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Chapter 12

Evaluation of Space and Use

Introduction

Graham Matthews

A Case Study from Finland

Anne Lehto, Eija Poteri and Mirja Iivonen

Introduction by Graham Matthews

Structure of the Chapter

This chapter is presented in two parts. The first outlines why evaluation of space and its use in university libraries has particular significance at the moment; it also briefly introduces methods that have traditionally been used to achieve this and offers examples of other methods that have been applied more recently. It suggests why such approaches are appropriate. The second part reports on a case study in a university library that has recently had new library space, where library managers have applied evaluation methods not used there before. It is intended that this reinforces the case for trying methods new to particular situations and libraries in that it offers guidance to others, indicates advantages and disadvantages of such approaches, and shows the significance of such exercises for future planning. This chapter is a much adapted version of work presented at the 75th IFLA Satellite Meeting, Turin, 20 August 2009 and an earlier version was published in Lau J., Tammara, A. M. and Bothma T. (eds), 'Libraries Driving Access to Knowledge', 2012, Germany: De Gruyter Saur/IFLA Publications 151.

Evaluation of Space and Use

Evaluation of space and its use in libraries is not new but it is particularly important at the moment. It is important that changes of use and innovations are evaluated to determine their success or otherwise.

In the early 21st century, libraries not only need to establish how they strategically develop the virtual services they provide, but they also need to consider their physical space. The move to electronic collections and services is providing libraries from all sectors with opportunities to use their physical space in different

ways. At the same time as this is occurring, there is also a need to provide evidence to institutional managers and funding bodies that scarce resources are being used effectively and that services are fit for purpose. (Bryant et al. 2009: 7)

This last point, the need to emphasize to funders and parent organizations the significance and value of the library in times of dynamic change, is underlined by Bundy (2004: 16–17), reflecting on the situation in Australia and New Zealand:

Despite the progress with new buildings, and consciousness raising about their value to their communities, the challenge which remains in Australia and New Zealand is how to persuade local government decision makers, and university, further education and school administrators, of the high return on investment in replacing or rebuilding library buildings ... Libraries have made tremendous advances, have embraced new technologies, developed innovative services, often in times of financial constraint and change, but still face an 'image' issue – promotion of what they are about, what they offer, what impact they have for their communities is vital in engaging the support of decision makers and taking them along with the vision of the new library.

This is not necessarily new to libraries, as Bryant et al. (2009: 8–9) acknowledge:

It is generally recognized that if services and facilities are to be improved and enhanced there has to be some form of evaluative exercise which investigates their efficacy and fitness for purpose. Most university libraries engage in some kind of evaluation, such as user surveys, head counts, loan statistics analysis and web metric analyses.

Indeed, a range of techniques is available to, and used by, librarians to undertake evaluation. They can utilize both quantitative and qualitative approaches and, indeed, often use a blend of both. Sources of advice on the various methods, and from different perspectives, abound – on evidence-based practice (see, for example, Booth and Brice 2004), performance measurement (see, for example, Brophy 2006), and impact (see, for example, Markless and Streatfield 2006). Developments in higher education in recent years, including increased and wider participation, new technologies, changes in learning and teaching, and more demanding expectations of graduate employers, have added to the need for more and different evaluation activities in libraries as well as their parent organizations. Texts on research methods for librarians (such as Connaway and Powell 2010, and Pickard 2012) provide information and guidance on traditional and novel methods.

There are now, in England, even more pressing reasons for carrying out such activities. Prospective students and their parents are keenly aware of the cost of university education with the increase in 2012–2013 of tuition fees of up to

£9,000 per year (the cap was £3,375 up to 2011–2012). The results of one survey project an average debt of £59,100 for students in England (the average predicted debt for students in the UK starting in 2011 is £26,100) – Push University guide (<http://push.co.uk/>) survey reported by BBC News (2011). Students increasingly see themselves as customers, and universities are competing to attract students. Students and their families are looking at and comparing resources, including libraries, at different institutions. The National Student Survey (NSS) includes a question on student satisfaction with libraries and resources (see SCONUL 2012a). So, libraries need to determine how they measure up to those at other universities and find a competitive edge. They need to engage in ongoing evaluation and improvement in line with university strategy in challenging and dynamic times.

Quantitative methods

[Q]uantitative studies have an enduring popularity with librarians, since they can make good use of the wide range of readily available data such as library gate-counts, book issue figures etc. Such studies follow a relatively linear progression, from research design, to data collection, to data analysis. At the end, the researcher may produce a set of statistics, or graphs to convey their findings. (Bryant: 2007: 8)

Librarians, indeed, are in the habit of collecting statistics. See, in the UK, for example, SCONUL Annual Library Statistics (SCONUL 2012b), and in the USA, ARL Statistics and Assessment (ARL 2012).

But as Bryant et al. (2009: 9) point out: ‘These are all valuable tools, but they do not provide the richness or depth that is sometimes needed. Yet when evaluating use of library space, establishing the nature of the activities taking place is not as straightforward as producing quantitative data.’ Thus, libraries need to collect and exploit both quantitative and qualitative data.

Qualitative methods

Not all research questions can be answered using quantitative approaches. For example, data collected from a library’s e-journal database can show how many articles were downloaded within a certain period of time, but cannot tell the researcher *why* they were downloaded, or whether they were subsequently *used* (Bryant 2007: 5). A number of writers have called for more use of qualitative methods in Library and Information Science research. Afzal argues that a better understanding of ‘information phenomena’ is required, and that qualitative research can ‘play an important role in furthering that understanding’ and developing broad theories of information behaviour (Afzal 2006: 22). He suggests that there is a real need to focus research on users themselves, in order to develop a clearer understanding of the context of information use (Afzal 2006: 23). Qualitative studies, using a range of research tools such as interviews, case studies, and observation, can offer this level of contextual insight.

Evaluating the Effectiveness of Innovations in the Use of Space

Whilst traditional approaches, quantitative and qualitative, are used in the routine evaluation of the use of space,

[a]s new uses of space are employed, it would seem appropriate to assess them, to see if they are working as planned, to provide evidence for further developments, and so on. As new uses grow, why shouldn't new methods of assessment be used too? These may not be novel from a methodological point of view, but they may be in their application in this sector and for this purpose. (Matthews et al. 2009)

And, indeed, there is a growing list of published accounts of such approaches – see, for example, Fried Foster and Gibbons 2007 (ethnographic tools), Ludwig and Starr 2005 (delphi study), Potthoff et al. 2000 (role repertory grid), Ramsden 2011 (mixed methods), Webb et al. 2008 (multi-method including video study), Wu and Lanclos 2011 (ethnographic approach), and Xia 2005 (GIS). At a recent UK seminar, Sheffield Hallam University provided good examples (Aspden and Harrop 2009) on how to seek students' views on the new spaces they had created. Students were asked to take pictures of space they liked and disliked, and a wiki was set up for them to respond to. Twitter was also used to seek feedback.

Bryant (2007: 8), in introducing an approach to assessing space at Loughborough University Library, UK, notes that:

In his influential text, *Ethnography: A way of seeing* (1999), Wolcott argues fervently that the dominance of quantitative methods should not be allowed to overshadow the merits of qualitative approaches ... Wolcott's argument, that observation is the *sine qua non* of knowledge, is an interesting one. It is certainly true that we can learn much from simple observation, yet this is an approach to learning which is often overlooked simply because of its perceived simplicity.

The observation at Loughborough University Pilkington Library, whilst apparently a simple exercise on the surface, was more complex, certainly in terms of its undertaking and analysis. There follows an example of another exercise using a different kind of observation, again seemingly straightforward, but more complicated in practice and in the interpretation and use of the results.

A Case Study From Finland by Anne Lehto, Eija Poteri and Mirja Iivonen

Introduction

Library buildings have been a popular topic of study and discussion in the field of library research for many decades. Numerous papers about flexible library buildings and the various functions of library facilities have been published recently. As Boone (2003) describes, moving away from the traditional repository conception of libraries as storage centres of material, new facilities are more complex, providing enhanced interactive and research environments with a multitude of functions. Demas (2005) has pointed out that there has been in recent years a reawakening to the fact that libraries are fundamentally about people, how they use information, how they learn, and how they participate in the life of a learning community.

Students need computers, wireless networks, teaching labs, and other facilities in the library (see, for example, Boone 2003, Oyston 2003, Rizzo 2002). In a survey on the construction or the renovation of over 177 academic libraries in 1995–2002 in the USA, it was found that there was a considerable number of new ‘non-library’ facilities in the libraries (Shill and Tonner, 2003). One major change was the addition of collaborative study spaces. According to Shill and Tonner’s survey there was an increase in the following facilities: conference rooms, computer labs, seminar rooms, multimedia production centres, cafés, educational technology centres, art galleries, classrooms, auditoria, research institutes, book stores, and writing labs.

University library facilities often include group study spaces that community members can reserve to meet their minor collaboration needs, as Cocciolo (2010) describes. He examined whether virtual space can be used to compensate for the lack of physical space for group collaboration in an urban academic library. His results indicated that physical spaces were in very high demand, whereas virtual spaces were not at all as popular.

Wireless networks and inexpensive laptops make student laptop usage more and more common in university libraries. According to a study conducted in Indiana University-Purdue Indianapolis University, during the 2007–2008 academic year, 37 per cent of the observed male students and 25 per cent of the observed female students used laptops in the university library (Applegate 2009). However, students also use traditional reading rooms and study places without computers. Secluded, quiet nooks are still needed and appreciated (Applegate 2009, van Beynen et al. 2010).

Libraries are facing various changes – they must challenge historic assumptions and ask fundamental, strategic questions. It is important for libraries to rethink the physical spaces of the library and create a ‘desirable draw’ (Brindley 2006).

The Case Study: Tampere University Main Library Building

In planning new library buildings or renovating old ones, a critical factor is to know how library space is actually used, how ways of using library buildings are changing, and what users' expectations are towards the library place as their own space. We now assume that the use of library buildings will change, even radically, in the future. Therefore, new library buildings should not only support current use but also be flexible and easily modified.

This section of the chapter presents the findings of observation and surveys which aimed to find out more about the use of Tampere University's main library building.

Table 12.1 Functions of the public spaces in Tampere University Main Library

Location	Functions
First floor	<ul style="list-style-type: none"> • circulation desk • interlibrary loan services • self check-out/check-in machines • text book collections on open shelves which users are able to browse • some computers for user use • all users go to upper floors (second and third) through the first floor
Second floor	<ul style="list-style-type: none"> • the majority of the library's open collections • reading places
Text book reading room (also located on the second floor with a separate entrance)	<ul style="list-style-type: none"> • quiet reading room (based on student feedback) • 122 reading places • open 24/7
Third floor	<ul style="list-style-type: none"> • learning centre • four rooms for group work • about 50 computers with relevant software • two teaching labs • reference collection • printed journals • microfilm/microfiche readers • information service enquiry desk

Tampere University Main Library (Tampere University Library 2012) operates on the main campus of the University. The new library building opened in the summer of 2006. Before this, the library was located in the premises of a former shoe factory. The new building was designed to open up the library. New library buildings offer librarians a good opportunity to analyze the use of library space and to design new solutions for better use. Evaluating their ongoing use at a time of dynamic change is equally important.

An outline of the Main Library building and services is presented in Table 12.1.

The public space in the Main Library comprises 497 reading and work places.

Choosing an Evaluation Method

Monitoring users' activities in the library through observation walks is a rather simple way to gather systematic data on how the library premises are actually used. The method is based on regular observation tours through the public areas of the library. The observers in our study were given standardized forms to record user behaviour and maps of the floor plans with fixed routes to walk. As stated above, Tampere University Main Library was built in 2006 and thus has modern premises, but how these were really functioning in daily use was a question that we sought to answer by this exercise. In order to find evidence about the actual use of physical space in Tampere University Main Library, we found it interesting to monitor and investigate what our library users actually do in the library, e.g. do they interact with others? Do they interact with texts or computers? Furthermore, we were interested in finding out about the amount of social versus individual use of library space.

Monitoring as a method was adopted, with modifications, from seating sweep methods that have been used, for example, in Norwegian and Canadian public libraries (see, for example, Given and Leckie 2003, Baker 2006, Høivik 2008). There are some examples of the use of similar methods in academic libraries. At Loughborough University Library, England, for example, ethnographic methods, which included some observation, were applied in investigating the use of physical library space (Bryant et al. 2009). In Indiana University–Purdue University Indianapolis Library, observations were conducted in the 2007–2008 academic year to gather data on the use of specific, differently configured, public areas within the library (Applegate 2009). At the University of South Florida St. Petersburg, Nelson Poynter Memorial Library, for a one-year period, visitors were observed using the pedestrian choice research method (van Beynen et al. 2010).

There are several advantages of the monitoring method. For example, the gathering of data by observation tours can be conducted by library staff acting as observers; they can register their observations of user activity in line with given instructions on a standardized form. Further advantages of the method are that users' privacy is protected, because no personal data is collected and the observer

can remain completely detached from the observed group (Baker 2006, Høivik 2008). Hence, no specific information on what users are doing or working with is received by applying this method. Even with this in mind, we found the method very useful for supplementing our knowledge of user use of, and satisfaction with, our library premises.

Applying the Method

We divided the activities of users into a set of categories which are presented in Table 12.3 below. The categories were chosen on the basis of the results of previous research (e.g. Høivik 2008) with regard to the essential functions of the monitored university library building. Furthermore, activities were monitored with respect to whether they were conducted individually or in a group.

Observation walks

Monitoring was carried out during three different weeks in the Main Library to collect data relating to the actual use of the library as space at different times of the academic year; in addition, a third monitoring week took place two years after the first two (see Table 12.2 below). The first monitoring took place March 30–April 3, 2009 (referred to below as Week 1), the second October 12–17, 2009 (referred to as Week 2), and the third March 28–April 1, 2011 (referred to as Week 3). All monitoring sessions were arranged to take place from Monday to Friday, four times a day, at 09.00, 12.00, 15.00, and at 18.00, in four different locations (first floor, text book reading room, second floor, and third floor). In Week 1, 23 members of the library staff volunteered to carry out monitoring tours according to given instructions, using recording forms and floor map. Week 2 observation was conducted by 22 volunteers from the library staff, and Week 3 by 20 volunteers. There were new volunteers in Weeks 2 and 3 as there were new members of staff – they were most welcome as they covered for several staff members on vacation. Altogether, 34 members of the Main Library staff participated in one or more monitoring walks.

The monitored public spaces in the library have different functions (see Table 12.1 above). When the new Main Library was planned, the idea was that the third floor would be the place where library users would study in the learning centre and therefore stay for a longer period than on the first floor. All spaces mentioned in Table 12.1 are wireless networked. The library opening hours during the observation periods (Monday–Friday) were 08.00–19.00, with the exception of the text book reading room which was open 24 hours every day. The service hours of the circulation desk were 10.00–19.00; the information services enquiry desk service hours were 10.00–19.00 in 2009, but 12.00–18.00 in 2011. The text book reading room was open 08.00–19.00 in 2009, whereas in 2011 the service hours were somewhat shorter, i.e. 10.00–19.00.

Group work rooms in-person survey

An in-person survey, also called a face-to-face or personal survey, is a purposeful conversation between two or more participants who are physically in the same place. An in-person survey involves an interviewer or interviewers and a respondent or respondents. Most surveys are conducted quantitatively so that they allow the measurement of findings using statistical methods (Oishi 2003). Our small in-person survey was carried out in the group work rooms in the Main Library during week 14, at the beginning of April 2011. The purpose of the survey was to find out who uses our group work rooms and what kinds of assignment they do there. There are four group work rooms in the main library: two smaller rooms with a PC and 4–5 seats, and two bigger rooms with a PC, a projector, and 10–12 seats. Rooms are available to university students and researchers for academic purposes. The reservation system is online on the homepage of the library, and only the user's e-mail address is required.

The survey comprised six questions:

1. What was the disciplinary field of the assignment that was being worked on?
2. What was the level of the assignment? (Five alternatives were offered: i. Basic studies; ii. Intermediate studies; iii. Advanced studies; iv. Doctoral studies or research; and v. General studies.)
3. How many times has the group met or planned to meet in connection with the assignment?
4. What other means has the group used to work together?
5. What devices have they used in the group work rooms?
6. What new devices or services would they like to use?

The number of group members was counted and recorded by the interviewer.

Six interviewers were involved in the survey. Interviewers were experienced librarians who were familiar with facilities in the library. They received a brief orientation to the task a couple of days in advance. Interviewers made a circuit through group work rooms twice a day at 10.00 and at 15.00 from Monday to Friday during week 14. Because all four rooms were reserved from morning to evening every day, the maximum number of surveys would have been 40. However, one group declined to participate in the survey, and on eight occasions a room was empty (in spite of the reservation), and twice there was a group that had already been interviewed. Thus we received 29 completed survey forms.

Findings

Monitoring – evidence of daily use of the library building

The number of observations recorded in each of the three weeks is shown in Table 12.2 below.

Table 12.2 Number of monitoring observations by time

Week 1, 30.3–3.4.2009						
Time	Mon	Tue	Wed	Thu	Fri	Total
09.00	49	54	56	50	52	261
12.00	148	178	152	185	113	776
15.00	205	220	190	170	133	918
18.00	92	82	72	83	49	378
Total	494	534	470	488	347	2333
Week 2, 12–17.10.2009						
Time	Mon	Tue	Wed	Thu	Fri	Total
09.00	51	52	47	28	20	198
12.00	162	180	184	145	81	752
15.00	224	316	218	138	97	993
18.00	133	109	88	37	27	394
Total	570	657	537	348	225	2337
Week 3, 28.3–1.4.2011						
Time	Mon	Tue	Wed	Thu	Fri	Total
09.00	51	80	83	68	52	334
12.00	156	193	180	153	212	894
15.00	202	206	231	229	160	1028
18.00	95	101	86	72	65	419
Total	504	580	580	522	489	2675

Table 12.3 presents the observations by category of user activity as percentages of the number of activities recorded.

Table 12.3 Observed categories of users' activities by percentage

Categories of activities	Week 1 %	Week 2 %	Week 3 %
Sits alone reading or writing (without computer)	50	43	46
Sits or stands alone with library computer	19	17	16
Sits alone with own laptop	12	17	20
Walks or stands alone (doesn't use library materials or browse, and without relating to library staff)	6	9	7
Sits or stands in a group with library computers	4	2	3
Browses alone	2	2	2
Contact with staff	1	1	1
Talks on mobile phone or sends SMS	1	1	1
Sits in a group reading or writing (without computers)	1	2	1
Queuing	1	1	1
Uses self check-out/check-in machines	1	1	1
Takes photocopies or printouts	1	1	1
Sits in a group with own laptop(s)	0	1	0
Walks or stands in company (don't use library materials or browse, and without relating to library staff)	0	1	1
Other activities*	1	1	1
Total	100	100	100
n	2333	2337	2675

Note: * Sits alone or in a group without books or computers, uses microfiche or microfilm readers, browses in a group, or is sleeping in the library.

The library is used most often for individual reading or writing. The results of the monitoring show that the most common activity in all three weeks was *Sits alone reading or writing*. The next, in Week 1, was *Sits or stands alone with library computer*, and the third common activity in Week 1 was *Sits alone with own laptop*. In Week 2, the percentage of the category *Sits alone with own laptop* was equal to the percentage of the category *Sits or stands alone with library computer*. In Weeks 2 and 3, the observations of the use of own laptops increased and the individual use of laptops surpassed the individual use of library computers. The

use of computers in the library, whether users' own or laptops, accounted for about 40 per cent of observed activities in Week 3.

In the second observation week, there were more observations of users walking or standing than in the other weeks. One explanation could be that there are more information literacy classes taking place in the teaching labs inside the library in the autumn. The categories *Browses alone* and *Contact with staff* represented only a very small proportion of the observed activities. Most of the service desks in the library were closed at 09.00 when the first monitoring walking tours were conducted, so contact with staff at the desks was not possible at that time. Moreover, the evening tours at 18.00 in Weeks 1 and 2 were carried out by the librarian who was also on duty at the information services desk on the third-floor learning resources centre, and thus was not available for users at that time. Still, some librarians reported that they had been consulted by users while they were walking on their monitoring tour.

Table 12.4 Users' activities – alone vs in a group

Categories of activities	Week 1 alone	Week 1 group	% of Week 1	Week 2 alone	Week 2 group	% of Week 2	Week 3 alone	Week 3 group	% of Week 3
Sits reading or writing	98%	2%	51%	96%	4%	44%	98%	2%	47%
Sits or stands with library computer(s)	83%	17%	23%	87%	13%	19%	84%	16%	19%
Sits with own laptop(s)	96%	4%	12%	95%	5%	18%	98%	2%	21%
Walks or stands	93%	7%	7%	94%	6%	10%	92%	8%	7%
Browses	100%	0%	2%	94%	6%	3%	95%	5%	2%
Contact with staff	100%	0%	1%	100%	0%	1%	100%	0%	1%
Talks on mobile or sends SMS	100%	0%	1%	100%	0%	1%	100%	0%	1%
Other activities*	97%	3%	3%	63%	37%	3%	66%	34%	3%
Total	94%	6%	100%	93%	7%	100%	94%	6%	100%
n	2192	141	2333	2170	167	2337	2508	149	2675

Note: * Queuing; use of self-service check out/in machines, photocopiers, or microfiche readers; sitting without books or computers; etc.

Group versus independent activity

As shown in Table 12.4, only 6–7 per cent of the observed activities in a week took place in a group. This result was somewhat lower than we expected.

The results of the monitoring showed that the library is used most often for individual reading or writing. This finding is in line with previous studies which emphasize the importance of reading rooms that inspire scholarship in a modern library (Demas 2005, Freeman 2005, Gayton 2008, Applegate 2009). The social use of library premises in a group was lower than expected in the observation period. The students are nevertheless in the library to complete the tasks given to them by faculty. If the tasks are mostly individually based, there is no need for group work. On the other hand, collaboration can also take place in virtual networks.

Activity by day of the week

The monitoring has provided more basic information to assist with planning of services and service hours. However, we need to consider both the risks of generalizing these results of three weeks too widely and the probable development and change in the use patterns of the users.

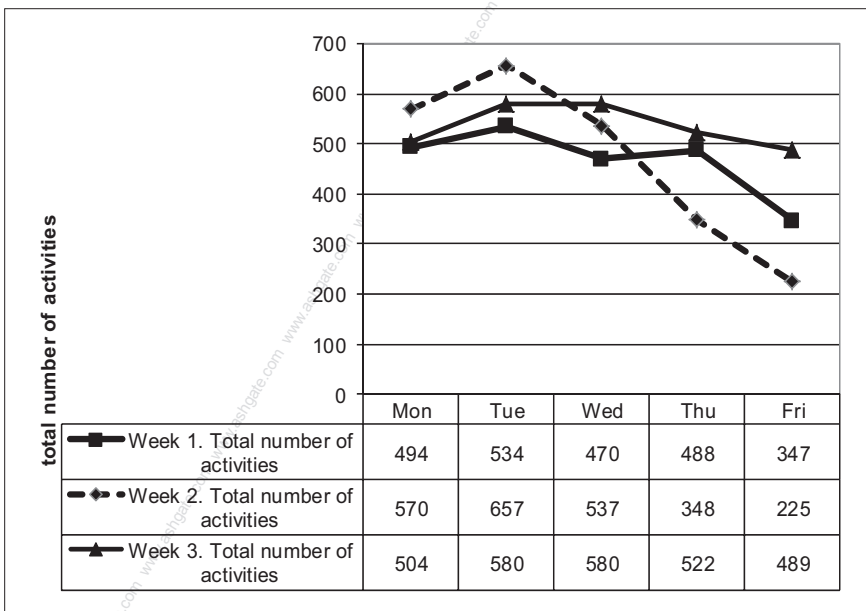
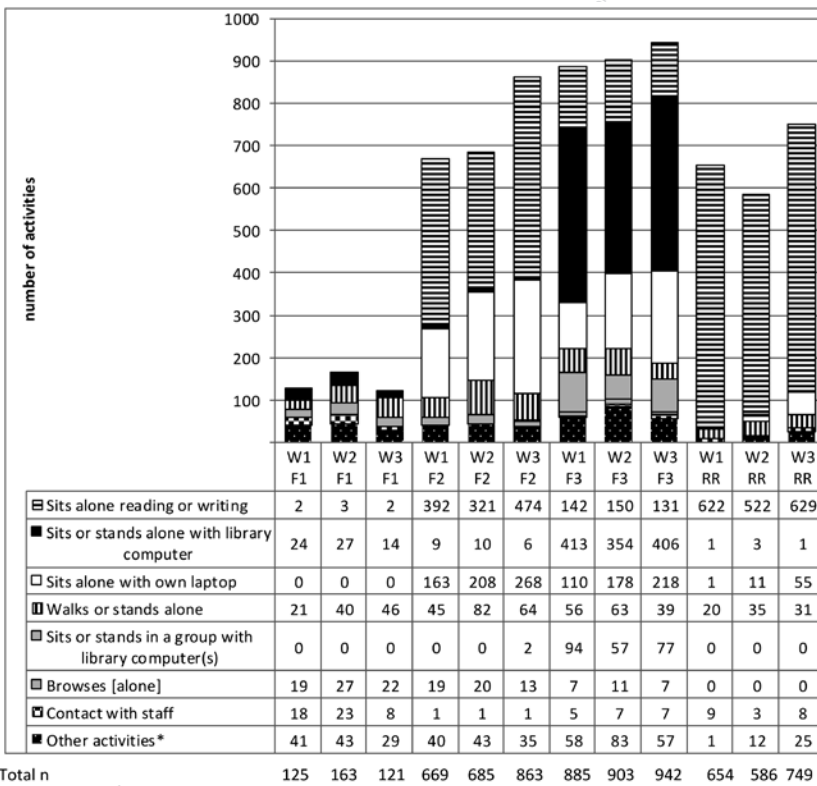


Figure 12.1 Total number of observed activities by weekday

As shown in Figure 12.1, Friday was clearly the quietest day in every week. Of the observed weekdays, Tuesday was the busiest day of the week as well as Wednesday

in Week 3. Monday, Wednesday, and Thursday also had notably more activities than Friday in Weeks 1 and 2, whereas in Week 3 Friday was more like the other days.

A comparison between the observed Weeks shows that in Week 2, on Monday, there were 15 per cent, on Tuesday 23 per cent, and on Wednesday 14 per cent more observed activities than in Week 1. On Thursday there were almost 29 per cent and on Friday even 35 per cent fewer observations in Week 2 than in Week 1. One explanation for this pattern could be the fact that *Hämeenkadun approbatur* – ‘student event/happening’ – took place on Thursday in the second monitoring week. In Week 3, the number of observations altogether was significantly higher than in the former observations, which gives evidence of the active use of our library premises.



Key: F1=1st Floor, F2=2nd Floor, F3=3rd Floor, RR=Reading Room

Figure 12.2 Users’ activities by location

Note: * Queuing, the use of mobile phones, self-service check-in/out, photocopiers or microfilm readers, walking or standing in company, sitting in a group reading or writing or with own laptop(s), or sitting alone without books or computers, etc.

Different locations in the Main Library have different functions. The differences in the numbers of observations varied between different locations (Figure 12.2), which is also of interest to us for planning. For example, the number of activities on the first floor where circulation functions are located was lower compared with other observed spaces. It is worth noting that the first floor is a place just for quick visits for activities such as borrowing, returns, charges, interlibrary loans. Users usually do not stay there for a long time. The reading room, second floor, and third floor, rather, are spaces for study purposes and offer a place for a longer stay than the first floor.

We have now conducted this study three times and at two points in the academic year. Still, more investigations are needed. Then, a monitoring exercise should be repeated regularly to reveal prospective changes in the patterns of user use of the library premises.

Use of Group Work Rooms

The results of the in-person survey of the group work rooms indicate that these facilities are important for students to work on different kinds of collaborative tasks. We managed to interview 29 groups (including 73 group members). The average size of the group was 2.5 members. The largest group consisted of eight members, and the most common group size was two members. Gender division was not taken into account. Of the 29 groups that were interviewed, 19 consisted of two group members. This can be described as working in pairs rather than group work. From the library's point of view this means that small group work rooms would serve as well as bigger rooms.

The group work rooms are occupied from morning to evening. Students need only to have an e-mail address to reserve a group work room. The maximum time for a group is three hours in a day. Students can easily bypass the rule of three hours by using different e-mail addresses, but perhaps this is not very common. This was our impression before the survey. What we did not know, was: who are the users, where do they come from, and what exactly do they do in the group work rooms?

All the disciplines on the university main campus were referred to in the survey. Table 12.5 below provides a breakdown. Business and law students used group work rooms slightly more than other students.

Table 12.5 Disciplinary field of the assignment that was worked on in the library

Disciplinary field of the assignment that was worked on in the library	N
Business, management, or law studies	8
Communication or linguistics studies	5
Computer or mathematical studies	4
Pedagogics	4
Social sciences	3
General studies, such as language courses	5
All groups	29

Table 12.6 shows that students were occupied with assignments of all levels from basic studies to doctoral studies in the group work rooms. One group, comprising international students, was working on a research-level assignment.

Table 12.6 Level of the assignment that was worked on in the library

Level of the assignment that was worked on in the library	N
Basic studies	6
Intermediate studies	11
Advanced studies	5
Doctoral studies or research	2
General studies	5
All groups	29

Students expressed satisfaction with facilities in the group work rooms. There are PCs in all four rooms, and projectors also in the two bigger rooms. The following list contains the new facilities the groups reported they would like to have, besides computers and projectors, in the group work rooms:

- Better soundproofing
- Loudspeakers (two groups mentioned this)

- Coffee machine
- White board markers (librarians keep them safe at the reference librarian's desk)
- A specific computer program (the name of the program was not mentioned)
- Saturday opening hours (only the text book reading room is open during weekends)
- More group work rooms (two groups mentioned this)
- Two computers per room
- More effective reservation system.

Interesting data on the duration of the group work done in the library has also been gathered: about one-third of the groups met only once, one-third of the groups met or planned to meet twice or three times, and one-third of the groups met or planned to meet four times or even more. This tells us that the group work requires both space and time, and many groups come back to complete their task.

We also asked what other means the groups had used, or planned to use, for group work. Almost all groups mentioned e-mail as an important tool, whereas only a couple of groups mentioned Moodle, the virtual learning environment that is commonly used at the University of Tampere. Moodle was characterized as a place where the finished assignment would be submitted, not as a place where the students were going to meet or discuss. Cocciolo (2010) has illustrated the importance of the physical space over the virtual space for students. He studied the use of physical study places and virtual study places marketed by the Teachers College Library at Columbia University in New York. He found that 'library users continue to desire the use of physical space' and that 'library users would rather book collaboration rooms late in the evening or early in the morning rather than use the virtual collaboration space provided by the library' (Cocciolo 2010: 531).

Conclusions and Lessons Learned

As university library users today have remote access via networks, both to a huge amount of scientific information licensed for them by the library, and also to open-access resources, the importance of the university library as a physical space might not be as evident as it used to be in times when printed collections were the main sources of information.

In this case study, we have presented valid evidence on the use of library space as a study place. An evidence-based librarianship approach (see, for example, Partridge and Hallam 2005, Booth 2006) has been employed to describe the use of library spaces in Tampere University Main Library. We have presented librarian-observed (monitoring) and user-reported (survey) evidence to demonstrate how users still come to the library and what they do there. Further, we have utilized research-derived evidence to convince and support our understanding of the necessity of library premises as a study place.

We noticed that users are still physically present in the library even though many services provided by the library are nowadays available via network connection

and library users can use them anytime, anywhere. Users still come to the library to study. This emphasizes the importance of modern and well-equipped library premises on campus. In spite of the virtual library, users still come to the physical library and they even come to it to get access to the networked environment. The monitoring evidenced an increase in the use of laptops, which was already seen in the second monitoring week. From 2009 to 2011, the number of observations of laptop use rose from 12 per cent of the total observations to 20 per cent from 2009 to 2011. Thus, the university library as a place is an interesting and important hybrid library especially for students, offering them both a real and virtual learning environment.

In the literature there are several references to changes in higher education and their effect on university libraries. For example, many current trends in higher education, such as problem-based learning, emphasize the need for space for group work. However, we did not get a lot of evidence for this. From the monitoring, it seemed that the users clearly worked more alone than in a group. In the in-person survey we focused especially on group work. According to the survey, the groups were rather small. The most common group size was two people, indicating that there should be many small group work rooms rather than a few bigger ones.

The teaching methods at the University of Tampere may not yet have become collaboration oriented, but still emphasize studying alone. We know that the problem-based learning method has not been applied in the faculties that the Main Library serves. Nevertheless, there is an overall reform of education going on at the University of Tampere. The reform will evidently introduce new methods of teaching and learning. In describing the students' use of library space we can make some assumptions about the most common current teaching methods, and even put forward some ideas for the use of different methods.

The in-person survey in the group work rooms showed that students of all disciplines and all levels use the library facilities. This supports the basic value of the library as a democratic and open institution which offers the same opportunities to all members and all disciplines of the community. On the one hand, we were able to get some evidence about the library as a third place. The findings of the monitoring and survey show that the users came to stay in the library. On the other hand, we could not get a lot of evidence about the library as a meeting place or its role in enhancing social capital. Principally, over the period of the survey and monitoring, the library premises seemed to support more individual study than the needs of groups. However, the findings of both the survey and monitoring showed that there were also user groups in the library. We feel that their number will increase in the future. Probably, university libraries as a space will never be the same for socializing as public libraries are and will be, but they might be for enhancing social capital and supporting collaborative work for common purposes more than they do today.

The monitoring and in-person survey were carried out by library staff in collaboration with members of staff from different library departments. The exercises were learning processes for the staff. Thus, the experiments have

enhanced collaborative knowledge building and sharing in the library. In addition, conducting the studies has strengthened the library as a learning organization. As part of the academic community, the library attempts to be research based in all activities and planning processes. The presentation of facts and evidence-based information, for example, to the parent organization and funders will increase the credibility and reputation of the library.

The users' satisfaction is the final goal of all the development that is done by the Tampere University Library. We think that we have managed to get current evidence about the daily use of library premises and we can benefit from this in the future. Of course, we need to track the use of our premises continuously and to follow the methods of university teaching and learning to be able to react to these changes, with flexible space. Applegate (2009) emphasizes the need for tracking the whole academic year, as she points out that there is no typical week in a semester concerning space, although she admits that there are patterns.

There are some implications of these studies for space planning that have been brought to light, and some measures which the library can put into practice. Because the findings showed that there is a need for individual concentrated study, the library should ensure that an adequate number of quiet places are available for students in the future, too. The premises are so new that large modifications are not needed. According to our study it is also clear that students come to the library to use computers, so availability of computer working places and the number of computers are things that the library should take care of. Because the users nowadays increasingly use their own laptops in the library, we have, as well as providing a wireless network, to ensure that there are desks without computers but with electrical sockets available.

The results of the monitoring and the survey show that the library is actively used as a study place, more for individual than for social, collaborative purposes. Nevertheless, both aspects have been considered in planning – this clearly benefits the users. The authors have learned from the process of gathering information, too, and hope that their case study will encourage others to undertake similar exercises.

References

Introduction

- Afzal, W. 2006. An argument for the increased use of qualitative research in LIS. *Emporia State Research Studies* [Online], 43(1), 22–25. Available at: <http://www.emporia.edu/esrs/vol43/afzal.pdf> [accessed: 18 April 2012].
- ARL. 2012. Association of Research Libraries. Statistics & Assessment. Annual Surveys. ARL Statistics. Available at: <http://www.arl.org/stats/annualsurveys/arlstats/index.shtml> [accessed 18 April 2012].

- Aspden, L. and Harrop, D. 2009. *Extending Learning: Constructing Community Through Space Design*. Inaugural meeting of UK Learning Spaces Special Interest Group, Sheffield Hallam University, 23 April 2009.
- BBC News. 2011. *Average UK student debts 'could hit £53,000'*. Education and Family [online]. Available at: <http://www.bbc.co.uk/news/education-14488312> [Accessed 9 March 2012].
- Booth, A. and Brice A. (eds). 2004. *Evidence-based Practice for Information Professionals: A Handbook*. London: Facet Publishing.
- Brophy, P. 2006. *Measuring Library Performance: Principles and Techniques*. London: Facet Publishing.
- Bryant, J.E. 2007. *An Ethnographic Study of User Behaviour in Open3 at the Pilkington Library*. Loughborough University, MSc dissertation. Loughborough: Loughborough University.
- Bryant, J., Matthews, G., and Walton, G. 2009. Academic libraries and social and learning space: A case study of Loughborough University Library, UK. *Journal of Librarianship and Information Science*, 41(1), 7–18.
- Bundy, A. 2004. *Places of Connection: New Public and Academic Library Buildings in Australia and New Zealand*. Paper for Library Buildings Conference, Bournemouth, UK, 5–6 February 2004.
- Connaway, L.S. and Powell, R.R. 2010. *Basic Research Methods for Librarians*. 5th ed. Santa Barbara, California: Libraries Unlimited.
- Fried Foster, N. and Gibbons, S. (eds). 2007. *Studying Students: The Undergraduate Research Project at the University of Rochester*. Chicago: Association of College and Research Libraries, a division of the American Library Association.
- Ludwig, L. and Starr, S. 2005. Library as place: Results of a delphi study. *Journal of the Medical Library Association*, 93(3), 315–326.
- Markless, S. and Streatfield, D. 2006. *Evaluating the Impact of Your Library*. London: Facet Publishing.
- Matthews, G. et al. 2009. *The Effective Use of Space in University and Public Libraries: Current Issues*. IFLA Pre-Conference Libraries as Place and Space, Torino, Italy, 19–21 August 2009. [Online]. Available at: <http://www.ifla2009.it/online/wp-content/uploads/2009/06/Final.Graham.pdf> [accessed 18 April 2012].
- Pickard, A.J. 2012. *Research Methods in Information*. 2nd ed. London: Facet Publishing.
- Pothoff, J. K. et al. 2000. An evaluation of patron perceptions of library space using the role repertory grid procedure, *College and Research Libraries*, 61(3), 191–203.
- Ramsden, B. 2011. Evaluating the impact of learning space. *Reference Services Review*, 39(3), 451–464.
- SCONUL. 2012a. National Student Survey (NSS) Data. [Online]. Available at: <http://vamp.diglib.shrivenham.cranfield.ac.uk/statistics/national-student-survey-nss-data> [accessed 29 March 2012].

- SCONUL. 2012b. Annual Library Statistics [Online]. Available at: <http://vamp.diglib.shrivenham.cranfield.ac.uk/statistics/sconul-annual-library-statistics> [accessed 29 March 2012].
- Webb, K.M., Schaller, M.A., and Hunley, S.A. 2008. Measuring library space use and preferences: Charting a path toward increased engagement. *Libraries and the Academy*, 8(4), 407–422.
- Wolcott, H.F. 1999. *Ethnography: A Way of Seeing*. Walnut Creek: AltaMira Press.
- Wu, S.K. and Lanclos, D. 2011. Re-imagining the users' experience: An ethnographic approach to web usability and space design. *Reference Service Review*, 39(3), 369–389.
- Xia, J. 2005. Visualizing occupancy of library study space with GIS maps. *New Library World*, 106(5), 219–233.

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- Applegate, R. 2009. The library is for studying: Student preferences for study space. *Journal of Academic Librarianship*, 35(4), 341–346.
- Baker, L. 2006. Observation: A complex research method. *Library Trends*, 55(1), 171–189.
- Boone, M.D. 2003. Monastery to marketplace: A paradigm shift. *Library Hi Tech*, 21(3), 358–366.
- Booth, A. 2006. Counting what counts: Performance measurement and evidence-based practice. *Performance Measurement and Metrics*, 7(2), 63–74.
- Brindley, L. 2006. Re-defining the library. *Library Hi tech*, 24(4), 484–495.
- Bryant, J., Matthews, G., and Walton, G. 2009. Academic libraries and social and learning space: A case study of Loughborough University Library. *Journal of Librarianship and Information Science*, 41(1), 7–18.
- Cocciolo, A. 2010. Alleviating physical space constraints using virtual space? A study from an urban academic library. *Library Hi Tech*, 28(4), 523–535.
- Demas, S. 2005. From the Ashes of Alexandria: What's Happening in the College Library, in *Library as Place: Rethinking Roles, Rethinking Space*. Washington, DC: Council on Library and Information Resources, 25–40. CLIR Publication No 129. [Online]. Available at: www.clir.org/pubs/reports/pub129/pub129.pdf [accessed 18 April 2012].
- Freeman, G.T. 2005. The Library as Place: Changes in Learning Patterns, Collections, Technology, and Use, in *Library as Place: Rethinking Roles, Rethinking Space*. Washington, DC: Council on Library and Information Resources, 1–9. CLIR Publication No 129. Available at: www.clir.org/pubs/reports/pub129/pub129.pdf [accessed 18 April 2012].
- Gayton, J.T. 2008. Academic libraries: “Social” or “Communal”? The nature and future of academic libraries. *Journal of Academic Librarianship*, 34(1), 60–66.
- Given, L.M. and Leckie, G.J. 2003. Sweeping the library: Mapping the social activity space of the public library. *Library & Information Science Research*, 25, 365–385.

- Høivik, T. 2008. *Count the Traffic*. Paper presented at the 74th World Library and Information Congress (IFLA), Quebec, Canada. Available at: <http://archive.ifla.org/IV/ifla74/papers/107-Hoivik-en.pdf> [accessed 18 April 2012].
- Oishi, S.M. 2003. *How to Conduct In-person Interviews for Surveys*. Thousand Oaks: Sage.
- Oyston, E. (ed.). 2003. *Centred on Learning. Academic Case Studies on Learning Centre Development*. Aldershot: Ashgate.
- Partridge, H.L. and Hallam, G.C. 2005. Developing a culture of evidence-based practice within the library and information profession: The impact of library science education. A teaching and learning model from the Queensland University of Technology, in *Management, marketing, evaluation and promotion of library services, based on statistics, analyses and evaluation in your own library*. Satellite meeting of the IFLA Management and Marketing Section, 71st WLIC 2005, 9–11 August 2005, Bergen, Norway. Unpublished. Available at: <http://eprints.qut.edu.au/1973> [accessed 20 August 2012].
- Rizzo, J.C. 2002. Finding your place in the information age library. *New Library World*, 103(1182/1183), 457–466.
- Shill, H.B. and Tonner, S. 2003. Creating a better place: Physical improvements in academic libraries 1995–2002. *College and Research Libraries*, 64(6), 431–466.
- van Beynen, K., Pettijohn, P., and Carrel, M. 2010. Using pedestrian choice research to facilitate resource engagement in a midsized academic library. *Journal of Academic Librarianship*, 36(5), 412–419.
- Tampere University Library 2012 *Welcome to the University Library*. Available at: <http://www.uta.fi/kirjasto/en/index.html> [accessed 11 September 2012].