | 1% | 18 | 3% | 154 | 25% | 156 | 25% | 45 | 7% |

**Table 7 Responses to Question #16**

### *Observations for Questions #16*

Fifty percent of students who did "Ask a librarian" reported a quality rating of fair to high. (The wording of the question does not distinguish clearly between face-to-face, phone or online "asking".) More students might benefit from "Ask a Librarian" chat service if it were more widely advertised. Other ways to make librarians available to answer questions could be explored, perhaps using Web 2.0 approaches.

When discussing using different types of Web 2.0 technology to push library services, it would be best to look at the data from number 21. Many students are active on social network services like Facebook and MySpace, and students tend not to interact as much using blogs or Twitter, though blogs are read at a moderate amount by 37% of the students.

### *Questions #17 - #20*

This series of questions asked students to best describe themselves in terms of their general technology abilities and online services they use. The majority of students reported spending from six to thirty hours a week online. Over 37% of students spend from 26-50% of their time on school-related activities, and almost 50% reported that they adopt new technologies at about the same time that other people do. Almost 20% of our undergraduates reported using new technologies somewhat before others do.

More of our students own a laptop or netbook (24.48%) as opposed to 13.85% owning a desktop computer. This is consistent with findings from a 2009 Student and Information Technology ECAR Research study (Caruso, 2009). Over 20% of the UHM students each own portable media players (like iPods) and digital cameras.

### *Observations for Question #20*

Undergraduates spend a significant amount of time online, just not apparently at library internet destinations. Nearly half have access to personal computing resources, and it is likely that students will depend less and less on computer systems physically located in

the library.  Most students should be assumed to be somewhat computer literate, but most are not at the cutting edge.

### Question # 21

Social network platforms like Facebook and Myspace are used almost daily by 56% of the students and by another 18% from one to three times a week. Almost 81% never use RSS feeds or Twitter and 57% never post to a blog, though approximately 37% will read blogs several times a month to several times a week.

### Observations for Question #21

It might be worth investigating how other libraries use a social network tool like Facebook and to find out if they have statistics on the success of its use for their purposes.

RuthMarie Quirk has just started (as of November 19, 2009) a Facebook account for Sinclair Library. She could share her experiences using this tool.

### Question #22

In question 22, when students were asked if they would use a mobile phone for accessing various library services, the following table indicates the results. Results are grouped into generally "likely" or "unlikely" responses. (Please note that the "unlikely" grouping also includes students responding that they don't own a mobile phone.)

| Service | Unlikely | Likely |
|---------|----------|--------|
| Ask a librarian a question | 80% | 20% |
| Send a Call Number from the catalog | 75% | 25% |
| Receive a renewal or overdue notice | 59% | 41% |
| Renew library materials | 60% | 40% |

**Table 8 Responses to Question #22**

### Observations for Question #22

The responses from Question 22 indicate that though students might not use their mobile phone as a research tool (asking reference questions of a librarian and sending Call Numbers from the catalog), they would be more inclined to use it as a book renewal service and to receive overdue notices.

### Question #23

This question asked about the frequency of use for a list of web tools and social networking sites. Undergraduate students are three times more likely to use Facebook as opposed to MySpace for a social networking tool.   Approximately 73% of the students

report that they are using it more lately or that they use it all of the time. Several current tools that are rarely used are Second Life, Delicious, Skype, Twitter and Zotero.

*Observations for Question #23*
If the Library were contemplating using one of the current social networking tools available, it would be best to select Facebook. The data indicates that this tool is more widely used among the undergraduates at UHM.

A blogging tool Xanga (http://www.xanga.com/) was mentioned a number of times in the comments section.  The product has been reviewed as "more for personal journals or blogging, rather than business blogs"[1].  The UH system (ITS) is offering blog support on the Wordpress platform (http://blog.hawaii.edu/) which could be worth investigation if staff or faculty in the Library are planning on creating a blog.

*Question #24*
When asked which of the Google tools that students currently use, the top four tools were listed as follows:

| | |
|---|---|
| Search | 17.51% |
| Maps | 14.45% |
| Image Search | 11.81% |
| Gmail | 9.76% |

*Questions #25-#27*
The Mozilla Firefox web browser was selected as the browser of choice by almost 48% of the students. Internet Explorer was the second selection with approximately 23% use, followed by Safari with about 16% use.

Almost 57% of the students indicated that they customize their web browser with add-ons, extensions and toolbars. Almost 23% of the students responded positively and another 51% with a possibility of using library-specific browser add-ons or search toolbars if provided by the library.

*Observations for Question #25 - #27*
The Library has created a Search Plugins page (http://library.manoa.hawaii.edu/research/searchplugin/searchplugin.html) describing how to modify browsers by adding search plug-ins for searching the UHM OPAC and Electronic Resources. If the Library wants students to use this information more extensively to modify their browser with these services, then this information should be pushed via classes and at the Reference Desks.

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[1] Top Ten Reviews By Havalah Gholdston, accessed December 14, 2009
http://blog-software-review.toptenreviews.com/xanga.com-review.html

Google Chrome should have been listed as one of the choices. In the comments section a number of people mentioned that this was their browser of choice.

*Question #28*
A number of Web 2.0 applications are not considered helpful to performing school-related work by the majority of the undergraduate students. In fact almost 55% of the students report never using any of the services listed in the question.

The most widely-used service is Laulima, and this is most likely because it is required by some instructors. Blogs are not used a great deal, though Wikis are found to be "somewhat helpful" to "very helpful" by 23% of the students. Webcasts are either never used and viewed as "not helpful" by 79% of the students, followed by Podcasts, which are either never used or seen as "not helpful" by 73%. Online video tutorials are seen as somewhat to very helpful by 48% of the students.

| 28 How helpful have the following been for school-related work? Check all that apply. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Never use it for school | % | Not helpful | % | Somewhat helpful | % | Helpful | % | Very Helpful | % | |
| Blogs | 423 | 68% | 59 | 9% | 102 | 16% | 32 | 5% | 11 | 2% | |
| Wikis | 215 | 35% | 39 | 6% | 177 | 28% | 137 | 22% | 55 | 9% | |
| Podcasts | 416 | 66% | 43 | 7% | 100 | 16% | 54 | 9% | 15 | 2% | |
| Webcasts | 450 | 72% | 45 | 7% | 74 | 12% | 45 | 7% | 12 | 2% | |
| Online video tutorials | 290 | 47% | 31 | 5% | 150 | 24% | 111 | 18% | 39 | 6% | |
| Virtual worlds (Second Life, etc.) | 532 | 85% | 48 | 8% | 30 | 5% | 13 | 2% | 5 | >1% | |
| E-learning sites (Laulima) | 74 | 12% | 33 | 5% | 169 | 27% | 184 | 29% | 169 | 27% | |
| Ratio | 54.77% | | 6.80% | | 18.30% | | 13.14% | | 6.98% | | |

<div align="center">Table 9 Responses to Question #28</div>

*Observations for Question #28*
Students report that the most widely-used service is Laulima. This service is used more extensively than other types of online delivery methods and Web 2.0 applications. The Library may want to explore how it can push its services via the Laulima platform as it is viewed as generally helpful by 83% of the undergraduate students. Other applications may have been rated unhelpful because there are very few available, or they are not kept current. The library may want to focus resources on integration with the service/application that is most frequently used rather than "if we build it they will come".

*Question #12 and #29 – Free-text Comments*

Question #12 asked "What would you change or add to Hamilton Library in general to make the building more useful to you?"
Question #29 asked "Do you have any other comments or suggestions concerning technology services in or for the library?"

There were 374 commenters for question #12 and 172 for question #29. The following section is a summary of the more frequent comments arranged in general headings. The last heading lists the six most frequent comments found in the survey. (For a complete print-out of the comments, please contact Beth Tillinghast at betht@hawaii.edu.)

## Hardware
More outlets
More wireless spots in Sinclair and Hamilton
Need wi-fi service in group study rooms
More computers in Sinclair and Hamilton
More distributed computers instead of being in just a few concentrated areas
Faster computers in libraries

## Software
More updated versions of Word
More Browse the Internet Only computers

## Resources
Engineering standards online (ACI and ASTMC)
Stop canceling electronic journal subscriptions
More online resources, fewer hardcopy items
Make website more user friendly (confusing EResources)
Point to other online course resources, i.e. MIT's open courseware

## Education
A convenient way to learn about all of the library resources
More workshops to teach technologies

## Services
A better way to handle book requests, especially substituting older editions when newer
    ones are asked for
More helpful library staff
Library staff that encourage their services
Cloud computing service so students can store and access school-related documents and
    files

## Environment
Hamilton is too cold
Increase the hours
Being able to bring food and drinks in Hamilton like at Sinclair
Focus on what you are – a Library. Don't inject yourselves into our lives.

Move noisy copy machines into their own space and make them easier to use (coins instead of cards)

**<u>The Most Frequent Comments</u>**
More wireless
More computers
Distribute computers throughout library
Make library services more widely known
More outlets
Longer hours

# Recommendations from Undergraduate Student Library Technology Survey

1. 71% of the undergraduate students conduct their research at home. This seems like a perfect situation for students to use our online chat reference. However, students report that they don't know this service exists.

   How can the Chat Reference service support students who research remotely?

2. The 4th highest use of computers in the Library is to access Laulima. Currently I don't know if the public services librarians work in conjunction with Laulima course developers, but this seems like an excellent way to make our services and resources available and an equally excellent way to work with faculty

   How can library services and resources be pushed through the courses offered in Laulima?

3. Through the qualitative responses students asked for more communication with the library to know about classes offered or resources available.

   How can the Library better communicate with the students it serves? From the responses students don't utilize the social networking tools or blogs for this type of communication. I know there is a graduate listserv for dissemination of information. Is there one for the undergraduate community? Students want more traditional forms of communication, and listservs would be ideal.

4. Students want more areas for social use. They want to gather to chat and to work in a more casual setting.

   The Library should finally try having an area where food and coffee are allowed, even sold.

5. The free-text comment section asked for other comments or suggestions. Two of the more frequent comments about Services were the need for "more helpful library staff" and that the "Library staff needs to encourage their services" more.

   If the reference desks consolidate (as has been rumored), could this free up faculty to act as "roving" librarians?

6. Another request that came up a number of times was for more workshops to teach technologies.

7. Students want a Library website that can more easily be navigated.

   The frustration over less-than-clear navigation might be alleviated a certain extent by offering a federated search of the library's resources.

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**# 7. When you are at the library, how often do you engage in the following?**

| | Never | | 1-3 times per semester | | 1-3 times per month | | INFREQUENT | 1-3 times per week | | Daily | | FREQUENT | Didn't know about this | | N/A as I'm a new student | | Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Use library computers** | 95 | 15% | 173 | 28% | 99 | 16% | 60% | 130 | 21% | 53 | 9% | 30% | 4 | 1% | 62 | 10% | **616** |
| **Use your laptop** | 172 | 28% | 112 | 18% | 90 | 15% | 61% | 90 | 15% | 88 | 14% | 29% | 2 | 0% | 59 | 10% | **613** |
| Do research for an assignment | 66 | 11% | 208 | 34% | 144 | 23% | 68% | 86 | 14% | 39 | 6% | | 1 | 0% | 73 | 12% | **617** |
| Search for items in the catalog | 149 | 24% | 193 | 31% | 109 | 18% | 74% | 65 | 11% | 10 | 2% | | 9 | 1% | 78 | 13% | **613** |
| Use the library website to find articles | 131 | 21% | 188 | 31% | 130 | 21% | 73% | 65 | 11% | 16 | 3% | | 9 | 1% | 77 | 13% | **616** |
| Ask a librarian for help | 202 | 33% | 253 | 41% | 67 | 11% | 85% | 14 | 2% | 8 | 1% | | 1 | 0% | 69 | 11% | **614** |
| Use reference books | 225 | 37% | 199 | 33% | 68 | 11% | 81% | 24 | 4% | 11 | 2% | | 6 | 1% | 75 | 12% | **608** |
| Use maps or GIS computers | 379 | 62% | 62 | 10% | 27 | 4% | 76% | 6 | 1% | 2 | 0% | | 63 | 10% | 73 | 12% | **612** |
| Use microforms | 396 | 65% | 60 | 10% | 11 | 2% | 77% | 2 | 0% | 1 | 0% | | 67 | 11% | 73 | 12% | **610** |
| Check out books or journals | 160 | 26% | 246 | 40% | 94 | 15% | 81% | 26 | 4% | 6 | 1% | | 3 | 0% | 79 | 13% | **614** |
| Use a group study room | 211 | 34% | 174 | 28% | 74 | 12% | 75% | 47 | 8% | 16 | 3% | | 14 | 2% | 77 | 13% | **613** |
| Socialize with friends | 226 | 37% | 148 | 24% | 84 | 14% | 75% | 54 | 9% | 31 | 5% | | 2 | 0% | 69 | 11% | **614** |
| Sleep | 317 | 52% | 100 | 16% | 62 | 10% | 78% | 39 | 6% | 25 | 4% | | 10 | 2% | 59 | 10% | **612** |

**Table 10 Responses to Question #7**

# Appendix B

**#8. In a semester, when you use a library computer in Hamilton Library, approximately how often do you do the following?**

| | Never | Never | 1-3 times per semester | 1-3 times per semester | 1-3 times per month | 1-3 times per month | INFREQUENT | 1-3 times per week | 1-3 times per week | Daily | Daily | SEMI-FREQUENT | FREQUENT | Didn't know about this | Didn't know about this | N/A - new student | N/A - new student | Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Look up a call number | 213 | 35% | 183 | 30% | 83 | 14% | 44% | 32 | 5% | 7 | 1% | 20% | 6% | 10 | 2% | 80 | 13% | 608 |
| Search for books and/or articles | 133 | 22% | 213 | 35% | 125 | 21% | 56% | 38 | 6% | 10 | 2% | 29% | 8% | 4 | 1% | 80 | 13% | 603 |
| Visit a course webpage (i.e. Laulima) | 136 | 22% | 137 | 23% | 91 | 15% | 38% | 93 | 15% | 73 | 12% | 42% | 27% | 4 | 1% | 73 | 12% | 607 |
| Use scanners | 372 | 62% | 72 | 12% | 29 | 5% | 17% | 11 | 2% | 2 | 0% | 7% | 2% | 40 | 7% | 76 | 13% | 602 |
| Use printers | 198 | 33% | 128 | 21% | 87 | 14% | 35% | 90 | 15% | 21 | 3% | 33% | 18% | 5 | 1% | 78 | 13% | 607 |
| Use Microsoft Office (i.e. Word, PowerPoint, Excel) | 186 | 31% | 121 | 20% | 89 | 15% | 35% | 87 | 14% | 40 | 7% | 36% | 21% | 4 | 1% | 76 | 13% | 603 |
| Use EndNote | 421 | 70% | 18 | 3% | 13 | 2% | 5% | 6 | 1% | 1 | 0% | 3% | 1% | 65 | 11% | 78 | 13% | 602 |
| Use the Library website | 166 | 27% | 192 | 32% | 100 | 16% | 48% | 42 | 7% | 21 | 3% | 27% | 10% | 6 | 1% | 80 | 13% | 607 |
| Access MyUH account | 103 | 17% | 131 | 22% | 92 | 15% | 37% | 108 | 18% | 97 | 16% | 49% | 34% | 5 | 1% | 72 | 12% | 608 |
| Check email | 109 | 18% | 118 | 19% | 85 | 14% | 33% | 106 | 17% | 115 | 19% | 50% | 36% | 4 | 1% | 71 | 12% | 608 |
| Upload files (i.e. to Laulima) | 317 | 53% | 73 | 12% | 52 | 9% | 21% | 43 | 7% | 30 | 5% | 21% | 12% | 10 | 2% | 78 | 13% | 603 |
| Browse the Internet | 140 | 23% | 132 | 22% | 71 | 12% | 33% | 94 | 15% | 96 | 16% | 43% | 31% | 3 | 0% | 71 | 12% | 607 |
| Use a chat or instant message program | 414 | 68% | 41 | 7% | 21 | 3% | 10% | 28 | 5% | 19 | 3% | 11% | 8% | 7 | 1% | 76 | 13% | 606 |

Nearly 80 percent have never or almost never looked up a call number and 15 percent more are new students or didn't know

The only use of library computers that is frequent is to go to course pages, myUH, read email or browse the internet,

Semi-frequent = sum of 1-3 times per month, 1-3 per week and daily

Frequent = sum of 1-3 times per week and daily

Infrequent = never, 1-3 times per semester, 1-3 times per month

**Table 11 Responses to Question #8**

# Appendix C

HL Wireless AP Locations as of 10/22/09

**Phase I**
  1st Floor - ITS CLIC Lab
  2nd Floor - Folio Area
  2nd Floor - Study Area in front of freight elevator

**Phase II**
  1st Floor - Room 113
  2nd Floor - Next to Room 217
  4th Floor - Asia
  5th Floor - Special Collections

**Phase III**
  1st Floor - SciTech
  1st Floor - Yap Room
  2nd Floor - Study Area (former CLIC Lab)
  3rd Floor - Study Area in front of elevator
  4th Floor - Study Area in front of elevator
  5th Floor - Archives Reading Room

**Appendix D**

**Summary Report: Library Technology Survey for UHM Undergraduates**

**Conducted September – October, 2009**

Beth Tillinghast
DNS
UHM Library

919 responses, approximately 630 complete responses

| 1 | How did you find out about this survey? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| Library Website | | | 6 | 0.92% |
| Word of mouth | | | 1 | 0.15% |
| Email | | | 642 | 98.02% |
| Flyer | | | 2 | 0.31% |
| Instructor | | | 2 | 0.31% |
| Librarian | | | 1 | 0.15% |
| Other (Specify Below) | | | 1 | 0.15% |
| | | | | |
| | | Average | 3 | N/A |
| | | **Total selections** | 655 | N/A |
| | | **Total Responses** | 655 | |
| | | | | |

| 2 | Which of the following best describes you? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| First-Year Undergraduate | | | 99 | 15.11% |
| Second-Year Undergraduate | | | 77 | 11.76% |
| Third-Year Undergraduate | | | 151 | 23.05% |
| Fourth-Year Undergraduate | | | 157 | 23.97% |
| Fifth-Year Undergraduate | | | 143 | 21.83% |
| Other (Specify Below) | | | 28 | 4.27% |
| | | | | |
| | | Average | 3.38 | N/A |
| | | **Total selections** | 655 | N/A |
| | | **Total Responses** | 655 | |
| | | | | |

| 3 | What best represents your major or concentration? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| | Architecture | | 5 | 0.76% |
| | Arts & Humanities | | 62 | 9.48% |
| | Business | | 99 | 15.14% |
| | Education | | 36 | 5.5% |
| | Engineering | | 54 | 8.26% |
| | Hawaiian Knowledge | | 11 | 1.68% |
| | Health Sciences | | 59 | 9.02% |
| | Languages, Linguistics & Literature | | 38 | 5.81% |
| | Law | | 1 | 0.15% |
| | Library Services | | 0 | 0% |
| | Natural Sciences (i.e. Math, Biology, Physics, ICS, etc) | | 91 | 13.91% |
| | Ocean & Earth Science & Technology | | 13 | 1.99% |
| | Pacific & Asian Studies | | 12 | 1.83% |
| | Social Sciences | | 63 | 9.63% |
| | Social Work | | 9 | 1.38% |
| | Travel Industry Management | | 11 | 1.68% |
| | Tropical Agriculture & Human Resources | | 17 | 2.6% |
| | Undecided/Undeclared | | 15 | 2.29% |
| | Other (Specify Below) | | 58 | 8.87% |
| | | | | |
| | | Average | 8.87 | N/A |
| | | Total selections | 654 | N/A |
| | | Total Responses | 654 | |
| | | | | |

| 4 | Are you a distance student? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| | Yes | | 44 | 6.74% |
| | No | | 609 | 93.26% |
| | | | | |
| | | Average | 1.93 | N/A |
| | | Total selections | 653 | N/A |
| | | Total Responses | 653 | |
| | | | | |

| 5 | Which library building do you visit most? Choose one: | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| | Hamilton | | 350 | 56.54% |
| | Sinclair | | 213 | 34.41% |
| | N/A as I am a new student | | 56 | 9.05% |
| | | | | |
| | | Average | 1.53 | N/A |
| | | Total selections | 619 | N/A |
| | | Total Responses | 619 | |
| | | | | |

| 6 | On average, how often do you physically visit the Hamilton Library during the regular semester? | | Count | Ratio |
|---|---|---|---|---|
| Never | | | 22 | 3.58% |
| 1-3 times per semester | | | 140 | 22.8% |
| 1-3 times per month | | | 137 | 22.31% |
| 1-3 times per week | | | 183 | 29.8% |
| Daily | | | 64 | 10.42% |
| N/A as I am a new student | | | 68 | 11.07% |
| | | Average | 3.54 | N/A |
| | | Total selections | 614 | N/A |
| | | Total Responses | 614 | |

| 7 When you are at the library, how often do you engage in the following? | Never | 1-3 times per semester | 1-3 times per month | 1-3 times per week | Daily | Didn't know about this | N/A as I'm a new student | Count | Ratio |
|---|---|---|---|---|---|---|---|---|---|
| Use library computers | 95 (1.19%) | 173 (2.17%) | 99 (1.24%) | 130 (1.63%) | 53 (0.66%) | 4 (0.05%) | 62 (0.78%) | 616 | 7.73% |
| Use your laptop | 172 (2.16%) | 112 (1.4%) | 90 (1.13%) | 90 (1.13%) | 88 (1.1%) | 2 (0.03%) | 59 (0.74%) | 613 | 7.69% |
| Do research for an assignment | 66 (0.83%) | 208 (2.61%) | 144 (1.81%) | 86 (1.08%) | 39 (0.49%) | 1 (0.01%) | 73 (0.92%) | 617 | 7.74% |
| Search for items in the catalog | 149 (1.87%) | 193 (2.42%) | 109 (1.37%) | 65 (0.82%) | 10 (0.13%) | 9 (0.11%) | 78 (0.98%) | 613 | 7.69% |
| Use the library website to find articles | 131 (1.64%) | 188 (2.36%) | 130 (1.63%) | 65 (0.82%) | 16 (0.2%) | 9 (0.11%) | 77 (0.97%) | 616 | 7.73% |
| Ask a librarian for help | 202 (2.53%) | 253 (3.17%) | 67 (0.84%) | 14 (0.18%) | 8 (0.1%) | 1 (0.01%) | 69 (0.87%) | 614 | 7.7% |
| Use reference books | 225 (2.82%) | 199 (2.5%) | 68 (0.85%) | 24 (0.3%) | 11 (0.14%) | 6 (0.08%) | 75 (0.94%) | 608 | 7.63% |
| Use maps or GIS computers | 379 (4.75%) | 62 (0.78%) | 27 (0.34%) | 6 (0.08%) | 2 (0.03%) | 63 (0.79%) | 73 (0.92%) | 612 | 7.68% |
| Use microforms | 396 (4.97%) | 60 (0.75%) | 11 (0.14%) | 2 (0.03%) | 1 (0.01%) | 67 (0.84%) | 73 (0.92%) | 610 | 7.65% |
| Check out books or journals | 160 (2.01%) | 246 (3.09%) | 94 (1.18%) | 26 (0.33%) | 6 (0.08%) | 3 (0.04%) | 79 (0.99%) | 614 | 7.7% |
| Use a group study room | 211 (2.65%) | 174 (2.18%) | 74 (0.93%) | 47 (0.59%) | 16 (0.2%) | 14 (0.18%) | 77 (0.97%) | 613 | 7.69% |
| Socialize with friends | 226 (2.83%) | 148 (1.86%) | 84 (1.05%) | 54 (0.68%) | 31 (0.39%) | 2 (0.03%) | 69 (0.87%) | 614 | 7.7% |
| Sleep | 317 (3.98%) | 100 (1.25%) | 62 (0.78%) | 39 (0.49%) | 25 (0.31%) | 10 (0.13%) | 59 (0.74%) | 612 | 7.68% |
| Count total | 2729 | 2116 | 1059 | 648 | 306 | 191 | 923 | 7972 | |
| Ratio | 34.23% | 26.54% | 13.28% | 8.13% | 3.84% | 2.4% | 11.58% | | |
| Responses | 617 | | | | | | | | |

| 8 | In a semester, when you use a library computer in Hamilton Library, approximately how often do you do the following? | | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|---|
| | | Never | 1-3 times per semester | 1-3 times per month | 1-3 times per week | Daily | Didn't know about this | N/A as I'm a new student | | |
| Look up a call number | 213 (2.71%) | 183 (2.32%) | 83 (1.05%) | 32 (0.41%) | 7 (0.09%) | 10 (0.13%) | 80 (1.02%) | **608** | **7.72%** |
| Search for books and/or articles | 133 (1.69%) | 213 (2.71%) | 125 (1.59%) | 38 (0.48%) | 10 (0.13%) | 4 (0.05%) | 80 (1.02%) | **603** | **7.66%** |
| Visit a course webpage (i.e. Laulima) | 136 (1.73%) | 137 (1.74%) | 91 (1.16%) | 93 (1.18%) | 73 (0.93%) | 4 (0.05%) | 73 (0.93%) | **607** | **7.71%** |
| Use scanners | 372 (4.73%) | 72 (0.91%) | 29 (0.37%) | 11 (0.14%) | 2 (0.03%) | 40 (0.51%) | 76 (0.97%) | **602** | **7.65%** |
| Use printers | 198 (2.52%) | 128 (1.63%) | 87 (1.11%) | 90 (1.14%) | 21 (0.27%) | 5 (0.06%) | 78 (0.99%) | **607** | **7.71%** |
| Use Microsoft Office (i.e. Word, PowerPoint, Excel) | 186 (2.36%) | 121 (1.54%) | 89 (1.13%) | 87 (1.11%) | 40 (0.51%) | 4 (0.05%) | 76 (0.97%) | **603** | **7.66%** |
| Use EndNote | 421 (5.35%) | 18 (0.23%) | 13 (0.17%) | 6 (0.08%) | 1 (0.01%) | 65 (0.83%) | 78 (0.99%) | **602** | **7.65%** |
| Use the Library website | 166 (2.11%) | 192 (2.44%) | 100 (1.27%) | 42 (0.53%) | 21 (0.27%) | 6 (0.08%) | 80 (1.02%) | **607** | **7.71%** |
| Access MyUH account | 103 (1.31%) | 131 (1.66%) | 92 (1.17%) | 108 (1.37%) | 97 (1.23%) | 5 (0.06%) | 72 (0.91%) | **608** | **7.72%** |
| Check email | 109 (1.38%) | 118 (1.5%) | 85 (1.08%) | 106 (1.35%) | 115 (1.46%) | 4 (0.05%) | 71 (0.9%) | **608** | **7.72%** |
| Upload files (i.e. to Laulima) | 317 (4.03%) | 73 (0.93%) | 52 (0.66%) | 43 (0.55%) | 30 (0.38%) | 10 (0.13%) | 78 (0.99%) | **603** | **7.66%** |
| Browse the Internet | 140 (1.78%) | 132 (1.68%) | 71 (0.9%) | 94 (1.19%) | 96 (1.22%) | 3 (0.04%) | 71 (0.9%) | **607** | **7.71%** |
| Use a chat or instant message program | 414 (5.26%) | 41 (0.52%) | 21 (0.27%) | 28 (0.36%) | 19 (0.24%) | 7 (0.09%) | 76 (0.97%) | **606** | **7.7%** |
| Count total | **2908** | **1559** | **938** | **778** | **532** | **167** | **989** | 7871 | |
| Ratio | **36.95%** | **19.81%** | **11.92%** | **9.88%** | **6.76%** | **2.12%** | **12.57%** | | |
| Responses | 610 | | | | | | | | |

| 9 | Where do you do the majority of your computer-based research? Choose one: | | Count | Ratio |
|---|---|---|---|---|
| Library - on library computers | | | 57 | 9.31% |
| Library - on my own laptop | | | 83 | 13.56% |
| Lab computer or computer in my department | | | 29 | 4.74% |
| Home - on my own computer/laptop | | | 436 | 71.24% |
| Other (Specify Below) | | | 7 | 1.14% |
| | | Average | 3.41 | N/A |
| | | **Total selections** | 612 | N/A |
| | | **Total Responses** | 612 | |

| 10 | In your opinion, are there enough of the following available in Hamilton Library? | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|
| | | Yes | No | No opinion | Didn't know about this | N/A as I am a new student | | |
| Scanners | | 108 (1.76%) | 72 (1.17%) | 192 (3.13%) | 168 (2.74%) | 72 (1.17%) | **612** | **9.98%** |
| Seating | | 291 (4.75%) | 216 (3.52%) | 43 (0.7%) | 8 (0.13%) | 57 (0.93%) | **615** | **10.03%** |
| Desks/Tables | | 275 (4.49%) | 238 (3.88%) | 37 (0.6%) | 6 (0.1%) | 57 (0.93%) | **613** | **10%** |
| Quiet Study Space | | 338 (5.51%) | 168 (2.74%) | 39 (0.64%) | 8 (0.13%) | 61 (0.99%) | **614** | **10.01%** |
| Social/Collaborative Space | | 202 (3.29%) | 196 (3.2%) | 124 (2.02%) | 27 (0.44%) | 63 (1.03%) | **612** | **9.98%** |
| Wireless Internet Coverage | | 237 (3.87%) | 176 (2.87%) | 100 (1.63%) | 35 (0.57%) | 65 (1.06%) | **613** | **10%** |
| Power Outlets | | 174 (2.84%) | 230 (3.75%) | 112 (1.83%) | 34 (0.55%) | 65 (1.06%) | **615** | **10.03%** |
| Study Carrels | | 251 (4.09%) | 155 (2.53%) | 92 (1.5%) | 45 (0.73%) | 69 (1.13%) | **612** | **9.98%** |
| Group Study Rooms | | 144 (2.35%) | 228 (3.72%) | 123 (2.01%) | 49 (0.8%) | 70 (1.14%) | **614** | **10.01%** |
| Copy Machines | | 304 (4.96%) | 80 (1.3%) | 125 (2.04%) | 31 (0.51%) | 71 (1.16%) | **611** | **9.97%** |
| Count total | | **2324** | **1759** | **987** | **411** | **650** | **6131** | |
| Ratio | | **37.91%** | **28.69%** | **16.1%** | **6.7%** | **10.6%** | | |
| Responses | | 616 | | | | | | |

| 11 | How many of the following options do you think Hamilton Library currently offers? Check all that apply. | | Count | Ratio |
|---|---|---|---|---|
| Group Study Rooms | | | 501 | 10.43% |
| Full-text articles online | | | 459 | 9.55% |
| Talk with a librarian via chat | | | 154 | 3.21% |
| Research and library help classes | | | 308 | 6.41% |
| Online tutorials | | | 235 | 4.89% |
| Online article databases | | | 446 | 9.28% |
| Subject guides | | | 259 | 5.39% |
| Talk with a librarian in person | | | 531 | 11.05% |
| Scanners | | | 389 | 8.1% |
| Request items from other libraries | | | 391 | 8.14% |
| Full-text books online | | | 232 | 4.83% |
| Online book renewals | | | 385 | 8.01% |
| Online library catalog | | | 514 | 10.7% |
| | | Average | 7.14 | N/A |
| | | **Total selections** | 4804 | N/A |
| | | **Total Responses** | 593 | |

| 13 | How often do you visit the Library's website to do the following?<br>(http://library.manoa.hawaii.edu/index.html) | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|
| | Never | 1-3 times per semester | 1-3 times per month | 1-3 times per week | Daily | Didn't know about this | | |
| Find library information (i.e. hours, librarian contact information) | 210 (4.16%) | 275 (5.45%) | 83 (1.65%) | 19 (0.38%) | 5 (0.1%) | 41 (0.81%) | **633** | **12.55%** |
| Search the catalog (Hawaii Voyager) for books and journals | 157 (3.11%) | 227 (4.5%) | 135 (2.68%) | 60 (1.19%) | 7 (0.14%) | 47 (0.93%) | **633** | **12.55%** |
| Access electronic resources (i.e. databases, online journals) | 157 (3.11%) | 231 (4.58%) | 131 (2.6%) | 52 (1.03%) | 11 (0.22%) | 52 (1.03%) | **634** | **12.57%** |
| Access e-books | 309 (6.13%) | 131 (2.6%) | 63 (1.25%) | 21 (0.42%) | 5 (0.1%) | 100 (1.98%) | **629** | **12.47%** |
| Use subject guides or tutorials | 397 (7.87%) | 92 (1.82%) | 36 (0.71%) | 7 (0.14%) | 4 (0.08%) | 91 (1.8%) | **627** | **12.43%** |
| Ask a librarian for help via Ask-A-Librarian | 414 (8.21%) | 76 (1.51%) | 20 (0.4%) | 1 (0.02%) | 4 (0.08%) | 114 (2.26%) | **629** | **12.47%** |
| Access UH Manoa digital collections (i.e. ScholarSpace, Hawaiian Language Newspapers) | 363 (7.2%) | 118 (2.34%) | 36 (0.71%) | 5 (0.1%) | 4 (0.08%) | 103 (2.04%) | **629** | **12.47%** |
| Access online reserves | 312 (6.19%) | 143 (2.84%) | 58 (1.15%) | 15 (0.3%) | 7 (0.14%) | 95 (1.88%) | **630** | **12.49%** |
| Count total | **2319** | **1293** | **562** | **180** | **47** | **643** | **5044** | |
| Ratio | **45.98%** | **25.63%** | **11.14%** | **3.57%** | **0.93%** | **12.75%** | | |
| Responses | 634 | | | | | | | |

| 14 | How likely are you to use each of the following to START your research for an assignment? | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|
| | N/A - I don't use this | Extremely unlikely | Unlikely | Somewhat likely | Likely | Extremely likely | | |
| Google | 14 (0.28%) | 9 (0.18%) | 9 (0.18%) | 71 (1.4%) | 128 (2.53%) | 406 (8.03%) | **637** | **12.6%** |
| Wikipedia | 39 (0.77%) | 55 (1.09%) | 72 (1.42%) | 162 (3.21%) | 120 (2.37%) | 187 (3.7%) | **635** | **12.56%** |
| Library catalog | 56 (1.11%) | 51 (1.01%) | 107 (2.12%) | 172 (3.4%) | 156 (3.09%) | 88 (1.74%) | **630** | **12.47%** |
| Article database | 73 (1.44%) | 46 (0.91%) | 99 (1.96%) | 167 (3.3%) | 153 (3.03%) | 92 (1.82%) | **630** | **12.47%** |
| Google Scholar | 188 (3.72%) | 36 (0.71%) | 94 (1.86%) | 113 (2.24%) | 93 (1.84%) | 105 (2.08%) | **629** | **12.45%** |
| Ask friends/family | 84 (1.66%) | 77 (1.52%) | 153 (3.03%) | 175 (3.46%) | 94 (1.86%) | 45 (0.89%) | **628** | **12.43%** |
| Ask my instructor | 27 (0.53%) | 20 (0.4%) | 83 (1.64%) | 228 (4.51%) | 167 (3.3%) | 107 (2.12%) | **632** | **12.5%** |
| Ask a librarian | 101 (2%) | 103 (2.04%) | 180 (3.56%) | 154 (3.05%) | 68 (1.35%) | 27 (0.53%) | **633** | **12.52%** |
| Count total | **582** | **397** | **797** | **1242** | **979** | **1057** | **5054** | |
| Ratio | **11.52%** | **7.86%** | **15.77%** | **24.57%** | **19.37%** | **20.91%** | | |
| Responses | 638 | | | | | | | |

| 15 | How easy is it to use the following to FIND resources for your assignments? | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|
| | | N/A - I don't use this | Extremely difficult | Somewhat easy | Easy | Extremely Easy | | |
| Google | | 14 (0.28%) | 13 (0.26%) | 130 (2.59%) | 176 (3.5%) | 300 (5.97%) | 633 | 12.6% |
| Wikipedia | | 66 (1.31%) | 24 (0.48%) | 136 (2.71%) | 184 (3.66%) | 222 (4.42%) | 632 | 12.58% |
| Library catalog | | 117 (2.33%) | 59 (1.17%) | 230 (4.58%) | 164 (3.26%) | 54 (1.07%) | 624 | 12.42% |
| Article database | | 130 (2.59%) | 75 (1.49%) | 230 (4.58%) | 145 (2.89%) | 49 (0.98%) | 629 | 12.52% |
| Google Scholar | | 284 (5.65%) | 24 (0.48%) | 131 (2.61%) | 119 (2.37%) | 65 (1.29%) | 623 | 12.4% |
| Ask friends/family | | 163 (3.24%) | 73 (1.45%) | 203 (4.04%) | 105 (2.09%) | 81 (1.61%) | 625 | 12.44% |
| Ask my instructor | | 83 (1.65%) | 26 (0.52%) | 201 (4%) | 212 (4.22%) | 111 (2.21%) | 633 | 12.6% |
| Ask a librarian | | 228 (4.54%) | 30 (0.6%) | 151 (3%) | 157 (3.12%) | 60 (1.19%) | 626 | 12.46% |
| Count total | | 1085 | 324 | 1412 | 1262 | 942 | 5025 | |
| Ratio | | 21.59% | 6.45% | 28.1% | 25.11% | 18.75% | | |
| Responses | | 635 | | | | | | |

| 16 | What is the overall QUALITY of information you find using the following? | | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|---|
| | | N/A - I don't use this | Very low | Low | Fair | High | Very high | | |
| Google | | 10 (0.2%) | 13 (0.26%) | 38 (0.75%) | 247 (4.9%) | 209 (4.14%) | 117 (2.32%) | 634 | 12.57% |
| Wikipedia | | 42 (0.83%) | 54 (1.07%) | 99 (1.96%) | 259 (5.13%) | 120 (2.38%) | 60 (1.19%) | 634 | 12.57% |
| Library catalog | | 125 (2.48%) | 11 (0.22%) | 10 (0.2%) | 155 (3.07%) | 242 (4.8%) | 85 (1.69%) | 628 | 12.45% |
| Article database | | 155 (3.07%) | 9 (0.18%) | 10 (0.2%) | 117 (2.32%) | 208 (4.12%) | 132 (2.62%) | 631 | 12.51% |
| Google Scholar | | 288 (5.71%) | 5 (0.1%) | 13 (0.26%) | 110 (2.18%) | 130 (2.58%) | 82 (1.63%) | 628 | 12.45% |
| Ask friends/family | | 153 (3.03%) | 41 (0.81%) | 85 (1.69%) | 251 (4.98%) | 66 (1.31%) | 32 (0.63%) | 628 | 12.45% |
| Ask my instructor | | 76 (1.51%) | 15 (0.3%) | 10 (0.2%) | 145 (2.87%) | 244 (4.84%) | 143 (2.84%) | 633 | 12.55% |
| Ask a librarian | | 243 (4.82%) | 12 (0.24%) | 18 (0.36%) | 154 (3.05%) | 156 (3.09%) | 45 (0.89%) | 628 | 12.45% |
| Count total | | 1092 | 160 | 283 | 1438 | 1375 | 696 | 5044 | |
| Ratio | | 21.65% | 3.17% | 5.61% | 28.51% | 27.26% | 13.8% | | |
| Responses | | 635 | | | | | | | |

| 17 | How many hours per week do you spend online? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| Less than 5 | | | 26 | 4.06% |
| 6-10 | | | 131 | 20.44% |
| 11-20 | | | 155 | 24.18% |
| 21-30 | | | 158 | 24.65% |
| 31-40 | | | 85 | 13.26% |
| More than 40 | | | 86 | 13.42% |
| | | | | |
| | | Average | 3.63 | N/A |
| | | Total selections | 641 | N/A |
| | | Total Responses | 641 | |
| | | | | |

| 18 | How much of this time is spent on school-related activities? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| 0% | | | 0 | 0% |
| 1-25% | | | 160 | 24.96% |
| 26-50% | | | 241 | 37.6% |
| 51-75% | | | 160 | 24.96% |
| 76-99% | | | 75 | 11.7% |
| 100% | | | 5 | 0.78% |
| | | | | |
| | | Average | 3.26 | N/A |
| | | Total selections | 641 | N/A |
| | | Total Responses | 641 | |
| | | | | |

| 19 | Which of the following best describes you? | | Count | Ratio |
|---|---|---|---|---|
| | | | | |
| I usually avoid using new technologies. | | | 11 | 1.72% |
| I generally take awhile to use new technologies. | | | 152 | 23.75% |
| I use new technologies at the same time other people do. | | | 315 | 49.22% |
| I tend to use new technologies somewhat before others do. | | | 125 | 19.53% |
| I usually use new technologies before anyone else. | | | 37 | 5.78% |
| | | | | |
| | | Average | 3.04 | N/A |
| | | Total selections | 640 | N/A |
| | | Total Responses | 640 | |
| | | | | |

| 20 | Which of the following do you own? Check all that apply | | Count | Ratio |
|---|---|---|---|---|
| | Laptop computer or netbook | | 578 | 24.48% |
| | Desktop computer | | 327 | 13.85% |
| | PDA | | 57 | 2.41% |
| | Portable media player (iPod, Zune, etc.) | | 520 | 22.02% |
| | Digital camera | | 514 | 21.77% |
| | Digital video recorder | | 141 | 5.97% |
| | Enhanced mobile (iPhone, Blackberry) | | 199 | 8.43% |
| | Other (Specify Below) | | 25 | 1.06% |
| | | Average | 3.6 | N/A |
| | | Total selections | 2361 | N/A |
| | | Total Responses | 636 | |

| 21 | How frequently do you do the following on a computer, laptop or netbook? | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|
| | | Never | 1-3 times per semester | 1-3 times per month | 1-3 times per week | Daily | | |
| Text message | 319 (3.58%) | 30 (0.34%) | 32 (0.36%) | 47 (0.53%) | 208 (2.33%) | **636** | **7.14%** |
| Instant message | 164 (1.84%) | 54 (0.61%) | 85 (0.95%) | 147 (1.65%) | 189 (2.12%) | **639** | **7.17%** |
| Play online or console games | 211 (2.37%) | 111 (1.25%) | 85 (0.95%) | 125 (1.4%) | 105 (1.18%) | **637** | **7.15%** |
| Download music or videos | 121 (1.36%) | 87 (0.98%) | 178 (2%) | 155 (1.74%) | 93 (1.04%) | **634** | **7.11%** |
| Listen to podcasts | 368 (4.13%) | 93 (1.04%) | 78 (0.88%) | 57 (0.64%) | 38 (0.43%) | **634** | **7.11%** |
| Watch videos online | 45 (0.5%) | 65 (0.73%) | 129 (1.45%) | 236 (2.65%) | 163 (1.83%) | **638** | **7.16%** |
| Use Skype or other web calling programs | 296 (3.32%) | 92 (1.03%) | 104 (1.17%) | 89 (1%) | 54 (0.61%) | **635** | **7.13%** |
| Use Facebook, Myspace, etc. | 93 (1.04%) | 26 (0.29%) | 40 (0.45%) | 120 (1.35%) | 358 (4.02%) | **637** | **7.15%** |
| Post to a blog | 367 (4.12%) | 88 (0.99%) | 87 (0.98%) | 64 (0.72%) | 33 (0.37%) | **639** | **7.17%** |
| Comment on a blog | 342 (3.84%) | 110 (1.23%) | 82 (0.92%) | 74 (0.83%) | 31 (0.35%) | **639** | **7.17%** |
| Read a blog | 222 (2.49%) | 93 (1.04%) | 123 (1.38%) | 117 (1.31%) | 80 (0.9%) | **635** | **7.13%** |
| Edit a Wikipedia article | 575 (6.45%) | 41 (0.46%) | 12 (0.13%) | 4 (0.04%) | 3 (0.03%) | **635** | **7.13%** |
| Read Wikipedia articles | 112 (1.26%) | 107 (1.2%) | 180 (2.02%) | 192 (2.15%) | 46 (0.52%) | **637** | **7.15%** |
| Receive RSS or Tweets | 515 (5.78%) | 16 (0.18%) | 11 (0.12%) | 31 (0.35%) | 63 (0.71%) | **636** | **7.14%** |
| Count total | **3750** | **1013** | **1226** | **1458** | **1464** | **8911** | |
| Ratio | **42.08%** | **11.37%** | **13.76%** | **16.36%** | **16.43%** | | |
| Responses | 639 | | | | | | |

| 22 | If you own a mobile phone, how likely would you be to use the following TEXT/SMS library services? If you don't own a mobile phone, check Not Applicable (N/A). | | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|---|
| | | N/A - I don't use this | I own a cell, but don't text | Extremely unlikely | Unlikely | Fairly likely | Likely | Extremely likely | |
| Ask a librarian a question | 170 (6.71%) | 73 (2.88%) | 178 (7.03%) | 86 (3.4%) | 60 (2.37%) | 37 (1.46%) | 30 (1.18%) | 634 | 25.03% |
| Send a call number from the catalog | 172 (6.79%) | 69 (2.72%) | 149 (5.88%) | 82 (3.24%) | 57 (2.25%) | 54 (2.13%) | 51 (2.01%) | 634 | 25.03% |
| Receive a renewal or overdue notices | 145 (5.72%) | 69 (2.72%) | 113 (4.46%) | 43 (1.7%) | 74 (2.92%) | 96 (3.79%) | 92 (3.63%) | 632 | 24.95% |
| Renew library materials | 151 (5.96%) | 69 (2.72%) | 108 (4.26%) | 49 (1.93%) | 77 (3.04%) | 85 (3.36%) | 94 (3.71%) | 633 | 24.99% |
| Count total | **638** | **280** | **548** | **260** | **268** | **272** | **267** | **2533** | |
| Ratio | **25.19%** | **11.05%** | **21.63%** | **10.26%** | **10.58%** | **10.74%** | **10.54%** | | |
| Responses | 636 | | | | | | | | |

| 23 | For each of these web tools and social sites, select the phrase that best describes you. | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|
| | | Never heard of it. | Never use it | Used it in the past | Using it more lately | Use it all the time | | |
| Facebook | 2 (0.03%) | 101 (1.68%) | 71 (1.18%) | 122 (2.03%) | 343 (5.71%) | 639 | 10.64% |
| MySpace | 1 (0.02%) | 177 (2.95%) | 314 (5.23%) | 40 (0.67%) | 106 (1.76%) | 638 | 10.62% |
| Bebo | 415 (6.91%) | 187 (3.11%) | 29 (0.48%) | 3 (0.05%) | 4 (0.07%) | 638 | 10.62% |
| Linkedin | 404 (6.72%) | 192 (3.2%) | 31 (0.52%) | 9 (0.15%) | 2 (0.03%) | 638 | 10.62% |
| Second Life | 385 (6.41%) | 231 (3.84%) | 19 (0.32%) | - | 3 (0.05%) | 638 | 10.62% |
| Delicious | 451 (7.51%) | 158 (2.63%) | 18 (0.3%) | 5 (0.08%) | 6 (0.1%) | 638 | 10.62% |
| Skype | 42 (0.7%) | 254 (4.23%) | 155 (2.58%) | 116 (1.93%) | 71 (1.18%) | 638 | 10.62% |
| Twitter | 32 (0.53%) | 471 (7.84%) | 55 (0.92%) | 40 (0.67%) | 38 (0.63%) | 636 | 10.59% |
| Zotero | 495 (8.24%) | 132 (2.2%) | 4 (0.07%) | 1 (0.02%) | 2 (0.03%) | 634 | 10.55% |
| Other (Specify Below) | 178 (2.96%) | 61 (1.02%) | 6 (0.1%) | 5 (0.08%) | 21 (0.35%) | 271 | 4.51% |
| Count total | **2405** | **1964** | **702** | **341** | **596** | **6008** | |
| Ratio | **40.03%** | **32.69%** | **11.68%** | **5.68%** | **9.92%** | | |
| Responses | 639 | | | | | | |

| 24 | Which of the following Google tools do you currently use? Check all that apply. | | Count | Ratio |
|---|---|---|---|---|
| | Search | | 617 | 17.51% |
| | Gmail | | 344 | 9.76% |
| | Book search | | 200 | 5.68% |
| | Documents | | 216 | 6.13% |
| | Reader | | 91 | 2.58% |
| | Labs | | 49 | 1.39% |
| | Maps | | 509 | 14.45% |
| | Calendar | | 149 | 4.23% |
| | Scholar | | 205 | 5.82% |
| | Personalized home page (iGoogle) | | 121 | 3.43% |
| | Search alerts | | 23 | 0.65% |
| | News | | 245 | 6.95% |
| | Video | | 242 | 6.87% |
| | Image search | | 416 | 11.81% |
| | Talk | | 67 | 1.9% |
| | Other (Specify Below) | | 29 | 0.82% |
| | | | | |
| | | Average | 7.08 | N/A |
| | | **Total selections** | 3523 | N/A |
| | | **Total Responses** | 635 | |

| 25 | What web browser do you prefer and why? (Text box included.) | | Count | Ratio |
|---|---|---|---|---|
| | Mozilla Firefox | | 302 | 47.56% |
| | Internet Explorer | | 147 | 23.15% |
| | Safari | | 103 | 16.22% |
| | Opera | | 1 | 0.16% |
| | Not sure | | 7 | 1.1% |
| | No preference | | 35 | 5.51% |
| | Other (Specify Below) | | 40 | 6.3% |
| | | | | |
| | | Average | 2.26 | N/A |
| | | **Total selections** | 635 | N/A |
| | | **Total Responses** | 635 | |

| 26 | Do you customize your web browser with add-ons, extensions, and/or toolbars? | | Count | Ratio |
|---|---|---|---|---|
| | Yes | | 359 | 56.62% |
| | No | | 234 | 36.91% |
| | Not sure | | 41 | 6.47% |
| | | | | |
| | | Average | 1.5 | N/A |
| | | **Total selections** | 634 | N/A |
| | | **Total Responses** | 634 | |

| 27 | If they were available, would you use library-specific browser add-ons and/or search toolbars? | | Count | Ratio |
|---|---|---|---|---|
| | Yes | | 143 | 22.59% |
| | No | | 169 | 26.7% |
| | Maybe | | 321 | 50.71% |
| | | | | |
| | | Average | 2.28 | N/A |
| | | **Total selections** | 633 | N/A |
| | | **Total Responses** | 633 | |
| | | | | |

| 28 | How helpful have the following been for school-related work? Check all that apply. | | | | | | Count | Ratio |
|---|---|---|---|---|---|---|---|---|
| | | Never use it for school | Not helpful | Somewhat helpful | Helpful | Very Helpful | | |
| Blogs | | 423 (9.65%) | 59 (1.35%) | 102 (2.33%) | 32 (0.73%) | 11 (0.25%) | **627** | **14.31%** |
| Wikis | | 215 (4.91%) | 39 (0.89%) | 177 (4.04%) | 137 (3.13%) | 55 (1.26%) | **623** | **14.22%** |
| Podcasts | | 416 (9.49%) | 43 (0.98%) | 100 (2.28%) | 54 (1.23%) | 15 (0.34%) | **628** | **14.33%** |
| Webcasts | | 450 (10.27%) | 45 (1.03%) | 74 (1.69%) | 45 (1.03%) | 12 (0.27%) | **626** | **14.29%** |
| Online video tutorials | | 290 (6.62%) | 31 (0.71%) | 150 (3.42%) | 111 (2.53%) | 39 (0.89%) | **621** | **14.17%** |
| Virtual worlds (Second Life, etc.) | | 532 (12.14%) | 48 (1.1%) | 30 (0.68%) | 13 (0.3%) | 5 (0.11%) | **628** | **14.33%** |
| E-learning sites (Laulima) | | 74 (1.69%) | 33 (0.75%) | 169 (3.86%) | 184 (4.2%) | 169 (3.86%) | **629** | **14.35%** |
| Count total | | **2400** | **298** | **802** | **576** | **306** | **4382** | |
| Ratio | | **54.77%** | **6.8%** | **18.3%** | **13.14%** | **6.98%** | | |
| Responses | | 630 | | | | | | |
| | | | | | | | | |