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CHANGES IN ACADEMIC LIBRARY SPACE: A CASE STUDY AT THE UNIVERSITY OF NEW SOUTH WALES

Kylie Bailin

As the digital environment continues to become more pervasive in our lives, academic libraries have had to adapt to ensure that services remain relevant to users' needs. Research was conducted to examine the 2009-2011 refurbishment at the University of New South Wales (UNSW) Library and evaluate its success in meeting users' needs in terms of space and place, while also suggesting areas for improvement. The investigation used structured interviews to gauge students' satisfaction with the Library's space and/or facilities. Findings are explored under the following themes: collaborative study; individual study; spatial design; social space; technology; noise levels; and Help Zone. This research shows that users still require a physical space, and that the Library is highly valued as a place to congregate and study as it offers a welcoming and well designed environment with modern facilities.

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The library as space and place, and more recently the idea of a 'third place', has emerged as a key concept in the literature. This concept provides a background for the current trends in library redevelopment. Many university libraries have transformed their spaces into new environments that support the changing information needs of twenty-first century students, and many more are preparing to undergo this transformation. The digital shift has greatly impacted how students find and use information and the university library has had to adjust the kind of services and facilities it offers to cope with these changes. Key design concepts in the literature include a good layout, flexible and configurable study spaces, one information/service desk centred in an information/learning commons, extended hours, a library café, and a connection to the broader campus community. The 2009-2011 refurbishment at the University of New South Wales (UNSW) Library has incorporated some of these elements, focusing on a revamp of the furniture and space with the addition of more group study rooms, media booths with plasma screens and

multimedia facilities, informal lounge areas, additional seats with power points, and new carpeting. The final stage of the refurbishment involved replacing the information desk with a welcoming “Help Zone”. The Library now has over 3,000 seats, nearly double than before, and a tenfold increase in power points.

This research was inspired by the idea of libraries as a ‘third place’ and the critical role that physical spaces in libraries continue to play in the digital age. Before building renovations to improve spaces, library planners need to understand the information needs of students now and attempt to plan for how they will change in the future. The purpose of this research was to examine the 2009-2011 refurbishment at the UNSW Library and evaluate its success in meeting the user needs in terms of space and place, while also suggesting areas for improvement. The objectives of the research were:

- To better understand the space and place needs of UNSW students in the digital age.
- To report how the UNSW Library is meeting these needs.
- To evaluate the success of the redevelopment.

To achieve these objectives, the research focused on certain variables such as students’ preference for using different areas of the Library (computers, group space, lounge or quiet space) and what facilities students use in these spaces. Finally, the bulk of the research was formed from student responses to open-ended questions on what they find good about the space and facilities and what could be improved.

LITERATURE REVIEW

The term ‘third place’ originates with the sociologist Ray Oldenburg (1989), who in his book *The Great Good Place* defines it as any public place, which exists outside the realms of home and work. Libraries of all types can act as a third place. Lawsen (2004: 126) supports this in relation to academic libraries stating that “they each welcome members of their particular communities regardless of age and economic status and provide them with access to information, services and a responsive, usually safe, environment”. Webb, Schaller & Hunley (2008) also agree that academics libraries as a third place might be what students need. The emergence of information technology has not made the physical library obsolete as once predicted but instead usage has increased and the “demand for services and technological access to information, regardless of format, is beyond expectations” (Freeman 2005: 2). Technology and remote access are isolating people, whereas the physical library brings people together. As Littleton and Rethlefsen (2008: 314) state “users flock to library buildings and spaces that are attractive, centrally located, technologically current, and arranged to meet the needs of groups as well as solitary users”. The academic library can be a quiet refuge but can also act as a social gathering place for collaborative learning. Different users will have different needs, so the academic library should focus on creating spaces that are as “democratic, responsive, and meaningful as possible” (Wakaruk, 2009: 16).

The insights from student interviews conducted by O'Connor (cited in Bennett, 2005) at Sewanee: The University of the South, shed light on the range of functions that students expect from their learning spaces. Bennett (2005: 17) states that flexible and responsive space encourages study and fosters learning by recognising the social dimension of study, providing a range of spaces from personal seclusion to group study, enabling students to control the social dimension of their study space and foster a sense of community among students. If the academic library does not create these spaces then the students will seek them out elsewhere.

Another argument for space is based on the interesting dichotomy that is occurring at many academic libraries where loans are down but gate counts are up. An example of this occurred in the Science and Engineering Library at Ohio State University (Opperman & Jamison, 2008). These authors note that academic libraries which bring more people into the building seem to either have a new or renovated facility, or attractions other than the traditional library services and resources. Shill & Tonner (2004: 149) studied user patterns in new and renovated academic libraries to determine which features increased user counts and which did not. Among the numerous characteristics, their key finding is that "a high-quality building does make a difference" in raising the gate count. Shill & Tonner (2004: 149) also state that it is clear that "students are not uniformly 'deserting' the academic library" but are instead making less use of outdated facilities or uncomfortable environments.

Bennett's (2003: 2) landmark report *Libraries Designed for Learning*, observed that in the 1990s, "higher education saw transformative changes in terms of student learning, faculty teaching methods, and information technology". However, these changes prompted only minimal responses in terms of academic library space planning with no fundamental changes. Bennett (2003: 2) in part blames a "bias in library space planning that favors the provision of library services at the expense of the social identity of learning and of knowledge" as well as lack of support from the wider campus community. Students' needs today in relation to space and place have changed due to the adoption of active learning practices and the pervasiveness of information technology (Bennett, 2003). Students now prefer to learn by doing rather than listening and teaching methods have evolved to encourage this practice (Black & Roberts, 2006). These active behaviours, where students can feel engaged, often involve collaborative work and group study. Students are also technologically proficient and want to remain constantly connected online. However, according to Lomas & Oblinger (2006) students still want direct interaction with others in a physical space. These authors have identified five student characteristics that seem particularly applicable when designing learning spaces: digital; mobile; independent; social; and participatory. Adding to this, Gardner & Eng (2005) identified four attributes of student satisfaction with academic library use: they have great expectations; they expect customisation; they are technology veterans; and they utilise new communication modes.

Bennett (2007) interpreted data from the 2004 U.S. National Survey of Student Engagement (NSSE) to show that students do not see studying and socialising

as polar opposites and academic library space designs need to acknowledge the social dimension of learning behaviours as they can actually encourage more productive studying. This concept is supported by Bryant, Matthews & Walton (2009) in their case study of Loughborough University Library where they conducted an ethnographic study using unobtrusive observation. This study had similar objectives to this research, in that it focused on looking at how the space was being used, following on from a previous quantitative study which only looked at the level of usage (Walton, 2006). Another similar study was conducted by Bernstein (2007) who used unobtrusive observation, informal conversation with users and more formal interviews to evaluate satisfaction at Valdosta State University's Odum Library. Surveys can shed light on these research questions as illustrated by Webb, Schaller & Hunley (2008) who used a multi-method research approach at the University of Dayton, including a general campus survey on study spaces, online library surveys, a week-long video study, and data from the NSSE survey.

METHODOLOGY

After considering the previous approaches, the aims of this study were appropriately achieved through quantitative and qualitative data gathered via structured interviews. The quantitative data focused on gathering the demographic information and included questions asking which areas and what facilities students' used. Some unobtrusive observations were conducted but data from these observations were not used in the final analysis as preliminary findings added little to the data gathered via the interviews. The interview data allowed the participants to give their perspective rather than the researcher guessing or deciding what they were doing and, more importantly, why they were doing it. The qualitative questions allowed the researcher to understand the meanings and context behind the actions of individuals while investigating each construction of reality (Pickard, 2007).

This study was granted ethical clearance by the University's Arts, Humanities and Law Human Research Ethics Advisory Panel. Notification of this study was advertised on the Library's news blog. Flyers describing the study were also displayed in all areas where unobtrusive observation was to be carried out. The researcher also distributed flyers to interested participants.

Participants

Individuals and groups of students present in the Library building were approached to take part in a short five minute survey. Of the 78 students who were approached, 72 students consented to the interview. Of these participants, 40 were in groups (17 groups in total) and 32 were working alone. Although efforts were made to elicit comments from all students in a group, some responded minimally with a nod of agreement or verbally agreed with the other students. Table 1 details the demographic data for the 59 undergraduates who were interviewed while Table 2 details the data for the 13 postgraduates. As the observation times were from 9am-5pm, it was expected that the participants would be mostly undergraduates.

All participants were required to sign a participant information statement and consent form and were given a copy to keep. This form assured them that their information would remain anonymous and they could revoke their consent at any time.

This was a non-probability, convenience sample as students were chosen at random, based on the students using the Library during the observation times. The ability to generalise is not essential in this research (Williamson, 2002), since its aim is to obtain a snap shot of students' use and needs in the Library.

Table 1. Undergraduate participant student data

| Faculty | Female | Male | 1st year | 2nd year | 3rd year | 4th year | Total |
|-------------|--------|------|----------|----------|----------|----------|-------|
| Business | 9 | 4 | 6 | 3 | 1 | 3 | 13 |
| COFA | 3 | 0 | 3 | 0 | 0 | 0 | 3 |
| Engineering | 3 | 4 | 2 | 3 | 1 | 1 | 7 |
| FASS | 10 | 2 | 1 | 7 | 2 | 2 | 12 |
| FBE | 2 | 2 | 3 | 0 | 0 | 1 | 4 |
| Law | 0 | 3 | 0 | 1 | 1 | 1 | 3 |
| Medicine | 3 | 1 | 2 | 1 | 0 | 1 | 4 |
| Science | 9 | 4 | 8 | 1 | 3 | 1 | 13 |
| Total | 39 | 20 | 25 | 16 | 8 | 10 | 59 |

Table 2. Postgraduate participant student data

| Faculty | Female | Male | 1st year | 2nd year | Total |
|-------------|--------|------|----------|----------|-------|
| Business | 1 | 5 | 1 | 5 | 6 |
| Engineering | 1 | 3 | 3 | 1 | 4 |
| FASS | 1 | 2 | 3 | 0 | 3 |
| Total | 3 | 10 | 7 | 6 | 13 |

Note: COFA = College of Fine Arts, FASS = Faculty of Arts & Social Sciences, FBE = Faculty of the Built Environment

Data gathering

Structured interviews were carried out by one member of the Library staff. The benefits of employing one researcher to conduct all the interviews were consistency, ease of scheduling and saving time. A study by Bryant, Matthews & Walton (2009) employed similar methods but advised that future studies should recruit more researchers to ensure that the findings are not influenced by only one perspective and to guard against fatigue during the data collection. The interviews were conducted in various areas of the Library, across all levels, including the lounge areas, quiet areas, the Help Zone and a few group study

rooms. These areas were not all surveyed equally as the researcher discovered that it was very difficult to interview students in the quieter areas as it seemed to disturb the peace for other students. However, most students interviewed in other areas of the Library had also used the quiet areas. The students in the group study areas and at the bookable computers were also not actively targeted since they were using areas subject to time limits. The interviews were conducted during the month of May, which is in the middle of the first semester for the year, from 9am-5pm, Monday to Friday over a period of four weeks. They were done on random days of the week and at random times. The interviews lasted about five minutes and were not recorded as this might inhibit answers and was not necessary for quick structured interview questions (O'Reilly, 2005). Instead, the researcher filled out the answers for the student and took notes for the open ended questions. Students were prompted for more information at the end of the interview to capture anything that was not previously elicited.

Data analysis

The data was analysed using Excel by the same member of the Library staff who conducted the interviews. As stated above, some students in groups responded minimally and just agreed with what was being said by another student without giving unique answers. To compensate for this, answers were duplicated by the researcher when there was more than one student in the group unless they all gave different answers. Pivot tables were used to validate emerging observations that presented during the research. Following analysis of the qualitative questions, seven broad themes were identified: collaborative study; individual study; spatial design; social space; technology; noise levels; and Help Zone. These themes were applied to the open ended questions about what students found good about the Library's space and/or facilities and also what could be improved and what was missing. Since students' responses covered a range of themes, multiple themes were applied to each answer.

FINDINGS

Overall, the responses received were very positive, with most students wanting more of what's available, for example places to sit and group study rooms. When asked what could be improved, ten students said nothing and when asked what kinds of space and/or facilities were missing, 46 said nothing. Most students interviewed came to the library often, as shown in Figure 1 where 76% of students came to the Library once or more a week, with 35% coming every day. Figure 2 shows students' preferences for certain areas of the Library.

Figure 1. Number of times students visited the Library

How often in the Library?

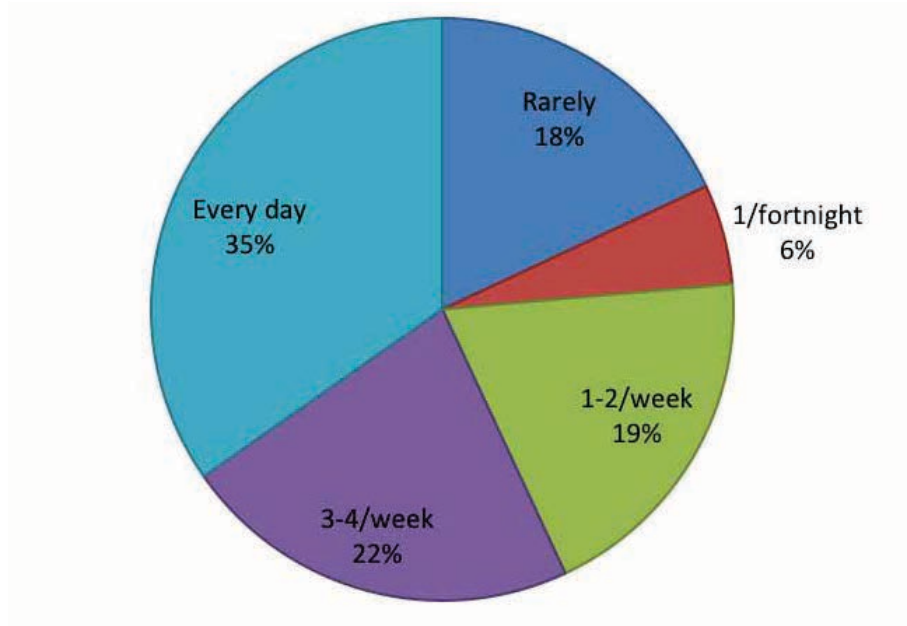
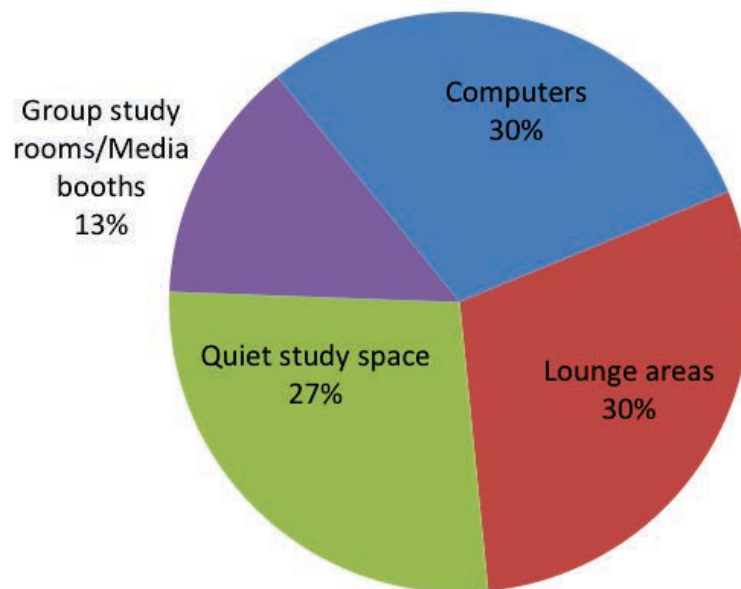


Figure 2. Students' preference for areas in the Library

Which do you use the most?



Collaborative study

It is clear that collaborative study is a very popular activity in the UNSW Library, and that it occurs in various locations. When students were asked about which facilities they used, 68% said they used the group study rooms, while 22% were doing group work at the time of interview. However, only 13% said they used the group study rooms and media booths most often. With over 85% of students using the flexible and informal lounge areas and about 30% preferring these areas, it is evident that lots of group work occurs here as well. In the open-end questions, 20 participants specifically included positive remarks about aspects of collaborative study in the Library, while 21 thought there was room for improvement.

The most common positive remark was the fact that the Library had lots of flexible space where students could study in groups and make noise if they needed to. Some preferred the informal lounge space filled with chairs and beanbags and for group work, while others preferred the group study rooms and media booths where students could talk more freely and set up laptops. The range of spaces available that facilitate interpersonal communication which students could control were well received. Webb, Schaller & Hunley (2008) support this finding and the University of Dayton Library reconfigured spaces in this manner after conducting similar research. The lack of regulation in these informal areas was also seen as a beneficial, as one student remarked:

“There are not many restrictions on where you can sit. It is obvious where you can talk or not without rules.” (First year UG female student from COFA)

Black & Roberts (2006) also found that this self-management of the space by the students was important so that students could easily understand what spaces were designed to be noisy or flexible and which were designed to be quiet.

The negative remarks mainly focused on there not being enough group study rooms or space in general where students can work collaboratively both formally and informally. One student also wanted:

“More group study rooms that you can just walk in without a booking. This lounge area on level four could be transformed. We only use the group rooms when they are free - we never book them.” (First year PG male student from Business)

Others echoed this opinion, as there seemed to not be enough space to work collaboratively when you have not made a group study room booking. During busy periods, these rooms are never free.

Another area identified that could be improved is to provide more information about certain facilities in the collaborative study areas. There was a lack of use of the plasma screens (11%) and DVD/video (7%) facilities and this may be attributed to not having any instructional signs. After the researcher explained how they could use them, by obtaining an AV cable to connect their laptop, some students remarked that it would be useful to have signs explaining this

in the rooms. There was a much higher use of the whiteboards (37%) in the collaborative areas with some students asking for more of them.

Individual study

As popular as collaborative study is, there is still a very high demand for individual study. In fact, some students think the Library has too much informal and communal space and not enough quiet study space. When students were asked about which areas they used, 57% said they used the quiet study space, while 27% said they used the quiet study space most often. A general observation was that all students (six interviewed) in the quiet areas do not use the lounge areas as they are too noisy. However, over half (53%) of the students in the lounge areas have used the quiet areas when they can find a space. In the open-ended questions, 20 participants specifically included positive remarks about aspects of individual study in the Library, while 21 thought there was room for improvement.

Many positive remarks focus on the fact that there are so many different spaces around that are usually available. Although some students time this right, outside of peak times, so they are assured to obtain a spot, as evidenced by this quote:

“It is comfortable to study, especially in the mornings as there is less people and fewer distractions. There is enough space when I’m early or in the afternoon. The peak times are at lunch time.”
(First year UG female student from Science)

The main area for improvement here was difficulty in finding a quiet study space. One remarked:

“There are not enough spaces. It is difficult to find a quiet space so I prefer to use other areas on campus for quiet study.” (Second year UG female student from FASS)

Another suggestion was that there:

“should be one level as a dedicated quiet study area.” (First year PG male student from FASS)

The UNSW Library does have quiet floors with corresponding signs, but this student felt that these were ignored. This is one of the problems with self-managed spaces, but for the most part, students respect each other. A final suggestion was that the:

“Quiet study spaces could have computers.” (Second year UG female student from FASS)

All of the computers in the library are on the noisier floors, whereas the quieter floors have individual desks and power points.

Spatial design

The most positive responses received from students focused on the spatial design of the Library, including flexible spaces, informal/formal areas, availability of seats, signage, location and ease of finding books, and the cosy, relaxing, and nice environment. In the open-end questions, 57 participants specifically included positive remarks about aspects of spatial design in the Library, while 39 thought there was room for improvement. Some of the positive comments received:

“The old library was boring. This one is more fun and vivid. It promotes thinking.” (Fourth year UG male student from Business)

“It is cosy and relaxing. The modern facilities were the reason that I chose to study here rather than [University of X].” (Third year UG female student from Business)

“I really like the decor on levels three and four. The environment with all the different spaces and furniture help me study. The hours are also very good. I have used [University of X’s] Library before and it’s very different than here. It’s so old and not so welcoming. The facilities at UNSW are much newer which enhances the experience. Even the wait for a computer at [University of X] is like 20-30 mins.” (Fourth year UG female student from FASS)

“It is a pretty good design and so far so good. It is my most favourite library to use compared to my local library and also better than [University of Y]. There are lots of books and lots of space.” (Second year PG male student from Engineering)

The main area for improvement was that students wanted more space and seats of all kinds including lounge areas, group study rooms, quiet study space and more beanbags for relaxing. Some specific comments received:

“The single study desks are always taken so there need to be more of these. I always see lots of space in the lounges without desks so there is less demand for these spaces.” (First year PG male student from FASS)

But to contrast that comment, another student said that:

“The lounge areas are very crowded so we need more of them.” (Fourth year UG male student from Business)

Three students identified the need for chairs with back support rather than stools as these would be more comfortable. Part of the quiet areas is made up of benches that have these padded stools. Matthews, Andrews & Adams (2011) support the need for padded chairs with backs in their evaluation of the Science Learning Centre at the University of Queensland, where students found areas with comfortable furniture more inviting than other areas.

Social space

Some students came to the Library specifically to socialise with friends, while others prefer to study in a social and noisy environment. A few remarks focused on the fact that seeing other students study encouraged them to study as well. In the open-end questions, 13 participants specifically included positive remarks about aspects of social space in the Library, while only one thought there was room for improvement. One student said that they actually come to the Library to socialise more often than meeting up for lunch with friends. The Library is a multipurpose facility and can function as a meeting spot, study place, and social gathering area. Bryant, Matthews & Walton (2009: 12) also found that the open plan space in the Loughborough University Library was seen as an important place for social activity in the university where students can “work and socialise in an informal environment”. In another study at the University of Queensland, Matthews, Andrews & Adams (2011) evaluated the Science Learning Centre (SLC), which is an informal space outside of the Library. In this study, a student remarked that they prefer the SLC to the Library as students can relax with their friends and choose to study or not if they want to. At the UNSW Library, we have successfully created areas that encourage and allow this social element, while also having the quiet areas.

Another student remarked:

“It is also good to have distractions sometimes and that is why people don’t like to study at home for the social element.” (Fourth year UG male student from Law)

The social environment also creates an atmosphere where it is acceptable not to study all the time as one student states:

“It is also very laid back so you do not feel like you have to study all the time. The noise is not distracting.” (First year PG male student from FASS)

Technology

The technological aspects of the Library that were discussed included the computers, WiFi, power points, touch-screen kiosks, informational plasma screens, printing, copying and scanning facilities, and the light board. Although it would appear that many students have laptops, 30% of students said they use the computer area most in the Library. When asked why, students remarked that either they did not have a laptop or it was just too heavy and that it was more convenient to use the Library’s computers. Table 3 lists the percentage of students that use various technological facilities in the Library.

Table 3. Technology used in Library

| Facilities used | Percentage |
|--------------------------------|------------|
| Computers | 88% |
| WiFi | 88% |
| Power points | 78% |
| Printing, copying and scanning | 74% |
| Plasma screens | 11% |
| Touch-screen kiosks | 11% |
| DVD/video players | 7% |

In the open-end questions, 22 participants specifically included positive remarks about aspects of technology in the Library, while 21 thought there was room for improvement. Many of the positive remarks focused on the computer booking system, which limits use for one hour blocks. Most thought that this was a fair system and ensured that they rarely had to wait longer than five minutes. Having power points all over the Library was also received positively as one student put it:

“It is very convenient to study as there are power points everywhere I would need them.” (Third year UG female student from Science)

Design and architecture students loved having a light board as it gave them a place to draw and prepare assignments. Students also like the printing facilities:

“The printing is good. It is easy to use and top up your library card either in the library or at home.” (First year UG female student from Science)

Areas for improvement were mostly focused on having more computers, better WiFi coverage, and higher speed internet. One student even wanted some computers with no time limit. There was also confusion about where to find some computers, as one student stated:

“I had to line up three times because by the time I went to find a computer my time was up. It gives you less than ten mins to find your computer. Maybe better signage on where the computer numbers are.” (First year UG female from student FBE)

Another student was frustrated at the use of games and social networking sites by students on the library computers:

“I am frustrated that people use the computers for games or Facebook when I am waiting to do research. I think that they should be blocked from library computers and those sites should only be accessible on the WiFi.” (First year PG male student from FASS)

This issue of viewing Facebook on library computers has been raised in other academic libraries and received comments from students on both sides of the

issue (Curtin University, 2011). However, as these interviews only received one comment pertaining to this issue, more research would be required to determine if this opinion was more widespread. A few students also wanted some Macintosh computers that had design software, such as Photoshop, installed. There was also a request for “maths software MAPLE on the computers” (First year UG male student from Business).

Noise levels

In the open-end questions, twenty participants specifically included positive remarks about the noise levels in the Library, while only seven thought there was room for improvement. The positive remarks were either from people who prefer noise while studying or simply do not have a problem with the noise levels in certain areas. Flexible areas allow students with different preferences to find an area that suits their needs and work habits. Bryant, Matthews & Walton (2009) also found this to be true in their evaluation of Loughborough University Library’s open plan space. Some comments received were:

“It is great to have the new open study lounge on level two as I prefer noise to work.” (Third year UG female student from Business)

“I like the space on levels two and three to hang out and relax. It is also great that it is contrasted with the quiet space on the higher levels. People normally respect these areas and there is never a problem with noise.” (Second year UG female student from FASS)

“I like the quiet study areas and the individual desks. I also like the benches in the quiet areas for group work. When at an individual desk the noise from here doesn’t bother me as I understand the need to do it. You can always find a really quiet area if you want to like the tables in between the shelves.” (Third year UG female from Science)

There were only a few negative comments about how the layout of the Library encourages noise. Some students pointed out that “the open plan allows the noise to travel” (Second year UG female student from FASS). This open space was more of a problem on level four, which is intended to be quieter. Another noise issue that was raised a couple of times was:

“Some group rooms are not well sound proofed with no roofs and curtains as dividers.” (Second year UG female student from Business)

Help Zone

The Help Zone area has replaced the service desks and aims to create a more user friendly environment where library staff approach and greet customers rather than the other way around. It also focuses on self-service by providing

check out facilities, computers, and directional touch-screen kiosks. There were 25 students, comprising nearly 35% of the total that were interviewed in the Help Zone. However, the findings also revealed that most students (64%) who were not in the Help Zone when interviewed have not used the Help Zone before. In the open-end questions, three participants specifically included positive remarks about the Help Zone in the Library, while no student specifically mentioned improvements. One of the positive responses provided insight into how students are at first confused as to what the Help Zone is, but once they have used it, they see the value:

“The Help Zone is much better than the desk before as it is easier to get help with people walking around. I was shocked at first since it is not traditional but thought it was cool. I think it will help the first years a lot as it is a big building. The location at the entrance makes it a great starting place.” (Fourth year UG male student from FBE)

IMPLICATIONS FOR FUTURE PRACTICE

The results of this research provide a better understanding of the needs of students in regard to what they expect from a twenty-first century library space. These are broken down into the themes revealed in this study.

Collaborative study

- Collaborative study areas that are well equipped with tools to facilitate group work such as whiteboards and multimedia facilities are highly valued. While it is obvious how some facilities work, others such as the multimedia facilities may need promotion and signage to encourage use.

Individual study

- Quiet areas with individual study desks are in high demand and heavily used. Some students will always prefer these areas, whereas others are more flexible and can work in noisier areas if that is the only option.

Spatial design

- Warm, welcoming, and well designed space will enhance the user experience.
- Plentiful space which is flexible and designed for both individual and collaborative study will accommodate most users' needs.

Social space

- It is important to have areas that permit both work and social activities as some students do not consider these activities mutually exclusive (Bennett, 2005). However, areas that encourage social interaction

should be set apart from the quiet areas. If they are interspersed, some people will not mind the noise but others will.

Technology

- The availability of technology (computers, WiFi, power points etc.) is widely appreciated and heavily used.
- Employ responsive and interactive technology (plasmas, touch-screen displays) that helps users to understand the space and its facilities. Similar techniques have been employed by Dallis & Walters (2006) at the Indiana University Bloomington Libraries.

Noise levels

- Self-regulation of noise levels can be incorporated into the design so that it is obvious which areas allow noise and which do not. This includes ensuring that collaborative work areas and group study rooms are adequately sound proofed.

Help Zone

- When changes are made to the traditional service desk area, these will need to be promoted widely online and in the library building. The findings show that most students interviewed outside the Help Zone had not used it before either due to confusion as to what it was or lack of need.

CONCLUSION

This study found that, overall, there is a high level of satisfaction with the refurbishment at the UNSW Library. There is also a high demand for the Library as a physical place and space in the digital environment, which is supported by previous research findings (Cocciolo, 2010; Gerke & Maness, 2007). The flexible and adaptable nature of the learning spaces is one of the winning features in the design. Freeman (2005: 4) supports this by stating that “the library as a place must be self-organizing - that is sufficiently flexible to meet changing space needs”. This study also confirms that the refurbished library space is meeting most of the students’ needs as reported by them. However, it cannot confirm whether there are unanticipated needs that even the students themselves have not reported. To determine this, research should be carried out at regular intervals in the future. Despite being a single case study with a small cross section of students, the findings and implications for future practice suggest key areas for consideration when redesigning a university library. If thoughtfully done, library space design can situate information in the social context of learning which is one of the primary goals of the academic institution.

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APPENDIX: INTERVIEW QUESTIONS

Observation location:

Date:

Time:

Questions

1. Is the student male or female? (circle one)
2. Part of a group or individual? (circle one)
3. Are you an undergraduate or postgraduate? (circle one)
What year?
4. What faculty are you from?
5. How often do you come to the Library?
6. What are you using this area for?
7. How often do you use this area?
8. Do you use any other areas? (circle all the apply)
 - a. Help Zone
 - b. Computers - If yes, what level?
 - c. Group study rooms - If yes, what level?
 - d. Lounge areas - If yes, what level?
 - e. Quiet study space - If yes, what level?
9. If yes, which do you use most? Why?
10. What facilities do you use?
 - a. Computers
 - b. Power points for your own laptop
 - c. WiFi
 - d. Flexible/informal lounge areas e.g. beanbags, foam chairs, couches
 - e. Individual desks
 - f. Group study rooms/media booths
 1. Plasma screens
 - 2 DVD/Video facilities
 3. Whiteboards
 - g. Printing/Copying/Scanning
 - h. Directional plasma screens/touch display kiosk
 - i. Other
11. What do you find good about the space and/or facilities in the Library
12. What do you think could be improved?
13. What kinds of space and/or facilities are missing?