

Learning in the Spaces: A Comparative Study of the Use of Traditional and 'New Generation' Library Learning Spaces by Various Disciplinary Cohorts

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The University of Queensland Library comprises 14 service delivery branches and a number of service support units. During 2008 the Library undertook research into the use of library learning spaces. The research included a survey and a design workshop. The aim of the survey was to elicit information about what happened during one day at four of the branches: the Social Sciences and Humanities Library, the Dorothy Hill Physical Sciences and Engineering Library, the Biological Sciences Library and the UQ Ipswich Library. These libraries serve obvious disciplinary cohorts. Two of the libraries are products of 'next generation' design concepts and two await planned refurbishment. The design workshop was conducted with focus groups of students and was intended to delve deeper into student requirements of our spaces and to find out what, to the students, represents an 'ideal' space that would support them in various learning activities.

In 2008 The University of Queensland Library conducted research into student use of library learning spaces to gather information about how students interact with one another, with technology, and with library learning spaces in their pursuit of learning outcomes. There were two parts to the research: a survey in which students were asked to provide information about their use of the library and a design workshop, where student focus groups brainstormed their ideal space¹ to support different learning activities. One research objective was to gather information about how actual use of space compares with intended use. Another aim was to explore how student use of space relates the learning or research activity being undertaken: do students undertake self-directed work in quiet spaces and group work in active spaces and how is technology used to support these activities?

THE RESEARCH

On 12 August, surveys were distributed to students using four UQ Library branches. The surveys had three elements: a series of questions about the student's intentions (*what were they coming to the library to do?*); a floor plan on which they marked their movements and activities during their visit; and a series of exit questions to assess the success of their visit (*had they achieved their intentions?*).

In excess of 1500 responses were returned. Results show that students are intentional about their use of library spaces and services: they schedule their visit into their day; they appreciate how much time they have to spend and what they need to achieve in that time; they know what spaces and services are available and are purposeful about where they go to work in the library according to their current task; and they expect to complete what they have to do. Students use the various types of spaces provided in the library intelligently.

A design workshop² was held during the week following the survey. Groups of students 'designed' their preferred learning space for three academic scenarios: collaborative group work; an individually assessed piece of course work; and examination preparation. While each group had its preferences, a number of common themes emerged. These included reliable and wide-spread access to the Internet, a range of technology to support group work including voice recorders, smart boards and printers, a steady supply of drinking water and coffee, and adequate natural light. Services that provide convenience are valued. The students affirmed that *place* is important to them: they like to come to the library. They also confirmed what we know from observation: student demands of spaces change during the academic year according to course progression and the nature of the assessment tasks on which they are working. So flexibility is an important design consideration.

'My Time at UQ Library' Survey

A survey was carried out during the course of an entire day from opening to closing in four branches of the UQ Library: the Social Sciences and Humanities Library and the Dorothy Hill Physical Sciences and Engineering Library,

¹ To eliminate potential constraints imposed by the term 'library', students were asked to think about a space.

² The workshop was conducted in the Collaborative Teaching and Learning Centre and facilitated by Hamilton Wilson, of Wilson Architects.

both of which have been identified for future refurbishment, and the UQ Ipswich Library and the Biological Sciences Library, two 'next generation' learning spaces³.

Type of data collected

The survey was anonymous and only basic demographic data was collected⁴. The time of entry and exit was collected to establish hours of use.

Information about student intentions for their use of the space was collected: what had they come to the library to do; why had they come to the library to do this; where were they before; how long did they plan to stay there on that visit; where in the library did they plan to work; was that their only visit to the branch on that day; and how often did they usually visit, in person, that branch/any UQ Library/non UQ libraries.

Students were asked to mark the sequence of their activities on a floor plan of the branch and include comments about what activities they did and how long they spent on each activity.

Students were also asked 'exit questions': what had they actually done on this visit; what else beyond their original intent had they done and why; what more could the library provide to support them in their studies; had they spent as much time as they had intended on this visit, and if not why; and where were they going next?

Number of respondents

Completed surveys numbered 1532 with the following breakdown: Social Sciences and Humanities Library: 492 (10% of the branch gate figures that day); Dorothy Hill Physical Sciences and Engineering Library: 405 (19% of gate figures); UQ Ipswich Library: 149 (23% of gate figures); and Biological Sciences Library: 486 (16.7% of gate figures).

Results and preliminary discussion

1. Most respondents visited the library to undertake individual study-related activities and they accomplished this.

Most students (63.11% of all respondents) came to the library in order to use a computer/laptop. Other popular reasons for coming to the library were, in ranked order, to undertake quiet study, find or borrow books, work on an individual assignment, use a printer or photocopier, and find journal articles. That is, the top five reasons for visiting the library are individual activities.

2. Respondents also visited the library to undertake social or group learning activities

Students also came to the library to undertake group work or meet friends. Using services that are provided in person by library staff was not identified by most students as their main reason for visiting the library. The lowest rated reasons why students were coming to the library were to get research help, attend a training session, and get IT help.

Branch data mirrored that data obtained from all respondents, with only slight variations. For example in the Social Sciences and Humanities Library the most quoted reason for visiting was to undertake quiet study, followed by computer use. Data obtained from postgraduate respondents also fit the pattern however they were more likely than other students to come to the library to seek assistance from library staff.

3. In all but a few instances, respondents actually did less of what they had intended to do.

The exception to this was students in the 'next generation' libraries where more worked at computers than had intended. It seems that students met friends or had other reasons to distract them. In all libraries fewer students achieved quiet study than had intended to, with the greatest variation being in the yet-to-be-refurbished Dorothy Hill Physical Sciences and Engineering Library. Students in this library also did less work on an individual assignment, made less use of printers/photocopiers, and did less group work than they had intended.

³ The new UQ Ipswich Library opened in 2003. The Biological Sciences Library was refurbished in 2006 and opened in 2007.

⁴ Gender, age, program of study and year of program

Students at the UQ Ipswich Library and Social Sciences and Humanities Library were least likely to be successful⁵ in finding/borrowing books than students using the other branches. These libraries contain collections that support the arts, social sciences and humanities disciplines. These disciplines tend to still be more reliant on print materials than electronic, vis-à-vis the sciences. Students in the Social Sciences and Humanities Library were also least likely to be successful in finding journal articles. The postgraduate cohort across all libraries recorded the highest failure rate for finding journals.

Students in the Social Sciences and Humanities Library had most difficulty finding course materials and also had the highest failure rate in using the High Use collection.

In all libraries, fewer used their own laptops than had intended, with the greatest variance being in the Social Sciences and Humanities Library.

In all libraries, students met more friends than intended, except at the Dorothy Hill Physical Sciences and Engineering Library.

4. *In all but a few instances, respondents actually did more 'other' things that they had intended to do.*

Everyone except Social Sciences and Humanities Library users did more of 'other' things than they had intended. Fewer got research help than had intended (and those numbers were small), likewise IT help.

5. *Most respondents chose to work in the library because it is conveniently located and provides good study spaces.*

The highest cited reasons why students chose to undertake their activities in the library were: convenient location (50.9% of all respondents); good study/working spaces; good study atmosphere; and it was the only place to find what they needed. This was consistent across the branches surveyed. Convenient location was the top reason for all respondents and all libraries except the newer UQ Ipswich Library where 'good study/working spaces' ranked first, with 'good study atmosphere' a close second.

6. *All cohorts put location, atmosphere, study space, and finding what they need above the social reasons (group meeting or meeting friends).*

Most of the students who attributed their visit to the library to the fact that their group was meeting there were using the UQ Ipswich Library. This was followed in order by the Dorothy Hill Physical Sciences and Engineering Library, the Social Sciences and Humanities Library, and finally the Biological Sciences Library. These results may be outcome of the availability of alternative group working sites within reasonable proximity.

Most of the students visiting the Social Sciences and Humanities Library went there because it was the only place to find what they needed. This was followed in order by the UQ Ipswich, the Biological Sciences Library and finally, the Dorothy Hill Physical Sciences and Engineering Library. This is a not surprising outcome, given that the two former libraries serve the humanities and social sciences disciplines which are still more print-reliant than the science, medicine and technology disciplines served by the other two libraries.

7. *Most respondents visited the library after they had been at home or at a class.*

8. *Most respondents planned to stay in the library for between 30 minutes and two hours*

Around a third of students (32.69%) planned only a quick visit (less than 30 minutes) and 22.61% planned to stay for longer than two hours.

9. *Respondents were regular library visitors.*

Most respondents (58%) said they visit a UQ Library daily, and 42% of them visited more than once on the survey day. Many visit at least weekly and only 5% responded that they visited infrequently (less than monthly). In addition, 30% of respondents visit non-UQ libraries at least once a month. Social Sciences and Humanities Library respondents (at 48%) and postgraduates (at 43%) are less likely to be daily visitors to the library than other cohorts.

10. *Students spent most of their time in the library using computers and quiet study spaces.*

⁵ Here, success and failure are judged by comparing what was achieved against what was intended.

Computers are the most used facility in the library: 25% of respondents spent 53% of their time using a library computer/laptop. After computers, students made use of the quiet study carrels in the library: 11.8% of respondents spent 53% of their time using this facility (students also used laptops in quiet study carrels). The next area most used was the group study rooms/tables: 7.67% of students spent 28% of their time in group areas. The information desk, Ask IT desk, and loans desk together were cited as areas used by just 7.54% of individuals, who spent 2.5% of their time here on the survey day.

11. *Students also used email in the library, used the Internet, met or chatted with their friends, ate, borrowed books, and used Facebook.*

12. *Students wanted the library to provide more computers and more quiet areas.*

There were 771 responses to the question about whether library could do more to support them in their studies. One student wrote 'More computers. Sometimes it is quite difficult to find somewhere to study (with a computer), if you come during the day. Need to be here by 9am to get a study spot with a computer.' Another said 'The library is great except for all the other students.' Students wanted the library to enforce quiet in designated areas and objected to other students talking loudly on mobile phones. These results are consistent with the outcomes of client surveys.

Design workshop

The survey was followed a week later with a two hour design workshop. Incentives⁶ to participate were offered. Eighteen students participated and were divided into three groups. The students were undergraduates and postgraduates, and enrolled in different programs. Completion of the space use survey was not a prerequisite but was mentioned to set the scene. The flexible learning space setting – the Collaborative Teaching and Learning Centre (CTLCC)⁷ – supported the use of instruction, collaboration, and reporting.

The student experience is critical and the workshop aim was to tease out 'the ideal' for students. Three scenarios⁸ were put to the groups who brainstormed the ideal space that would support them best in that learning activity.

1. *What resources and space are desired for group work?*

Groups were asked to imagine that they had been set an assignment that required collaboration with other students. Interestingly, groups thought of this in terms of working together physically.

To support this activity, students wanted bookable, swipe card accessible study rooms fitted with plasma screens or projectors. Rooms should be spacious, soundproof, and students wanted privacy but at the same time valued a view to the outside world. Students expressed a preference for working in rooms rather than in open areas.

Students liked the group rooms in the Biological Sciences Library, which include technology that supports cooperative group work: plasma screens to which laptops can be connected allow multiple group members to view an assignment and whiteboard walls allow students to map concepts and write notes. They said they wanted rooms to contain whiteboards with inbuilt printers or 'smart boards' to capture and facilitate the sharing of electronic content, and printers/scanners.

Students wanted access to multiple computers and power points, as well as Internet and wireless access for laptops and mobile devices.

Spaces that simulate the presentation environment and allow students to rehearse presentations were desirable. These spaces would provide the appropriate technology, including voice recorders.

Alternatives to fluorescent lighting were proposed: natural light or adjustable lighting/lamps perhaps.

⁶ Free lunch and the chance to win an Apple iPod Touch

⁷ Sir James Foots Building, UQ St Lucia Campus

⁸ Scenarios were used to tie the outcomes to pedagogy and to focus the students and optimize working time.

Tables should be large, to provide space to spread out, read, and work at a computer. Chairs should be comfortable and height adjustable. Students wanted to be able to eat and drink while they worked, and requested more water fountains. *If students had access to a space that met their needs, then they would prefer to remain there.*

2. *What resources and spaces are desired for individual assignment work?*

Students expressed a preference for working in an enclosed private space and requested bookable, swipe card accessible, sound proof rooms. This is consistent with result from client surveys: students would like 24 hour, swipe card access to study spaces. Security was a consideration. Students wanted lockable rooms or lockable desks so they could leave their belongings safely if they had to get up for breaks.

Again students expressed a preference for large tables that provided space to spread out books and work at a computer (students are regularly observed working on the floor with their laptop and books spread out around them.) They repeated the desire for alternatives to fluorescent lighting.

Students wanted to be able to access electronic books and journals, as well as online forums for their courses, to engage with other students and their lecturer. They wanted easy access to computers, including some which did not require a login for quick catalogue searches. Students also wanted the library to provide specialized software required by their courses. Again, they wanted access to more power points for laptop and iPod recharging. Also requested were cheaper printing, more download quota, more scanners and recharge machines on every floor (to top up credit to pay for printing).

Students would value devices that help them save time, especially with locating books. Many said they did not understand the classification system and had difficulty locating items on the shelf. They were positive about online features that might assist such as receipts showing call numbers and book locations, which could be printed from catalogue records, or being able to SMS a call number from the catalogue to their mobile phone.

Many of the students wanted libraries to be quiet spaces and suggested social spaces in the library should be separately located. They also wanted printers, copiers, and recharge machines to be isolated to contain noise.

3. *What resources and spaces are desired when preparing for exams?*

Students valued a 'soothing environment'. They wanted to be able to study in comfortable, attractive spaces with natural light and fresh air if possible. They also wanted minimal distractions.

When studying for exams, they wanted access to individual study rooms that were bookable (for entire days) and fitted out with whiteboards. They would prefer tables bigger than current library carrels so they could spread out textbooks and notebooks. Security was raised again. An acceptable alternative to rooms were lockable desks so items could be left safely if students wanted to get up for a break. Comfortable chairs were also appreciated.

Students wanted easy access to things to help them study and make good use of their time, like stationery vending machines and fast printing facilities. They wanted water fountains on each level of the library and permission to eat and drink while studying (they also requested that more bins be provided). From the survey we knew that having to leave the library in order to eat/get a coffee meant that students lost their 'place', and it was one reason why they did not stay as long as they had intended.

Students wanted to find communal areas in the library where they could take a study break, relax, and socialize. In these areas they would like bean bags, comfortable couches, free lockers for storage and free tea and coffee.

Students were aware that their demands of spaces vary during the course of the academic year. They felt that access to computers was not as important at exam time as it was at other times during semester.

At exam time students wanted more online textbooks and semester loans and wanted the library to move more textbooks into the High Use area around exam time. They wanted past exam papers within reach and extended opening hours – to midnight, or even better would be to have 24 hour access to the library.

Conclusions

Place is important. Despite wanting online access to journals, books, forums, and help, students like to come to the library. While students want online access to materials, forums that provided engagement with other students and lecturers, and even support such as the library's online chat service, results from the design workshop were that staff support available in person in the library and having their 'own space' within the University were all valued aspects of the library as place.

Flexibility in spaces is important. Students acknowledged that their need for space differs during semester, which reinforces the need for libraries to think about flexible designs that accommodate needs at various times of the year.

Convenience is valued by students. Students are busy and the more we can do to provide convenient access and desirable spaces, the better their experience is likely to be. Things like easy access to water fountains, multiple access points to libraries, toilets on every level, and permission to eat and drink – all help to optimize their time in the library.

The information obtained from the research into student use of library and learning spaces will be considered along with the results of library surveys when developing spaces to suit learning needs.