

Designing better Workspaces for Academic Library Staff Case Study of University of Queensland Library

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Abstract

The paper examines library staff experiences of workspaces in academic libraries. It draws upon the data from a survey of "Staff Experience of Library Physical Spaces" made available to the staff at different branches of the University of Queensland Library in 2013. The survey focused on library staff overall satisfaction with the quality of their workspaces and their opinions on positive and negative features of these spaces. The staff rated their level of satisfaction with aspects of physical workspaces in the library including lighting, acoustics, thermal comfort, indoor air quality, and storage. In addition, four design issues of security, flexibility, welcoming nature of library entry, and wayfinding were examined in detail. 79 library staff completed the survey and more than 50 responses were recorded to the survey open-ended questions. The analysis of the qualitative data identified design-related factors that are most important for the library staff and provided insights into possible design improvements to library staff workspaces.

Drawing upon the major themes emerged from the staff comments, the paper concludes with a number of considerations for planning and design of workspaces for library staff including: (1) strategies to maximise environmental comfort i.e. thermal, acoustics, and visual comfort; (2) functional requirements of staff spaces in relation to the work-related activities i.e. personal and work-related storages; (3) human factors and ergonomics; (4) psychological impacts of interior design elements on staff productivity and satisfaction; (5) strategies to encourage collegial interactions and foster a sense of community, pride, and ownership over workspaces.

Keywords: Academic library spaces; Internal staff areas; Staff experiences; Workspace design; Post occupancy evaluation

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1. Introduction

Internal staff areas in libraries are defined as "all library premises or areas not accessible to the public" and "set aside for the activities of staff engaged in the management and operation of the establishment" [1]. These areas may include storage rooms for materials and supplies, meeting rooms, and amenities such as toilets and kitchenette. Importance of spaces for library staff cannot be denied, given the large numbers of staff working in academic libraries, "the proportion of the total library space which they occupy, and the potential impact which the design of this space has on effective delivery of services and on staff morale and motivation" [2].

The importance of staff spaces in libraries are often overlooked and the library staff is not usually included in decision-making about library space design and planning. This may be reflected in a way in the knowledge gap that exists about staff spaces in library planning and design literature. According to Purcell [2], "project briefs often prefer to concentrate on the educational and research benefits accruing from a new build or renovation" and fail to closely examine planning and design requirements of spaces for library staff. This, however, is beginning to change in recent years and the works done by the Society of College, National and University Libraries (SCONUL) (e.g. Seminar on Staff Space in 2009) and International Federation of Library Associations and Institutions (IFLA) [e.g. 3, 4] present examples of the effort to address staff accommodation considerations and requirements in library buildings.

In a chapter on internal staff areas, Bisbrouck [1] addresses functional requirements and specific needs of spaces for library staff and examines a number of alternative organizational approaches. He distinguishes among different tasks performed in internal staff areas: "tasks related to the library collections (i.e. document selection and acquisitions and recording of collections);"

and "tasks associated with public-oriented activities (i.e. preparation of events and organization of activities aimed at specific user groups); and (3) administrative tasks i.e. financial and library-personnel management" [1]. The organisation and relationships of internal staff areas are then largely determined by the organisation of the work and structure of the system i.e. numbers and grades of library staff employed for various tasks. The structure of internal staff areas is also influenced by the size of the library. In a small library where a small team of staff complete all the different tasks, the staff work areas may be best located in close proximity to the library's public areas whereas in a larger library where a larger and more specialised team of staff is engaged, most of the library staff areas may have no immediate interface with the public areas [1].

In terms of space allocation standards or minimum space required, the average work area per full-time library staff should be greater than for a standard administrative office (10- 12 square metres per employee) to accommodate the space required for storage of collections awaiting processing. An average area of 15 square metres per workstation not including circulation is then recommended for every full-time library staff [1]. In addition, while providing minimum space area is important, different internal staff areas must also be "habitable." For example, an office of 12 square meter area is effectively habitable and functional if its dimensions are around 3 meters by 4 meters as opposed to a long and narrow space of 5.5 meters by 2.2 meters. Simplicity of form, shape, and volume may also be preferred to allow room for flexibility and adaptation to changing needs [1].

Among design considerations for internal staff areas are: ensuring continuity between the various document processing tasks; and segregating of document-processing circuit from the public. Document processing includes various tasks i.e. locating documents within a commercial distribution system, ordering from publishers, and receiving orders. While document processing chain may comprise of various types of operations, the key is to ensure continuity between the operations. Another design consideration has to do with segregating document processing chain from the public. An implication of this may be having two library entrances, one for the public and one for staff and deliveries. Other design considerations for spaces for library staff also include: maximising environmental comfort of workspaces; and finding the right balance between openness versus enclosure or an open-plan layout versus individual offices. Faulkner-Brown's [5] ten commandments for generic university library buildings, which was later revisited by McDonald [6], can also be related to the design of effective and responsive spaces for library staff. Ten quality indicators for library staff accommodation then can be identified as: flexible; compact; accessible; extendable; varied; organized; comfortable; constant in environment; secure; and economic.

2. Method

Identifying the knowledge gap in design requirements and considerations for staff areas in academic libraries and drawing upon the limited existing knowledge about library staff physical workspaces, we prepared a plan to examine the state of workspaces in various branches of University of Queensland (UQ) library in 2013. Following a walkthrough observation of staff workspaces in three branches at St Lucia Campus in Brisbane, and as part of a major evaluation of UQ library spaces, a survey instrument was developed to collect information about physical spaces of UQ libraries from the library staff. The aim of the major evaluation study was to better understand library space utilization and identify the weaknesses and strengths in relation to physical spaces of UQ libraries in order to make informed decisions about future improvements.

2.1. Staff library space experience survey

The online survey instrument, *Staff Experience of Library Physical Environments*, focused on aspects of library workspace and library staff experiences with and perceptions of these spaces. The first section of the survey included questions about *staff demographics* and the nature of work activities in the library. This section was followed by a set of questions about the *quality of physical spaces* in the library i.e. staff experiences and levels of satisfaction with these spaces. The survey respondents were asked to rate their overall satisfaction with the quality of the workspaces and describe some of the positive and negative features of these spaces. The next question required the library staff to rate their levels of satisfaction with aspects of the physical spaces including: (1) daylight/natural light; (2) artificial light; (3) acoustics/noise control; (4) thermal comfort during summer and winter; (5) indoor air quality/ventilation; (6) storage provided in the work areas; (7) security of the workspace; and (8) wayfinding in library spaces. Each of these likert scale question was followed by an open-ended question asking the survey respondents to provide further details and comments. Finally, the issues of *flexibility* of workspaces and *welcoming nature of the library* entry were examined through a number of likert scale and open-ended questions.

2.2. Participants

96 library staff started the survey and 79 completed it to the last question. Of this number, 35 responses were from the library staff who mainly worked at Social Sciences and Humanities Library (SSHL). 11 library staff also specified that they work in more than one location (Table 1).

Table 1: Library staff responses to "In which branch of UQ library do you usually work?"

In which branch of UQ library do you usually work?		
Architecture & Music Library	4	4.17%
Biological Sciences Library	3	3.13%
Dorothy Hill Engineering & Sciences Library	12	12.50%
Fryer Library	6	6.25%
Gatton Library	2	2.08%
Herston Health Sciences Library	4	4.17%
Ipswich Library	4	4.17%
Mater McAuley Library	3	3.13%
PACE Health Sciences Library	4	4.17%
Princess Alexandra Hospital Library	1	1.04%
Rural Clinical School	2	2.08%
Social Sciences & Humanities Library	35	36.46%
Walter Harrison Law Library	5	5.21%
Other	11	11.46%
Total	96	

Table 2: Age ranges of survey respondents

What age range do you fall into?		
Below 30	11	11.3%
30-39	18	18.6%
40-49	15	15.5%
Above 50	46	47.4%
I'd rather not answer this question	7	7.2%
Total	97	

Almost half of the survey respondents indicated that they are above 50 years old (Table 2), with the majority

of the survey responses coming from the female library staff (73%, n=69). 19 Male staff also completed the survey and seven staff chose not to reveal their gender or answer the question of gender.

In terms of work pattern and number of years working in one of the UQ libraries (Figure 1), 64% (n=62) of the survey respondents were employed full time, with about 71% (n=63) working in UQ libraries for the last three years.

3. Results

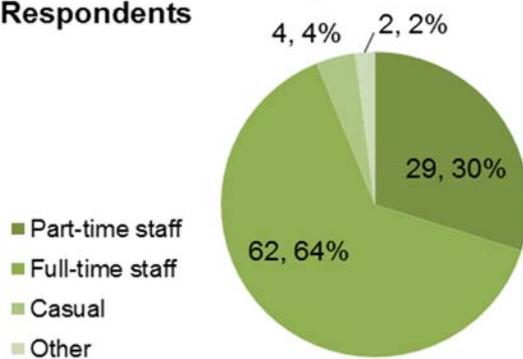
The following sections present the findings on the satisfaction of the UQ library staff, who completed the survey, with aspects of their library spaces and specifically their workspaces in the library. In addition, key themes from the staff comments about positive and negative features of the library workspaces are presented.

3.1. Library staff satisfaction with the quality of workspace

In terms of library staff satisfaction with the overall quality of their workspaces, the data suggests that around 57% of the respondents (n=48) are either Very Satisfied or Somewhat Satisfied, which is a positive finding. However, the finding suggesting 33% of the survey respondents (n=27) are either Somewhat Satisfied or Very Unsatisfied with the quality of their workspace highlights the need for a close examination of the factors leading to the negative experiences and perceptions (Table 3).

In terms of library staff satisfaction with different aspects of their workspaces, mixed findings were achieved and no definitive pattern could be suggested for any of these aspects (Figure 2).

Work Pattern of Survey Respondents



Number of Years Working in UQ Libraries

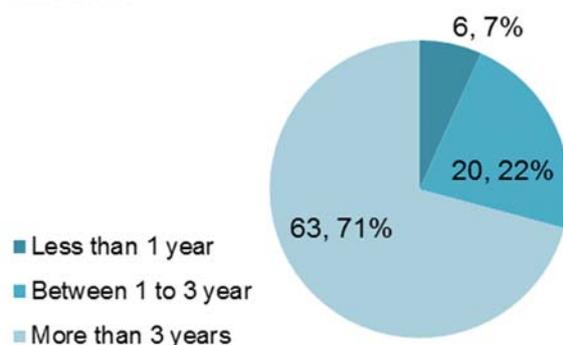


Figure 1. Pie charts indicating Work Pattern of Survey Respondents (left) and Number of Years Working in UQ Libraries (right)

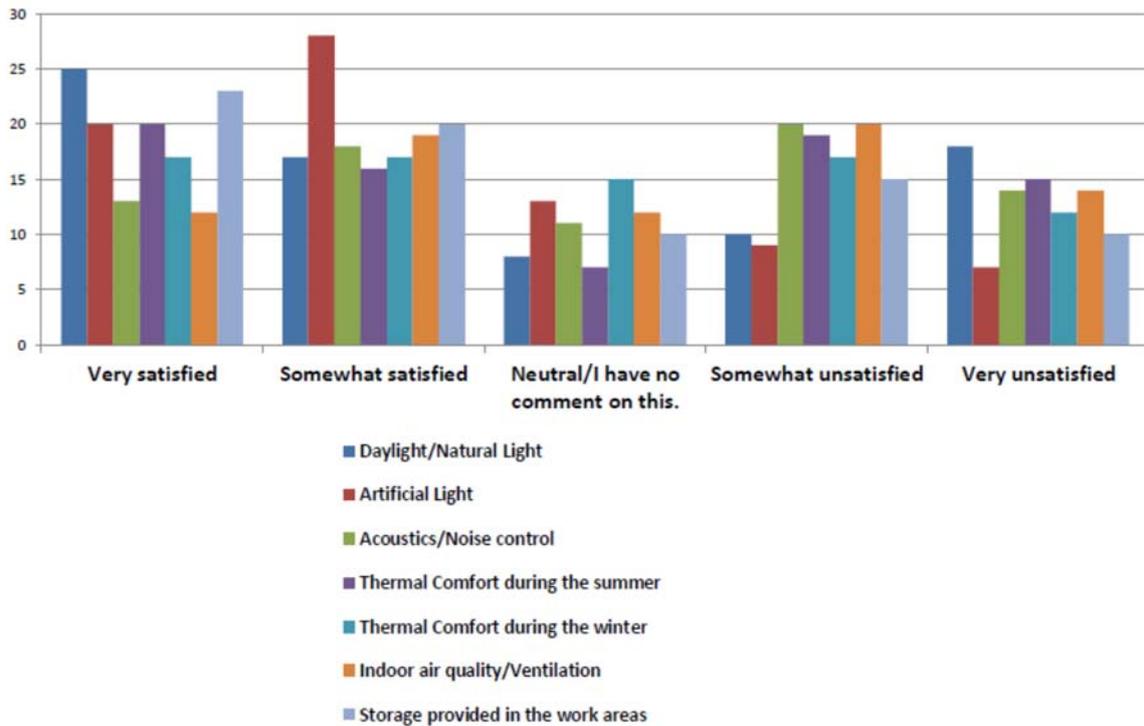


Figure 2. UQ library staff satisfaction with different aspects of their workspaces

Table 3: Library staff satisfaction with the overall quality of their workspaces

How satisfied you are with the quality of your workspace?		
Very Unsatisfied	8	9.64%
Somewhat Unsatisfied	19	22.89%
Neither Satisfied nor Unsatisfied	8	9.64%
Somewhat Satisfied	30	36.14%
Very Satisfied	18	21.69%
Total	83	

However, UQ library branches appear to be doing well in terms of the provision of artificial light in their spaces. Acoustics or noise control and indoor air quality were also found two areas which may need to be closely examined with the least satisfaction of the survey respondents with these two design related aspects (Figure 2).

3.2. Positive features of UQ library staff workspaces

76 comments were recorded to the question related to positive features of UQ library staff workspaces. The library staff comments about the positive features of

their workspaces can be divided in two categories: (1) comments addressing issues related to people, processes, and policies (10 references); and (2) comments highlighting positive features of physical environments (62 references).

3.2.1. Positive features related to people, processes and polices

Among the staff comments with the theme related to people, processes, and policies in the work environment there were references to "Caring colleagues" with "a positive attitude to work and a desire to produce good results," "friendly staff and atmosphere," good collegial interactions and "energy of the students."

Shared space with Student Centre and Student Services is conducive to collaborative effort (a UQ library staff).

3.2.2. Positive features of physical workspaces

Figure 3 presents the themes emerged from library staff comments about positive feature of spaces at UQ library branches. **Good furniture** i.e. ample sized, adjustable, and ergonomic desks and chairs was mentioned 18 times in the library staff comments as a positive feature of their workspace. Other themes that emerged from the staff comments were library spaces being **spacious**

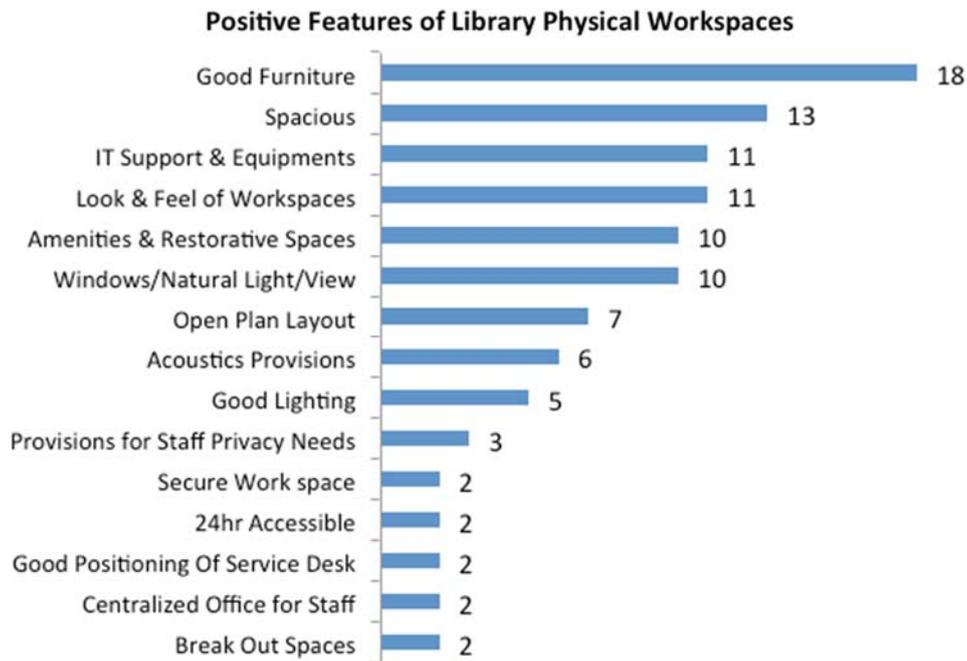


Figure 3. Themes from library staff comments on POSITIVE features of library physical spaces

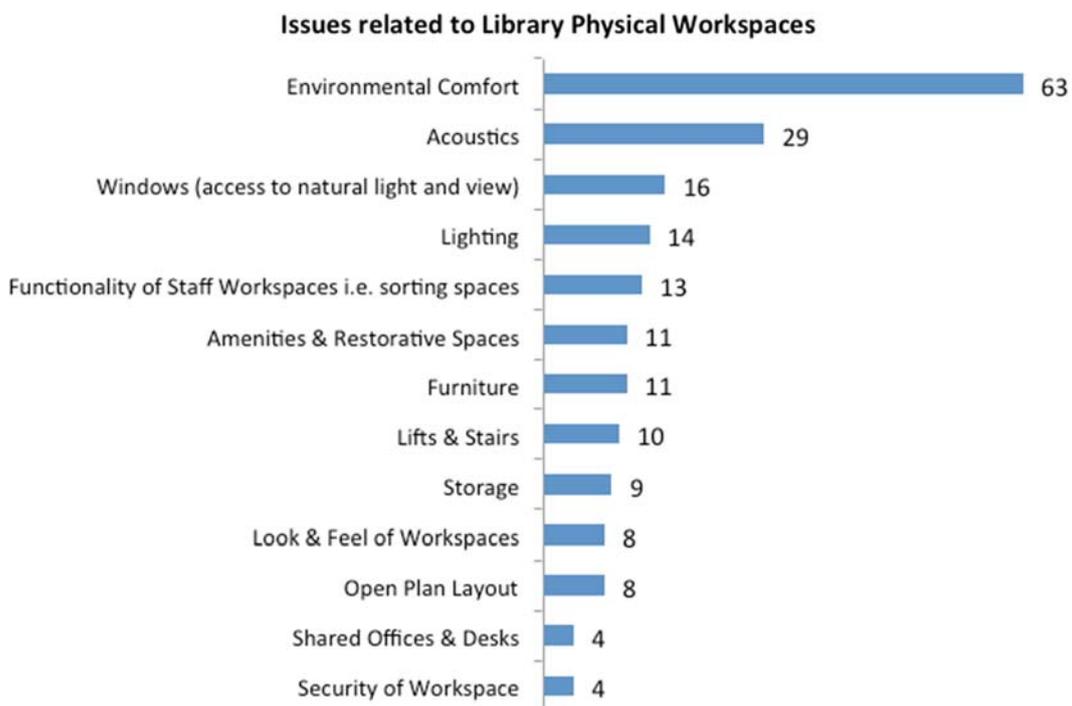


Figure 4. Themes emerged from UQ library staff comments on NEGATIVE features of library physical spaces

and adequately sized (13 references) and having access to **IT support and equipment** (11 references). In addition, 11 staff comments referred to features related to the **look and feel of workspaces** i.e. being user friendly, comfortable, clean, new, and having friendly atmosphere and attractive ambience.

Inclusion of appropriate **amenities and restorative spaces** and access to **windows/natural light/views** to outside were also among the themes identified from the library staff comments. Tearooms, kitchenette and staff lounge or common rooms as well as the special features such as the indoor garden in Ipswich library were considered as forms of restorative spaces.

[There are] excellent facilities at Ipswich for both staff and students. The garden crates an ambiance that is conducive to work and to study (A UQ library staff).

Other positive features of physical workspaces from the library staff point of views included: **Provisions for staff privacy needs** i.e. offering personal/individual workspaces and creating open plan office spaces with partitions around desks/pods which allows for collegial interactions while maintaining some levels of privacy needs; **secure work space; 24hr accessibility; good positioning of service desk; centralized office for staff;** and **break out spaces** i.e. meeting rooms and alternative spaces to accommodate consultations and discussions without impacting on the work group.

In addition to these themes, four library staff referred to four features of their workspace which they viewed as positive features: "historical significance of the library as a heritage listed building;" "simple arrangement of shelves and sorting system;" "air-conditioned spaces;" and "availability of a variety of spaces."

3.3. Issues with UQ library staff workspaces

Similar to comments in relation to positive features of workspaces, the library staff made some references to issues related to people, processes and policies (7 references). In relation to the negative features of physical workspaces (Figure 4), the highest number of references in relation to the negative aspects of physical workspaces made by the library staff was **issues with the provision of environmental comfort** i.e. thermal comfort, ventilation and indoor air quality (63 references). Air-conditioning system clearly presents a challenge with 45 staff comments directly stating it as a negative aspect of their physical workspace:

The temperature in all parts of the Library (staff and student areas) is quite erratic. Group rooms can become unbearably hot whilst the staff area can be quite cold. The air conditioning sensors in some parts of the Library were installed before internal walls were erected (A UQ library staff).

Given the range of individuals' preferences for thermal comfort, this finding may be expected. However, it is important to provide a degree of staff control over the room temperature and ensure thermal comfort through incorporating sensors in appropriate locations and regularly checking them.

The library staff comments suggest **the issue of noise or acoustics provision** as the second most significant challenge in relation to workspaces especially in open plan office layout (29 references). This was followed by references to the **lack of windows** i.e. the limited access

to the natural light and view and the resulting need for constant artificial light and **issues with artificial lighting**.

Problems in relation to the functionality of workspaces was also addressed by 13 library staff, highlighting issues with the size of spaces and the area provided to perform certain work activities including sorting materials:

There is nowhere near enough sorting space, either at my desk or elsewhere in the workroom. This leads to serious health and safety issues due to over-stacking of boxes and awkward sorting positions on whatever spare table top or trolley we can find (A UQ library staff).

There is limited space for working on accessions. It is difficult to clear enough space for a traditional desk and space to sort material. There is limited space for trollies and small tables; sometimes these are at an uncomfortable height to work with (A UQ library staff).

Lack of appropriate amenities and restorative spaces, inadequate furniture, issues with lifts and stairs, and inadequate personal and work-related storage were other themes emerged from staff comments. The four last themes which were identified from staff comments about negative aspects of library workspaces included unappealing look and feel of workspaces, challenges associated with open plan layouts, difficulty in relation to shared offices and desks, and problems related to the security of workspaces.

4. Concluding remarks

Our study looked into aspects of library spaces related to internal staff areas and workspaces provided for the staff in academic libraries. A survey instrument was used to collect both qualitative and quantitative data from the library staff working in different branches of University of Queensland library. The quantitative data on the library staff satisfaction with different aspects of the library spaces did not suggest a definitive pattern for any aspect of natural light, artificial light, acoustics, thermal comfort during the winter and the summer, indoor air quality, and storage provided. While some staff were very unsatisfied with an aspect of library physical spaces, more or less similar number of staff were very satisfied with the same aspect. Individual differences in preference for certain design qualities, optimum light or temperature, and the different spaces of the UQ library branches where a certain survey respondent was working in, all account for this mixed finding. The qualitative data on negative and positive features of library workspaces from the viewpoints of staff cast light into areas of improvement for any future planning, design, and refurbishment to library spaces.

Drawing upon the major themes emerged from the staff comments, we conclude with five major considerations for planning and design of workspaces for library staff including: (1) examine strategies to maximise environmental comfort i.e. thermal, acoustics, and visual comfort; (2) address functional requirements of staff spaces in relation to the work-related activities i.e. personal and work-related storages; (3) take into account human factors and ergonomics; (4) address psychological impacts of interior design elements on staff productivity and satisfaction; and (5) examine strategies to encourage collegial interactions and foster a sense of community, pride, and ownership over workspaces.

Acoustic, visual, and thermal comfort, and ergonomic considerations need to be closely addressed in staff spaces. Staff survey comments specifically highlighted the importance of these design related factors, e.g. adjustable, ergonomic, and flexible furniture was stated as a positive feature of library workspaces:

*My personal desk space can be raised or lowered to accommodate a back injury.
Doors can be closed to cut down the noise
(A UQ library staff).*

Functional requirements of internal staff areas are of paramount importance and any decision in this regard needs to be made with consultation of the library staff who have the first hand knowledge and experience in this regard. Provision of proper work-related storage in necessary locations is one example of these requirements. In multi-level library buildings, Bisbrouck [1] recommends provision of storage rooms for storing materials, furniture, equipment, and building maintenance supplies (i.e. cleaning and housekeeping) on each floor. Another important design consideration has to do with psychological impacts of interior design of workspaces on staff. Factors such as access to windows and views, as well as provision for staff privacy needs and personalisation of workspaces need to be considered in this regard. If open plan layout is to be selected for staff area, considerations need to be taken into account for finding the right balance between privacy and visibility. For example, quiet and private spaces for consultations and project work may be included. In terms of the interface with the library users, "one part of the staffs offices may have a direct view onto the public areas (which does not necessarily mean direct access), thereby reinforcing the feeling of belonging to the community formed by users and staff" [1].

Finally, library staff should be engaged when space-related and other strategic decisions are made. Purcell [2] argues that "Library staff are often the 'forgotten

army' when crucial and strategic decisions are being taken." Adopting the 12 key variables identified by AMA and haa design [7] as critical to creating successful learning spaces, the following steps in creating good library staff accommodation can be determined, which further supports our study findings in the case study of spaces in UQ library branches:

1. Articulate a vision for staff accommodation e.g. Integrate the staff accommodation plan with other library plans;
2. Select an informed and knowledgeable design and implementation team and get the involvement of all stakeholders (i.e. library staff);
3. Learn from other exemplars and experiment with new ideas and innovative solutions;
4. Integrate Information and Communication Technologies (ICTs) and promote flexibility for different modes of work;
5. Re-skill the library staff in how best to use new workspaces;
6. Managing the space well in terms of maintenance, layout, and utilization;
7. Schedule ongoing feedback, act upon it, and publicize the lessons learned [2].

Acknowledgements

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