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**Navigating User Feedback Channels to Chart an Evidence Based Course for Library Redesign**

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**Abstract**

**Objectives** – The objective of this project was to redesign library spaces based on the user feedback obtained from a broad complement of feedback channels. The overarching goal of this project was to develop an evidence based approach to the redesign of library spaces.

**Methods** – Data from user-initiated and library-initiated feedback channels were collected and analyzed to determine priorities for library space changes. Online/onsite suggestions, a library onsite census survey, the LibQUAL+® survey, a whiteboard, ballot voting, and text voting were all used to gather input. A student advisory group was used as a sounding board for planned space changes before a final decision was made.

**Results** – Data produced by different feedback channels varied both in the number of suggestions generated as well as the changes requested. Composite data from all feedback channels resulted in a total of 687 suggestions identifying 17 different types of space changes. An onsite whiteboard, the LibQUAL+® survey, and library census proved the most prolific in producing suggestions.

**Conclusion** – Priorities for space changes were best determined through a composite of suggestions received from all feedback channels. The number of suggestions and requests received that were initiated by users was so small that it had to be supplemented with library-initiated feedback requests. The use of multiple feedback channels enhanced the number, variety, and scope of the suggestions that were received. Similar requests received through multiple feedback channels emphasized their importance to users. Focused follow-up feedback channels were effective in clarifying user suggestions for specific changes.

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## **Introduction**

The Texas A&M University and Texas A&M Health Sciences Center (United States) have an enrollment of over 50,000 students. The Medical Sciences Library (MSL) at Texas A&M University is charged with serving several diverse user groups within both of these institutions, including the Colleges of Agriculture and Life Sciences, Medicine, Nursing, Pharmacy, Veterinary Medicine, and Biomedical Sciences, and the School of Rural Public Health. As the number of visitors to the library continues to rise each year, MSL has begun to redesign and renovate library spaces in response to demands. As electronic resources replace print collections, the collection-centric model of libraries is being replaced by the user-centred, user-experience model. In an effort to make certain that renovation funds are used most effectively and that redesigned spaces really work for library users, MSL has been expanding its sources for user feedback and input into making space renovation decisions.

## ***Organizational Readiness***

At its essence, the ability to accept and act upon user feedback is a change-management challenge for the library organization. It requires moving library staff along a continuum which progresses from the vision of the academic library as a collections warehouse to a vision of the academic library as a composite of services (virtual and onsite) and a physical space that is an integral part of the campus learning environment.

Several steps were taken at MSL to begin this effort. Comments from LibQUAL+® surveys prior to 2010 made clear the importance of the

library as a place for undergraduate, graduate, and professional students. In an effort to provide the ongoing focus and accountability necessary to consistently respond to user feedback and implement change, an Onsite Services Librarian position was created. This was a new position with primary responsibility for the total user experience in the library, which encompasses all physical spaces (user and collection spaces) and all services delivered. By position definition, the Onsite Services Librarian was uniquely positioned to play a leadership role in library space redesign and to lead change efforts on a daily basis.

To assist the Onsite Services Librarian, and to build consensus around the issue of space, the technique of scenario planning was used to involve all library staff in imagining what MSL would look like in 2015 (Giesecke, 1998). Library staff participated in a brainstorming session to identify the key forces in the environment of the library and its users which would be strong determinants of what MSL would be in 2015.

Finally, as one of the key elements in the decision-making process concerning library redesign, the Onsite Services Librarian created an MSL Student Advisory Council that consisted of student leaders from each of the primary user groups. The chief hope for the MSL Student Advisory Council was to channel student energy and promote their engagement in creating the future of library spaces.

## **Literature Review**

Numerous articles, book chapters, and books have explored library space planning in general and recent changes in the concept of

the library as a physical place (Bennett, 2003; Connor, 2008; Council on Library and Information Resources, 2005; Ludwig, 2010; Ludwig & Starr, 2005; Stewart, 2010). While there is no uniform vision for the future of the library, most of the authors fundamentally agree on several concepts that are illustrated in current design trends, although their works vary in emphasis of these concepts. All recognize that this is a time of great transition in libraries and that developments in information technology have been a major catalyst in this transition. There is growing recognition that libraries are an integral part of campus learning spaces (Bennett, 2003; Council on Library and Information Resources, 2005). This leads to an acknowledgement that there continues to be a need for variety in library spaces to provide collaborative spaces, to meet the social dimensions of learning and of active learning, and to provide spaces for quiet study and contemplation (Ludwig, 2010; Ludwig & Starr, 2005). These works approached the subject from a trends perspective, with little mention of user input into space decisions and no mention of the use of multiple feedback channels.

Another segment of the literature has focused on user-driven library design, with data collected chiefly through the use of surveys (Antell & Engel, 2006; Vaska, Chan, & Powelson, 2009; Walton, 2006). Vaska et al. (2009) and Walton (2006) collected feedback with a single user survey. Hobbs and Klare (2010) reported the use of ethnographic techniques to gather student input into library space decisions. The research focus of the Hobbs study was student behaviour and use of campus spaces.

The question at hand was the effect that having multiple feedback channels had on the results received. Much has been written on the subject of changing library spaces and soliciting user feedback or gathering use data to guide decisions. Several studies involved the use of multiple inputs in general space planning and redesign efforts. Hiller (2001) focused primarily on the use of LibQUAL+® survey data to guide library decisions concerning services, collections, and the library

as place. He touched upon the use of additional locally based, large-scale surveys, but did not provide specific results or impacts of the multiple inputs. This confirmed the potential value of the LibQUAL+® survey data in making space decisions. Waxman, Clemons, Banning, and McKelfresh (2007) reported the use of questionnaires and field notes to document student behaviour and preferences for relaxation spaces to outline the specifications for the design of coffee shops within the library. Although limited to space planning for an information commons, Cataldo, Freund, Ochoa, and Salcedo (2007) described the use of external site visits, surveys, focus groups, and interviews. The reports of both Waxman et al. (2007) and Cataldo et al. (2007) reinforced the local supposition that multiple data sources would enrich the results. Dotson and Garris (2008) documented the use of multiple data inputs of library-generated statistics from observational studies on the use of library computers, group tables, individual study desks, carrels, and stacks. This study design underscored the complexity of user preferences for differing spaces. Moffat and Anderson (2009) provided a brief report on the use of multiple user surveys, student focus groups, and post-implementation surveys in determining library services and spaces. Although none of these provided data or an analysis of the impact or effectiveness of using multiple inputs, they also did not dismiss multiple user inputs as redundant or meaningless. Since it was clear that there was little research in the library literature that analyzed the impact of multiple feedback channels in space planning, the project was begun with the intent to fill that gap.

## Methods

Several different methods were used at MSL to capture input from users concerning library spaces. These methods can be grouped into two categories based on whether the data collected is user-initiated or library-initiated. Table 1 presents the data collection methods used during 2009 and 2010 to gather feedback concerning library space and the corresponding results.

Table 1  
Feedback Channels

	Feedback Channels	Responses Received	Responses with User Comments	Comments Regarding Library Space	Length of Time of Data Collection
User-initiated	Online/OnSite Suggestions	36	36	34	12 Months
Library-initiated	Census	427	247	189	1 day
	LibQUAL+®	714	368	133	6 weeks
	Whiteboard	209	209	209	3 weeks
	Ballot Voting	115	115	115	3 weeks
	Text Voting	7	7	7	3 months

### *Suggestions Received Online and Onsite*

At MSL, examples of usually available user-initiated tools included an onsite suggestion box, online links for user comments, and an email address specifically created for user interaction. These feedback channels are all available to users whenever they are ready to provide feedback to MSL. Most submissions through the onsite suggestion box are often focused on improvements to the library, while comments received online through the website links and via email tend to be more open-ended communications. None of these is specifically focused on feedback for library spaces. Occasionally, MSL receives spontaneously organized and orchestrated feedback campaigns from a user group on a subject of particular interest to them, for example, the closing of a coffee shop.

### *Library Census*

A library census, conducted every five years, is a library-initiated tool that consists of a series of questions given to every user who enters the MSL on a single day. The focus is on collecting demographic data from the user, with additional questions aimed at identifying why the user has come to the library on that visit and what services they used. The most recent census was conducted on 13 April 2010.

### *LibQUAL+® Survey*

Created in 2000, the LibQUAL+® survey is a user-centred tool that libraries use to solicit, track, and understand users' opinions and insights about service needs and expectations. This Web-based survey asks users to provide the minimal, optimal, and perceived ratings for library resources and services in three main facets: customer service (customer treatment, job knowledge of staff); information resources, their delivery, and accessibility; and the library as a place of study and learning (study environment, group and individual study needs) (Association of Research Libraries, Statistics and Assessment Program, 2010). The LibQUAL+® survey has been used annually by the Texas A&M University Library since 2000. Comments pertaining to the MSL that were extracted from the general university library's LibQUAL+® survey and results from a 2009 pilot LibQUAL+® survey (limited to the colleges in the Health Science Center) indicated the growing importance of the library as a place of study. The usefulness of these comments led to the decision to conduct the 2010 LibQUAL+® survey to target all MSL user populations. An MSL LibQUAL+® survey was administered and available online from 16 February 2010 until 31 March 2010. Survey invitations were sent to all students and faculty in the College of Veterinary Medicine and Biomedical Science and to all units within

the Texas A&M Health Science Center. Since the College of Agriculture and Life Sciences had been included for 10 years in the general university library LibQUAL+® survey, the decision was made to continue the established format for conducting the survey, following their method of using only a random sampling survey invitation for undergraduate and graduate students, but including all faculty of the college.

### *Follow-up and Focused Voting Methods*

Whiteboard voting, ballot voting, and text voting were all used during 2009-2010 to answer specific questions about re-engineering library spaces and replacing library furnishings. A large portable whiteboard asking what would help enhance the library space for their needs was used to gather ideas from users about what should be put into the large area freed up by the removal of the current journal display shelves. The whiteboard voting was used over a period of three weeks. Ballot voting and cellphone text voting were both used to gather data on preferred choices for furniture selection. Three sample chairs were brought into the library, allowing users the opportunity to try out the different styles and cast their vote for their top choice. Ballot voting was open for three weeks and text voting for three months.

### *Student Advisory Council*

The MSL Student Advisory Council served as a sounding board for establishing priorities and finalizing space redesign decisions based on the information gathered through the various feedback channels described above. This 12-person council was comprised of student leaders from each of the primary colleges served by MSL (College of Veterinary Medicine and Biomedical Sciences, Texas A&M Health Science Center, College of Agriculture and Life Sciences) and includes undergraduate, graduate, and professional students. The council provided direct input as members had first-hand experience with the role the library played in the routine of the student. This input was gathered both for existing situations and, more importantly,

before an expense was incurred in making a physical change. For larger or more expensive initiatives the Onsite Services Librarian met with the Library Student Advisory Council to clarify intended activities and to open channels of communication and opportunities for customization before any expense was incurred.

### **Results**

During 2009-2010 there were 34 user-initiated suggestions that pertained to the library as a place, spanning 12 different space change areas. The top five requested changes from this feedback method were: additional power outlets, increased comfortable seating, more computers, relaxed food and drink policy, and improved lighting. There were also five compliments about the general MSL environment.

The MSL census, conducted in April 2010, provided feedback about the library as place from responses to survey questions and from an open-ended comments opportunity provided on the form. Although intended primarily as a demographic tool concerning library user populations, the census comments produced the largest variety of space improvement suggestions, and also helped underscore the importance of various library services and environmental features which were reported in other feedback channels. A total of 427 completed census forms were received. From the responses, 247 comments were provided; 189 of those comments concerned the library as a place and covered 14 different space change areas. The top five requested changes were: more quiet study, more computers, more comfortable seating, more study rooms/booths/carrels, and more power outlets. Class work or class preparation was the most common reason users came to the library, followed by computer use, and the use of group study rooms or carrels. Nearly half of all respondents considered the library as a get-away and as a place for relaxation. A total of 714 users responded to the 2010 MSL LibQUAL+® survey. Of the 368 comments received, 133 dealt with the library as a place, representing 12 different space change areas.

Of the library as place comments, 46% expressed compliments and 54% expressed concerns. The top five requested changes were: more comfortable seating, more quiet study, more group tables, more computers, and more study rooms/booths/carrels.

The whiteboard was the most productive channel for user feedback, producing 209 suggestions that were focused on space, although most suggestions fell into only 8 different space change areas. The top five suggested uses for the newly opened space were: study rooms/booths/carrels, group tables, comfortable seating, computers, and a large-screen TV. There were three requests for the return of the current journal issues.

A total of 115 ballots were cast in the chair voting, providing a clear preference for the study chair of choice. During the next opportunity to test out new chairs a system of cellphone text voting was used. Considering the general activity level of students and their cellphones, the results were extremely surprising, with only seven votes cast.

The final prioritization of space change areas was based on the cumulative totals for the change areas from all feedback channels, presented in Figure 1.

The following section describes six key priorities that emerged from the feedback vehicles and how they were addressed.

*Seating*

Several forces prompted the decision to purchase new study chairs. Besides the need to replace broken study chairs, the Client Services Desk staff noted increasing complaints from students that they could not find any seats in the library. Comments from the MSL census and whiteboard feedback also addressed the need for additional seating. Based on a strong consensus of choice, 50 new fully adjustable student-selected chairs were purchased to increase or improve the seating options. As a second phase of this project, following many 2010 LibQUAL+® comments requesting more of these chairs, an additional 50 were purchased during the summer of 2010. The use

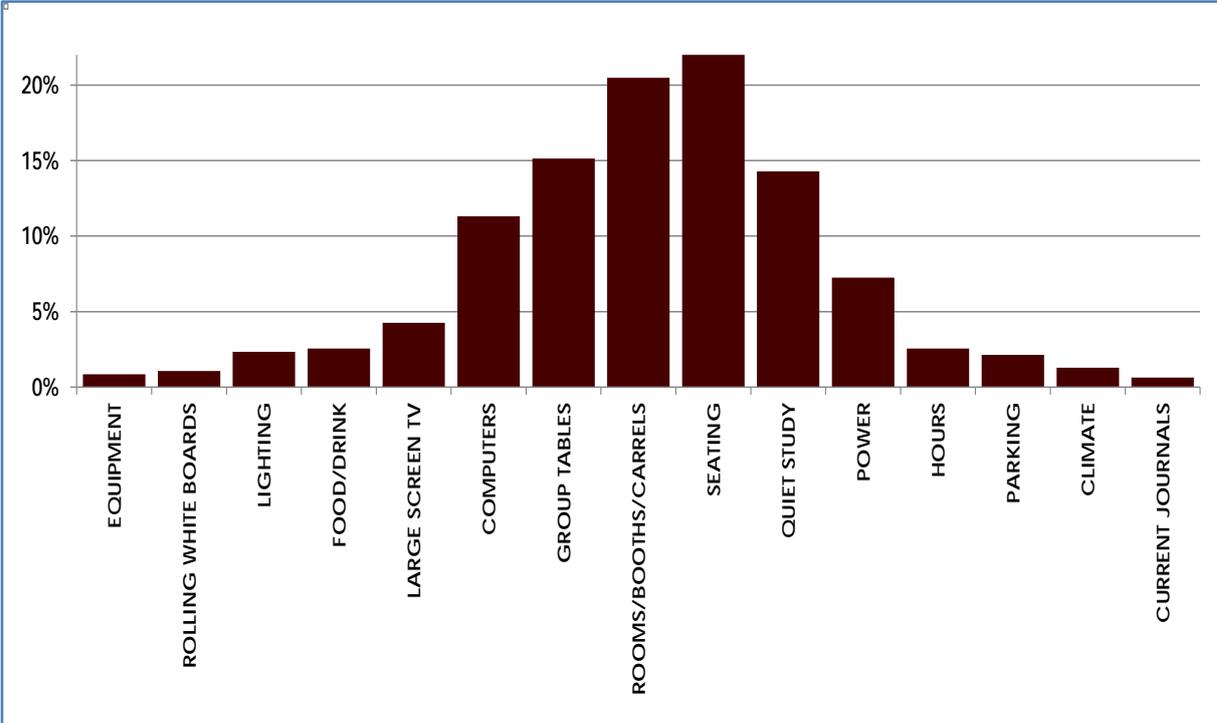


Figure 1  
Space change area totals

of ballot voting in the choice of chair showed MSL the importance and effectiveness of a focused follow-up to survey feedback.

### *Rooms/Booths/Carrels*

Additional study rooms have been requested on every feedback channel employed by MSL over the past several years (Applegate, 2009). Efforts have been underway to address this request. Past efforts to increase group study rooms involved converting multiple small photocopy rooms into group study rooms. Between 2009 and 2010 the decision to renovate and re-engineer little-used or unused office and work spaces into group study rooms resulted in a 50% net increase in study rooms at MSL. Monitoring of feedback channels and efforts to craft creative solutions for more group study rooms will continue. An architectural/interior design firm has been contracted to develop plans for renovation of MSL first floor space, with actual redesign work to be completed during 2012.

Study booths were a relatively new request that came chiefly through the whiteboard feedback channel. This has been forwarded to the architectural/interior design team so that these can be incorporated into the redesign plan.

Carrel availability and functionality have been improved through re-arranging the carrels to take better advantage of power sources throughout MSL, and to be certain that they are located in spaces that offer a quiet study atmosphere.

### *Group Tables (Collaborative Areas)*

Group study tables were one of the highest requested uses through the whiteboard feedback channel for the recovered current journal space. In addition, they were mentioned in MSL census and LibQUAL+® survey comments. There is an increasing expectation for group projects across the curricula of all student users of MSL. As a result, the need for areas of collaborative study continues to rise (Adamson & Bunnett, 2002). MSL took a dual-track approach to address

this need. First, eight additional tables were placed in the space opened up by the removal of current print journal shelves as had been requested by users. Second, an underutilized computer lab was refitted with furniture that allowed the computers and monitors to be stored below the desktop, transforming the “computer” desks into tables for collaborative work and study. These desks were also equipped with casters, allowing the tables to be rearranged as needed.

### *Quiet Study*

One of the primary concerns that MSL library users identified consistently as a priority in LibQUAL+® surveys and through MSL census was quiet study space. When viewed in conjunction with the increased emphasis on collaborative study areas discussed above, quiet study space can seem almost in direct conflict. MSL is a two-storey building which allows for some separation between the collaborative first floor areas being developed and what has historically been considered a quiet study second floor. Unfortunately, there is a large atrium opening to both floors which, although very pleasing aesthetically, also very effectively moves sound between the floors. MSL Client Services staff often received spoken and written complaints about noise levels. A review of this situation by library leadership concluded that the best approach to meet the need for quiet, while maintaining collaborative spaces on the first floor, was to make an actual physical barrier between the two spaces. This barrier also needed to blend with the open, airy feeling which characterizes the library. With the Library Student Advisory Council in agreement, a decision was made to install a glass wall around the second floor study area that would provide a noise barrier between the atrium and the second floor. Having MSL users enter through a glass door to reach the “quiet study zone” has proved an effective reminder of the quiet study expectations for that area. The addition of the walls also created a small lounge area that made it possible for students to leave the quiet zone for phone calls or discussions that might disturb the quiet study environment.

## *Computers*

Improvements in this area were driven by requests from the onsite suggestion box, postings on the whiteboard, and LibQUAL+® comments. Public computers were relocated to make better use of power sources in columns throughout the library. As an added benefit, the move of these computers also improved user access. The move placed the computers closer to the single service point desk where staff would be more available for user assistance. It also became much easier for users to see where open seating could be found. Finally, the move to the new location further away from large first floor windows eliminated a glare problem which had made using some of the computers undesirable. Improvements in access to power also resulted in an increased demand for laptops available for checkout. Between 2009 and 2010 MSL increased the number of public computers (desktops and laptops) by 25%. In that same time frame the circulation of laptops increased by about 70%, and the higher usage of public laptops brought relief to the need for additional computer access. Special efforts were also made to publicize and promote the use of 40 additional public computer workstations in the library's computer lab. All of the above efforts resulted in an increase in computer access, although this request continues to be received from users.

## *Power*

LibQUAL+® survey comments, whiteboard suggestions, and onsite suggestion box comments made clear the need for increased power in the library. This simple request was one of the most difficult and expensive for MSL to address since it would require significant structural modifications to the building to add power outlets to the floor. In an effort to contain the costs of this enhancement, an inventory was conducted for all sources of power in public areas and a diagram was developed. Through analysis of this diagram and building observations, solutions were developed to make much better use of the columns in library public spaces and the power source they provided. Tables with

public computers were rearranged to take advantage of outlets in nearby columns. This new arrangement freed up other power outlets that could be used for visitors with personal computers. As a temporary measure, several of the tables were equipped with power strips that could be shared by multiple users. A more permanent improvement in power availability was accomplished by retrofitting 23 study tables with pop-up power outlets at both ends of the table tops. This solution also allowed MSL to include an LED light bar as part of the retrofit package for the study tables. This change addressed requests for improved task lighting that had been voiced by users through online/onsite suggestions, MSL census, and LibQUAL+® survey comments.

## **Discussion**

There are advantages and disadvantages to both user-initiated and library-initiated approaches to feedback. User-initiated input has the benefit of identifying a specific concern that the user has at a particular point in time; it also offers the opportunity for immediate, personalized response from library staff. Some of the challenges of relying on individual user-initiated input include the possibility of misinterpretation of user comments due to variation in language and differences in communication, the temptation to over-generalize to the entire population, and difficulties in interpreting and analyzing free-text suggestions consistently. Library-initiated input usually has the advantages of being more carefully planned, consistent, and based on a controlled vocabulary. This greater consistency improves data analysis, interpretation, and longitudinal trend analysis. The use of standard survey tools such as LibQUAL+® also offers the opportunity for benchmarking against peer libraries. However, survey fatigue is a potential problem, as well as the challenge of finding a survey length that encourages participation and also results in significant amounts of valid data.

### *Limitations of Each Feedback Channel*

The establishment of a broad complement of feedback channels for user input concerning

the redesign of library spaces contained challenges and limitations inherent in each individual channel. Online/onsite suggestions, while providing specific concerns or requests, produced far too little input to be used as the sole feedback approach. The MSL census, although one of the most productive channels for library space comments, was only a snapshot from users on one particular day. LibQUAL+® offered the most statistically valid approach to gathering feedback, producing the third highest output of space comments and variety of space change requests. The whiteboard and ballot voting, while very productive and effective, were too focused on a particular space change or limited to a particular library space to supply ideas for changes to all library spaces. Cellphone text voting did not produce enough responses to be useful.

### *Use of Multiple Feedback Channels*

One objective of this project was to evaluate the use of multiple, broad-based feedback channels and whether it enhanced the feedback gained concerning changes in the library spaces. Table 1 presents the cumulative amount of feedback received through each feedback channel and the length of time each feedback channel was available. All the library-initiated feedback channels produced many times more comments than the user-initiated suggestions. Clearly, MSL needed additional feedback channels beyond the online and onsite suggestion box. Figure 1 presents a composite of all space-related suggestion areas received. The total number of comments for each space change request area listed in Table 2 was compared to the total number of space-related comments, resulting in relative percentages for each space change area.

Table 2  
Space Changes Requested by Feedback Channels

	Online/ OnSite Suggestions	Census	LibQual+®	Whiteboard	Ballot Voting	Text Voting	Totals
More Ergonomic Seating	4	14	30	22	115	7	192
More Group Study Spaces	2	12	9	73	0	0	96
General Environment	5	53	30	0	0	0	88
More Group Study Tables	1	7	14	49	0	0	71
Less Noise in Quiet Study	1	47	19	0	0	0	67
More Computers	4	17	10	22	0	0	53
More Power Outlets	6	10	2	16	0	0	34
Large Screen TV	0	0	0	20	0	0	20
Longer Hours	2	6	4	0	0	0	12
Relaxed Food/Drink Policies	4	4	4	0	0	0	12
Improved Task Lighting	3	6	2	0	0	0	11
More Parking	0	3	7	0	0	0	10
User Control of Climate	1	5	0	0	0	0	6
More Rolling Whiteboards	1	0	0	4	0	0	5
More Specialized Equipment	0	2	2	0	0	0	4
Return Current Journals Area	0	0	0	3	0	0	3
Cleaner Bathrooms	0	3	0	0	0	0	3
<b>Totals</b>	<b>34</b>	<b>189</b>	<b>133</b>	<b>209</b>	<b>115</b>	<b>7</b>	<b>687</b>

The question of the impact multiple feedback channels had on determining priorities seems best answered by a comparison of what would have been done if feedback came from only a single source, as well as what would not have been done, without the additional information from other feedback channels.

If only the user-initiated feedback channels had been used, the priorities addressed would have been seating, computers, power, lighting, and food/drink policy. Several of the top priorities from the census, LibQUAL+® survey, and whiteboard feedback channels would not have been addressed. The areas of study rooms/booths/carrels, group tables, and quiet study would all have been missed. The library census identified four of the top priorities that were actually addressed. But the important area of group tables for collaborative work would have been missed. The LibQUAL+® survey, taken as an individual source for changes in the library as a place, was the most effective single route, but it would not have identified the request for added power outlets, which was included in three of the other feedback channels, as a priority. Additionally, to truly add a higher level of specificity for the LibQUAL+® user comments, future initiatives should include a categorization employed with comment analysis. The whiteboard, although focused on a specific area within the library, identified four of the top priorities addressed. The quiet study area was not mentioned, which was understandable, since this feedback channel focused on a first floor area of the library which is designated for collaborative space.

A review of all feedback channels clearly indicated the need for library-initiated methods to supplement the relatively sparse suggestions provided by the user-initiated feedback channels. If any single library-initiated feedback channel had been used, from one to several important suggestions would have been missed. The use of multiple feedback channels uncovered several important priorities that were not strongly represented by any single feedback channel. While the LibQUAL+® survey turned in a solid performance as a feedback channel for

space redesign, the use of focused and follow-up feedback mechanisms (ballot voting, Student Advisory Council) also proved very effective.

## Conclusions

MSL accomplished the objective of this project, to use composite data from multiple user feedback channels in prioritizing space redesign. Analysis of the feedback clearly indicated that the LibQUAL+® survey and MSL census are rich sources for user comments on the library as a place. This has led to a commitment to a regular schedule for the LibQUAL+® survey and more frequent MSL censuses. A review of the volume of suggestions received through the online and onsite suggestion avenues indicated the need for additional feedback channels. Interpretation of feedback provided through all channels suggested the value of focused follow-up feedback techniques as appropriate. Efforts to determine priorities for the numerous space change requests received resulted in the opinion that multiple feedback channels were very useful. The authors intend to continue research into the published evidence to validate this reported MSL experience. MSL will monitor the online/onsite suggestion box and the 2012 LibQUAL+® survey to assess how users respond to the changes mentioned in this paper, will continue to solicit feedback from library users, and will carefully consider it in charting an evidence based course for library redesign.

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