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AUTHOR King, Helen
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ABSTRACT

In May 2000, a survey of current academic library building activities in Australia was undertaken. The libraries were asked to identify current or planned building projects, the drivers of the projects (i.e., why they were being undertaken), assumptions about the future of academic libraries underlying the planning, and what were seen as the key innovations in the new facility. The broad purpose of the survey was to identify any significant new trends that were emerging in the physical planning of academic libraries. Thirty-eight libraries were surveyed, and seventeen indicated that they were currently involved in significant building activity. Two New Zealand academic libraries also responded. The survey also canvassed comments from respondents on the challenges they faced in negotiating support for new facilities. Future models for academic libraries were examined, including "Information Commons," the integrated facility, the learning center, and the decentralized model. The paper also provides background on an investigation of trends in the planning and design of academic library facilities that took place at La Trobe University (Victoria, Australia) in preparation for a number of library building projects that would alleviate severe space problems at three of the campus libraries. (Contains 19 references.) (MES)

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THE ACADEMIC LIBRARY IN THE 21ST CENTURY – WHAT NEED FOR A PHYSICAL PLACE?

Helen King
La Trobe University,
Bendigo, Australia
Email h.king@bendigo.latrobe.edu.au

Introduction

Universities in Australia are facing significant challenges. Government funding is contracting, globalisation of higher education is increasing, and universities face competition from not only other traditional institutions but also commercial entities which have entered the higher education arena. Advances in technology have enabled the emergence of virtual institutions which have no physical boundaries or constraints, and the development of online teaching makes the location of students increasingly irrelevant. The student market and their needs have also changed. Life-long learning, mature age learners and part-time participation are now significant factors which must be accommodated. Universities have responded with the development of off-shore campuses in strategic locations; forging alliances with other institutions, not restricted by national boundaries; carving of niche markets and actively promoting specialist courses; maximising opportunities presented by information technology; the adoption of new approaches such as problem based and student centred learning; and the provision of flexible and online delivery strategies for teaching and learning. In particular, the advances in technological capabilities and the resulting organizational adaptation to technological change by institutions, are likely to have significant effects on the academic library, its services and enabling physical facilities. [1]

Background

Three years ago, La Trobe University a multi-campus university located in Victoria, Australia undertook an investigation of trends in the planning and design of academic library facilities. This was in preparation for a number of library building projects which would alleviate severe space problems at three of the campus libraries. The proposed building projects comprised a major redesign and reconfiguration of the main services floor at the Bundoora campus library in metropolitan Melbourne; a new library for the Albury/Wodonga campus in north-eastern Victoria and an extension into existing non library space at the Bendigo campus located in central Victoria.

Information was collected through reviews of the literature and a series of site visits to libraries in the United States. [2] The key issues for academic libraries then, as now, included the need to reposition from custodian of locally held collections to the gateway to information beyond the library walls; accommodating the rapid growth of information resources in electronic form; the investment and increasing dependence on information technology as the enabler in the delivery of library and information services; the changing teaching and learning environment and the converging roles of libraries and information technology providers. The impact of these issues was reflected in the changing nature of physical place in evidence in the new and redesigned library buildings being constructed at that time.

This investigation resulted in the identification of some key features or requirements of buildings which would meet the changing needs of the academic library and its users in a rapidly evolving higher education environment. These design principles have informed the planning for the La Trobe University Library building projects and comprise

- Ensuring maximum flexibility to facilitate internal redesign as the needs of the user and technology change, and unanticipated demands arise. This includes floor loading capacity to enable the move

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- to open access compactus shelving if required, and the wiring and cabling of buildings to minimise impediments to the redesign of existing areas to meet new needs;
- Provision of different sorts of space for the range of activities and services which libraries will provide - single and group study, space for activities which require active help and assistance from library staff, service counters, self service areas which encourage independence, allow choice and meet the needs of the “now” generation, spaces for teaching/learning/training in information skills and literacy, space for effective use of information resources, appropriate space for library staff, space to house information resources in a variety of formats and their associated technology requirements, and space for less scholarly activities e.g. comfortable reading space;
- Zoning, differentiation and protection of each type of space for different interactions, noise levels, technology support and service support requirements. Providing a seamless linking for the user;
- Incorporation of the new space norms or standards in areas designated for both print and electronic access and group study. Increase in space for workstation equipment as electronic resources increase and clients spend longer periods at these workstations. Additional space for the technology support infrastructure.

To date, the Bundoora campus library project has been completed and architect plans have been produced for the Albury/Wodonga campus library, but the project still awaits final funding approval. The Bendigo project has advanced to the stage where the concept of a new library building has been included in the revised master plan for the campus.

Australian Academic Library Building – The Current State

Continued monitoring of emerging higher education trends, and the potential impact of these on academic library services and associated physical facilities is essential. There is often a lengthy and uncertain time frame for capital works programs and the final funding approval for building projects. Serious planning may begin many years before project funding is finally authorised and such approval can be based on needs and predictions which are several years old. In a rapidly changing environment this can lead to a mismatch between what is delivered and what is now required.

In May 2000, a survey of current academic library building activities in Australia was undertaken. The libraries were asked to identify current or planned building projects, the drivers of the projects (i.e. why they were being undertaken), assumptions about the future of academic libraries underlying the planning and what were seen as the key innovations in the new facility. The broad purpose of the survey was to identify any significant new trends which were emerging in the physical planning of academic libraries. Thirty-eight libraries were surveyed and 17 indicated that they were currently involved in significant building activity. Two New Zealand academic libraries also responded.

The Rationales

Much of the activity was in response to changing university directions, including the rationalisation and sometimes closure of campuses and relocation of academic activities to other sites. This reflects a continuing evolution of the Australian higher education system since the massive restructuring in the late 1980s which saw amalgamation of institutions and establishment of multiple campuses of varying size and geographic dispersion. Nine institutions were extending their library buildings, as a consequence of both institutional consolidation and/or recognition that current library space was inadequate for both library users and collections. Seven institutions were planning or constructing new library buildings for newly established campuses (some offshore) or campuses where, again, libraries were considered inadequate in terms of sufficient space. Six libraries were undertaking projects which involved major reconfiguration of existing space to meet both changing library user behaviour and needs, and the shifting balance of library collections from print to electronic.

Other reasons included the need to achieve staffing efficiencies and reduced operating costs, improving workflow and functional layouts, and providing accommodation for new services and facilities to support changing university strategic directions, such as off-shore and off-campus teaching, and flexible learning initiatives.

The Academic Library of the Future – Underlying Assumptions

The survey respondents indicated a number of common assumptions about the academic library of the future which influenced their planning. These included

- print resources will still be required for the foreseeable future; access to networked electronic resources will increase. The balance between formats will vary with discipline areas. More rather than less space will be required for electronic access;
- there will be continued reliance on accessing and using information on campus, as well as from home and the workplace. Some clients will utilise their own equipment in the library e.g. laptops;
- independence of clients and demands for self-service facilities will increase, but they will need assistance in sifting through the range of options presented in the building. The concept of the one-stop shop for electronic resources, tools and assistance will increase in importance;
- a physical environment which is both psychologically supportive, aesthetically pleasing and safe will be important;
- clients will continue to study and learn in a variety of ways as the emphasis on flexible and resource based learning increases. Work for assessment will often be collaboratively undertaken and be presented in a variety of formats. This has implications for the types of study space and range of equipment clients will require;
- clients will demand longer hours of opening and 24 hour access to computing facilities as flexible learning opportunities increase;
- electronic and information literacy and the role of library staff in teaching information searching skills will increase in importance and require electronic training facilities;
- equity issues will demand accessible and specialist facilities for clients with a disability.

Respondents also consistently identified the requirement to ensure that the building was sufficiently flexible to accommodate future and uncertain change, as the access and use of information resources change, and different technologies are adopted and utilised in the transforming teaching and learning environment. Significantly, none of the responses questioned the continuing need for physical space or foreshadowed any decrease in size of that space in the future.

The Innovations

These underlying assumptions shaped the key innovations in the various building programs. A number of survey replies noted that the new features were in response to specific needs identified from surveys of client groups. Some developments also reflected attempts to capitalise on the potential synergies presented by organisational restructuring and realignments, particularly between library, computing, teaching and learning and other academic support facilities.

Specific features identified in the survey responses included

- 24 hour access to computer laboratories;
- physical isolation of specific areas to allow longer hours of access e.g. open reserve collection and adjacent computer, photocopying and study facilities;
- flexible learning spaces equipped with network access capability for group study and project work;
- workstations equipped for electronic information access including multimedia resources, and applications software such as word processing. Specialist assistance close at hand;
- production facilities for use by clients to develop their own audiovisual and multimedia resources in a variety of formats;
- videoconferencing facilities for client use;
- facilities to support client participation in networked online discussion groups;
- laptop docking facilities, wireless laptops available for loan;
- specialised facilities for researchers such as fully equipped workstations supporting information access and retrieval with full word processing and printing facilities adjacent to specialist assistance from reference librarians;
- special study domain for postgraduate students;
- open access compactus shelving
- provision of adjacent refreshment facilities or cafes including internet/cyber cafes;

- increased provision of self help facilities such as open reserve;
- teleconferencing facilities for administrative purposes;
- co-location of service desks for increased staffing efficiencies; and
- increased physical integration with related units in the organisational structure such as information technology, student support, and teaching and learning.

The Overseas Perspective

The survey was supplemented by information on current academic library planning and construction programs obtained from university and college websites, primarily in North America, and responses to questions posted to a number of online discussion groups. Features of these building programs highlighted as being innovative or distinctive were similar to those identified by the Australian and New Zealand academic libraries

- areas equipped with tele and videoconferencing facilities for distance teaching and learning;
- 24 hour computer and wired study facilities for laptop computers to enable flexible learning;
- increased emphasis on the social/leisure potential of academic libraries with the addition of gallery/exhibition areas and coffee bars or cafes;
- development of “information commons” facilities;
- co-location of the library facility with related units such as multimedia development and production services, information technology, centres for teaching and learning and academic support; and
- an integrated learning environment which combines or integrates traditional library services with other learning and support services such as multimedia production laboratories, information technology support, language laboratories, study skills support, and careers services (see, for example, Banks [3]).

The Challenges

The survey also canvassed comments from respondents on the challenges they faced in negotiating support for new facilities. Some reported funding constraints and pressures from competing interests limited full implementation of the original concept. One respondent stated that there still remained strong support for a traditional library as an integral part of the student experience, in line with the institutional strategy of providing quality on-campus education, rather than seeing the future as a virtual experience. A number commented on the value of client surveys to provide additional justification for new proposals. Unexpectedly, there was little comment on any increasing perception by university administrators that need for library space and facilities was on the decline, with the rapid growth and uptake of networked electronic resources. This may be because the survey respondents had already achieved success in obtaining support and funding for projects. Nevertheless it is seen by many in the current literature as the next great library debate.

The emergence of virtual degree granting institutions in North America compelled the Association of College and Research Libraries to issue a position paper recently on the continued need for academic libraries. [4] The paper considered the question “does a degree granting institution of higher education need a physical library and librarians for accreditation?” The Association mounts strong arguments against reliance only on digital information, stating this is not equivalent to access to an adequately supported academic library. With the move to independent learning, the Association contends that it is even more important that professional staff are available to provide guidance in the use and evaluation of information. That the ACRL believed there was sufficient cause to mount such a case, is compelling evidence that arguments for the continued need for physical space must be well informed, defensible and attuned to the current and evolving needs of the academic library's constituents.

Crawford [5] maintains that libraries will, in fact, need more space in the future – space for growing collections, meetings, study, research and reading. However, he contends that funding for needed library expansion and renovation is already being denied in some colleges and universities because administrators are convinced that stacks and associated space won't be needed in a few years. These sentiments are echoed by Baughman and Kielytyka. [6] Concerned that some administrators consider the library is a “costly anachronism”, the authors conducted a study of American colleges which clearly demonstrated that strong library collections were correlated with higher scholarly productivity, and higher institutional ranking. Rettig [7] argues that the academic library as a place will persist in

importance because of the economic sense in co-locating locally held print and electronic resources, and the very considerable investment in the technically advanced equipment required to access them (and remote electronic resources).

Nevertheless there has been a decline in constructions, expansions and renovations over the last seven years, at least in the United States. The 1999 Library Journal survey of library building projects noted that the number of academic library construction projects had again decreased with a total of just 30 completions. [8] This continues a decline which, in 1994, was thought to indicate a crisis in academic library building. [9] In that year 38 projects were completed. Other current trends, which should be monitored and may impact on arguments for further expenditure on expansion or redesign of library facilities, are the reports now emerging of reduced usage of buildings. [10] Some libraries are also reporting a reduction in the borrowing of physical materials. [11] Both of these trends may be a consequence of increased remote access not only to the Internet and library catalogue, but increasingly to licensed databases. However they may also be the outcome of changing user needs and an increasing mismatch between the facilities (and services) that users now require and those currently being provided by the library.

Future Models?

Kaser [12] documents the evolution of the American academic library building into four architectural stages, speculating that such buildings "have not yet realised the impact of new electronic technologies" and a fifth type may yet emerge. Conversely he also poses the possibility that contemporary modular library design, where books and reader spaces are integrated, may be continue to serve effectively in an electronic environment. Certainly the evidence of the current surveys indicates that services, functions and associated physical facilities are undergoing substantial albeit gradual and evolving change in response to the changing higher education environment, and repositioning and restructuring of parent institutions. The new library may be more of a workshop or laboratory than a warehouse, where students and researchers will integrate information from a wide range of media types into new forms and formats. [13] This behaviour is likened to the changing approach to retrieval of information, where hypertext links now provide access to content from many directions, moving beyond the traditional linear model of searching which has evolved in a primarily print based environment. The implications of this for building design have not been fully explored and there is need for more focussed user behaviour studies to investigate the new ways of information seeking, selection and use and how these might be better facilitated by the design and equipping of the physical space. Currently observations and assumptions are the primary guides available.

Information Commons

"Information Commons" are now appearing in many major academic libraries in North America. The terminology though perhaps not the concept, is less familiar in other countries. Certainly some elements are featuring in new library developments in Australia and New Zealand. This is "a new type of physical facility specifically designed to organise workspace and service delivery around an integrated digital environment." [14] Information Commons are characterised by individual and collaborative computer workstation areas which provide access to a wide range of software tools, not just information resources, ready access to assistance from staff with a range of specialist skills (computer, reference and media) providing a continuum of service, and individual and group work spaces with close physical access to the specialist assistance and the technology. The model encourages a holistic one stop shop concept to student and staff research, enabling information access, retrieval, and integration of material into a new whole to be undertaken at the one point. The Information Commons facility in the Leavey Library at the University of Southern California was, in 1994, one of the earliest and most publicised attempts to incorporate this new type of space and service to meet changing needs in a digital environment. The Commons experienced such high usage that it was doubled in size towards the end of 1998. Many other North American institutions have since adopted this model with similar successes e.g. Halbert. [15]

Increased access to computer facilities across campus and in the home may raise the argument that there will be a decreased need for this type of facility. However it must be recognised that digital information resources will not meet all information needs. Much important and needed information will remain in printed format for many years to come. The user should be provided with the opportunity to move from digital to print as seamlessly as possible. The provision of expert assistance at point of need is also an

important principle of this service. The social role of such a place also needs to be recognised. “The value of social sharing (of ideas, information, problems and dreams) that results from working and talking in groups should not be underestimated. People need to talk to each other when they move away from their computers, for it is this personal interaction that ultimately and uniquely enriches and humanises the learning experience.” [16]

Leighton and Weber [17] describe the following two models as embodying the merger of academic libraries with related learning facilities to form what they call the “meta-library”, resulting in a physical place which goes well beyond the traditional library, both in concept, educational function and services delivered.

The Integrated Facility

This model represents a shift from a focus primarily on the library needs, with reasonable incorporation of computer based technology, to one where the technology is given a more dominant role, shaping a new instructional environment. The integrated facility encompasses both the provision of and access to information, acknowledging not only the continuing significance of print material but also the increasing importance of an information technology rich environment. The result is a new amalgam of functions and spaces which brings together information resources, technology, production facilities and the combined talents of information professionals from across the campus. The technologies and library functions are often so integrated into this collaborative environment, that where one ends and the other begins cannot be easily be determined.

The Learning Centre

The learning centre focuses on the melding of curriculum support and student culture – gathering all the components under one roof so that students are provided with a total university experience, through interaction with books, technology, peers, and academic teachers and support. Academic studies are linked with other educationally purposeful activities in a seamless intellectual and social space.

The Decentralised Model

This academic library of the future focuses on distributed access to services. [18] In this model, the library continues to move beyond its walls. Fewer services are centrally sourced, with satellite functions, such mini information laboratories, located outside the library. This model of the future will be organised in some ways like those of the past, where branch library collections and associated services existed outside a central library. The new decentralised model, enabled by technology, allows services and expertise to be once again distributed and relocated closer to the users, in their offices and laboratories.

Conclusion

Whatever the model, it will probably be primarily driven by the educational objectives of the parent institution and its organisational structure and culture. The challenge for academic libraries will be to keep attuned to the strategic directions of their organisation as these are rationalised and refocussed, and be prepared for consequential new demands. It will be equally important to maintain an awareness of the changing behaviours, needs and demands of increasingly heterogeneous and perhaps more vocal client groups, and to rapidly re-align services and associated facilities to meet these new demands. The academic library has a unique capacity to provide an intellectual and social space on campus. A place where people can meet, interact and discuss in groups, both physical and virtual, in aesthetically pleasing and well equipped surroundings. A place which people enjoy coming to and a place where a range of specialist expertise is on hand to guide enquirers through complex information environments in their quest to discover new information and create new knowledge. As a recent OECD Experts Meeting on Libraries and Resource Centres for Tertiary Education 19 concluded, the academic library will continue to provide a “visible, identifiable and physical image” for the parent institution and remain an important marketing tool in the attraction of students, teachers and researchers, and an important contributor to the university's overall competitive edge.

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