



External Review

August 2002

Michael Ridley

**Chief Librarian
University of Guelph
Guelph, Ontario
N1G 2W1**

(519) 824-4120 x2181
(519) 824-6931 FAX

mridley@uoguelph.ca





**“The library of the future will combine
a managed place
with a managed digital space.”**

Agora Project
(University of East Anglia)



**“To remain what it is, the library must change
if it does not change, it will not remain what it is.”**

W. David Penniman
(Dean, School of Informatics, University at Buffalo, SUNY)

Health Sciences Library, McMaster University External Review

August 2002

CONTENTS

Executive Summary

1. Introduction

2. The Transformation of Academic Libraries

3. Health Sciences Library: Status and Challenge

4. Action Agenda

4.1 Information Resources (IR)

4.2 Information Technology (IT)

4.3 The Library as Learning Commons

4.4 Staff for the New Workplace and New Vision

4.5 Revitalizing the Hamilton and District Health Library Network

4.6 Fundraising and Development

4.7 Culture of Assessment

4.8 Leadership and Management

5. Conclusion

APPENDICIES

A. Prioritized Recommendations and Estimated Costs

B. Acquisitions Allocation Mechanism: the Access Model

C. Acknowledgements

Executive Summary

The Health Sciences Library at McMaster University is at a critical point in its development. It has endured the ravages of financial cutbacks, constrained funding and relentless inflation but all this has taken a toll on the Library. Staff are frustrated with the lack of financial resources necessary to fulfill their mission and users are frustrated by the lack information resources and services to accomplish their goals. As the Faculty of Health Sciences expands its teaching and research programs the Health Sciences Library is struggling to remain a vital and effective resource.

Intensifying this situation is the transformational impact of information technology. The Health Sciences Library, like all academic libraries, must reinvent itself within the context of the opportunities and challenges of information technology.

There are no “quick fixes” here. Revitalizing the HSL will require new and sustained support coupled with innovations in library service. However, it is clear that the Faculty can rely on the Library’s greatest assets, the expertise and dedication of the Library staff, to ensure success in this process. McMaster University is very fortunate to have some of the finest health sciences librarians in Canada.

The fundamental recommendation of this review is that the Health Sciences Library be given a substantial increase in budget. A collateral recommendation is that those resources be utilized in a significantly different way so as to reinvent the Library.

The key recommendations are to:

- increase the information resources budget and utilize the “access model” to rationalize access through electronic availability, onsite print collections and on demand (“just in time”) delivery.
- change and upgrade the information technology environment to maximize support for digital library services and electronic resources.
- re-envision the Library as a “learning commons” by clustering resources and re-allocating Library space.
- hire new staff (librarians and IT professionals) to provide leadership and support for expanded and redesigned services and resources.

1. Introduction

The purpose of this review is to examine and assess the current state of the Health Sciences Library (HSL) and make recommendations on how the Library should change and evolve in order to respond as effectively as possible to the needs of its user community within the context of the goals and objectives of the Faculty of Health Sciences and McMaster University.

Components of this review will include assessments of information resources, staff complement and expertise, financial resources, library services and library facilities. A specific focus will be placed on the nature and impact of digital libraries on the future directions of the Health Sciences Library. In responding to the question "where should the Health Sciences Library be going?" the report will also reflect on "how can it get there and what are the next steps to take along the way?"

With the advice and full cooperation of Dr. Susan Denburg (Associate Dean Academic) this review was conducted based on an environmental scan, consideration of key reports and documents from the Faculty of Health Sciences, McMaster University and other groups and an extensive series of interviews and meetings with faculty, students, clinical staff, administrative staff and members of the Library staff.

The interviews, conducted over a period from February to June 2002, provided an opportunity for the reviewer to ask specific questions and to allow the participants to voice their ideas and concerns about the Library. Follow-up reports and email were received from a number of groups and individuals. A call for email input generated over 50 responses primarily from faculty. The reviewer also held discussions with other academic health science librarians and other leaders in the library community. Finally, feedback on a draft version of this report from Library staff and others provided an opportunity to correct errors and clarify other issues. On some issues, as noted in the report, there was clear consensus from those interviewed or contacted. In other cases issues were raised by individuals or specific groups that in the opinion of the reviewer deserved to be acknowledged and acted upon.

An external review is not a magic elixir. The recommendations provided in this report are not the final answer nor the complete solution. This review should be a starting place for renewed and reinvigorated discussions and deliberations. It is a platform upon which to hold debate and dialogue. Whether the recommendations of this report are adopted and acted upon is less important than if this report spawns a new enthusiasm in the HSL that will allow it to reinvent itself and to reinstate the Library as a core resource in the Faculty and at the University.

Libraries are a precious resource and service. More than ever libraries are the heart of the academic enterprise and at the center of learning. However, it is only through transformation and change that libraries will continue to fulfill that mission.

2. The Transformation of Academic Libraries

Academic libraries are in a period of unprecedented change. It is a time of great excitement and opportunity but also a time of ambiguity and uncertainty. The very changes in information technology (IT) that have provided powerful new services (and promise to offer even more) are exactly the transformations which have challenged the core values of libraries and left them unclear of their role. However, notwithstanding the impact of IT, the future of the library is both digital and physical; library as place will coexist with library as digital environment. Just as libraries must reinvent themselves in the digital realm so too must they redefine their physical environments and re-conceptualize the services they provide.

The digital transformation of libraries will be experienced as they move through three key transitions:

1. **From database/repository to digital environment (the managed digital space).** Libraries have moved from the warehouse model to the access model but this transition moves them into an all encompassing digital information environment. Libraries (and their services and resources) will be omnipresent (wherever the users are the library will be), it will be seamless (fully integrated with digital learning tools, research environments and beyond). The focus will not be on documents and systems but rather on building community (it will be about people, interactions, processes, activities and services). Finally this environment will be dynamic and organic (it will be constructed as much by its users as by libraries).
2. **From information management to knowledge management.** In an environment where information is ubiquitous users need libraries to assist in establishing coherence and in sense-making (libraries must provide value added services that interpret and link as well as simply collect and make accessible). This is a people centric model (a focus on understanding users and ideas not just information and data). Libraries are and must remain trusted information systems (the status and reputation of libraries will allow them to manage personal information and provide customized services). As knowledge managers, libraries will move beyond explicit (recorded) information and attempt to codify and make accessible the tacit knowledge that informs our thinking and actions.
3. **From people finding information to information finding people.** The paradigm that has defined libraries (libraries enable people to find information) will be overturned. Increasingly the customization capabilities of new technologies and the omnipresence of telecommunications will allow libraries to create and support environments where information finds people. Technologies such as intelligent agents and personal information systems will enable this transition but it will be centered on users (individuals) taking control of their information space.

These three transitions are coupled with two other trends that will shape the nature of libraries:

1. **Copyright and Intellectual Property.** A significant platform on which the legal basis of libraries rests is copyright. The recent battles over the revised copyright law have not been beneficial to libraries and their users. As copyright (public policy) gives way to intellectual property (contract law) libraries (and the concept of the public good) are in serious jeopardy. Even if the concept of copyright survives (something which is not assured) it seems certain that the core educational exemptions will be undermined. As a result libraries must be prepared to work in an economic and political arena where the legal framework will significantly impact library budgets, access systems and service offerings. It will also challenge one of the core missions of libraries – preservation. Preserving digital information for future use poses difficult technical challenges but these pale in comparison to the intellectual property issues that will likely keep information as private (contractual) not public goods.
2. **Libraries and Learning.** Within the educational context libraries have always been as both colleagues and support services. As e-learning becomes pervasive (whether as a primary vehicle or as a support to other learning modalities) libraries must become integral partners in the learning process. This is a change not so much one of direction as of degree. The importance of information literacy, critical appraisal and the management of information combined with the emphasis on resource or inquiry based learning demands that libraries become true and full partners in learning. They must participate in determining educational objectives, program planning and delivery. The library must be transformed as the “learning commons” to enable both a redefined physical space and an enhanced role in learning.

These three transitions and two trends are illustrative of the transformation of academic libraries. They present a snapshot of the challenges to be addressed and exploited. Those libraries that pick up these challenges and make these transformations will again become the heart of their institutions; those that don't risk drifting into irrelevance. An important implication is the fundamental requirement that academic libraries move from an essentially passive role to one that is proactive perhaps even activist.

3. Health Sciences Library: Status and Challenge

Over the past 10 years financial pressures arising from relentless inflation, currency devaluation and draconian cuts to university budgets from provincial under funding have taken a toll on libraries. Like most others, the Health Sciences Library responded as it had to: it reduced journals, reduced monographs, reduced its labour force and reduced costs by any possible means. Reduce. Reduce. Atrophy. The results were predicable. The Library is no longer seen as the “heart” of the Faculty and as a key resource and service in the minds of its user community. This does not suggest that information resources and libraries are now unimportant to faculty, students and staff but rather that they have found other means to supplement the resources or services they came to expect from the HSL.

As the Library was cutting back the Faculty of Health Sciences was expanding and changing. New educational programs were introduced and the research agenda was expanded. There are now more students and more faculty, and a sophisticated health care research environment has arisen throughout Hamilton. To the continued commitment to problem based learning (PBL) has been added the challenge of conceptualizing and operationalizing the idea of e-PBL. As educational programs have become electronic or based at remote locations the students themselves are different. They don't come to the campus and they don't use the physical library. Added to this is the dramatic increase in tuition fees which brings with them high expectations (or perhaps lower tolerances) on behalf of students. As a result the HSL has a very complex user community comprised of different groups with separate funding each with an interest in decision making and defining the required services and resources. The list includes the Faculty of Health Sciences, McMaster University, Hamilton Health Sciences, Mohawk College, Conestoga College, Hamilton and District Health Library Network, Northern Academic Health Sciences Network (NAHSN), Consortium of Ontario Academic Health Libraries (COAHL), Ontario Council of University Libraries (OCUL), Canadian National Site Licensing Project (CNSLP) and many others.

Mandate and Resources

The mandate of the Health Sciences Library has expanded and been made more complex as the Faculty of Health Sciences has transformed. It has now reached a milestone. The comparative data which has been presented by the Health Sciences Library in numerous reports to many groups and individuals, are conclusive and unavoidable: more resources are required if it is to survive and thrive again.

**Annual Statistics of the Medical Schools
in the United States and Canada (1999-2000)**

Library	Gate Count	In House Collection Use	Interlibrary Loan	Librarians	Staff	Collections Expenditures (\$US)
McMaster	473,125	451,456	9,184	6	30.40	\$574,905
Manitoba	259,223	114,660	4,097	9	27.94	\$749,858
Queen's	208,225	135,515	5,675	6	19.50	\$685,626
Mean (all 135 libraries)	288,126	194,515	6,245	12.37	38.02	\$1,107,492
McMaster Ranking (all 135 libraries)	14	11	25	117	81	118

All the comparative data reveal the same patterns, a heavily used library with a small professional complement (although an average sized support staff) and an acquisitions budget that is a fraction of others (against both U.S. and Canadian comparators).

The Library is funded both by the University as part of its funding strategy for all libraries on campus and from the Faculty of Health Sciences who provide investments beyond the central allocation to ensure that the HSL responds to the unique requirements of the Faculty's educational, research and clinical programs. Library funding is currently under considerable review as the University Planning Committee examines the state of this funding and the appropriate allocation mechanisms with respect to collections development. The debate over the percentage funding of libraries is important, less for the determination of the precise amount (e.g. 6%, 7% or 9% of the University budget) and more for the signal that it provides regarding the importance of libraries in supporting the mission of the University.

**The fundamental recommendation of this review
is that the Health Sciences Library
be given a substantial increase in budget.
A collateral recommendation is that those resources
be utilized in a significantly different way
so as to reinvent the Library.**

Health Sciences Library and the McMaster University Libraries

The reporting and organizational structuring of the Health Sciences Library with respect to the McMaster University Libraries is unique in Canada although common in the United States. All other health sciences libraries in Canada report through the university

Health Sciences Library – External Review ... page 9

library system whereas the HSL reports through the Faculty of Health Sciences. This difference and the implications of this difference are not well understood by users and by many University administrators. However, the libraries work diligently to mitigate these differences and there is much evidence of cooperation and collaboration.

The organizational relationship between the libraries has clear advantages and disadvantages: some times it is enabling, some times it is prohibitive. It is arguable that a different relationship (e.g. the HSL reporting through the McMaster University Libraries) would reduce complexity and facilitate support for users. There are cases where significant problems arise from the reporting relationship (see the concerns about collection development in the basic sciences and interdisciplinary areas in the Information Resources section of this report). However, it is important to recognize that the underlying issue is really a question of academic structuring and governance; it is not a library decision. It is also likely the case that any decision to change the current situation would be more divisive than productive. In general the libraries have found ways to make the relationship work effectively and they should be encouraged to continue and expand those collaborative mechanisms.

Reinventing the Library

The dictum that “when all you have is a hammer, everything looks like a nail” has guided the Health Sciences Library for too long. The status quo is not desirable, acceptable or even sustainable. The Library needs to focus on a rapid and pervasive provision of digital resources and services and a re-conceptualization of the physical Library as a “learning commons.” It needs to establish the “new” core of services based on an iterative process that sheds the Library of non-value added processes and migrates towards a rich and response digital environment.

All this should be guided by key principles that focus on the changed and changing needs of the user community and are characterized by aggressive, risk taking strategies. This will be as challenging for the management and professional staff as it will be for the rest of the Library staff. The Director needs to establish with the management team a clear understanding of the position of the Library and the need to chart a new course. This leadership is essential to create awareness and understanding, and to promote action. It is fundamentally necessary to build and secure this commitment with the senior Library staff if change is to be enabled.

**Incremental adjustments
are unlikely to address these challenges.
If the Health Sciences Library is indeed
the heart of the institution
then a defibrillator is required.**

What kind of library does McMaster want? During the consultations for this review many faculty and students made envious references to the superb collections and services at the University of Toronto. It is doubtful that McMaster could develop such an

extraordinary library and it is doubtful that it should. As the Faculty of Health Sciences reviews the Health Sciences Library it has an opportunity to reinvent this core facility and create a powerful, dynamic and influential service based on a new vision unique to the McMaster University experience.

The recommendations of this review are not presented as a blueprint for action. Instead they are a combination of strategic directions and tactical actions that must become part of a community initiative. The library envisioned in these recommendations must be nurtured, modified and enhanced in concert with students, faculty and staff in order that it become a shared vision.

4. Action Agenda

4.1 Information Resources (IR)

Providing access to information resources is the core responsibility of any library. While the Health Sciences Library has not had to cut journals in the past few years the collection has been seriously eroded over time and it is apparent to all that it is no longer able to provide the range and depth of resources required to support the expanding educational and research programs. One faculty member very bluntly summed up the feelings of many that provided comments when he said “the Library has become completely dispensable over the last 5 - 10 years.” An MD student who had received her undergraduate degree at UBC was “shocked” at the state of the Library given her understanding of the McMaster program and the focus on self-directed, problem based learning.

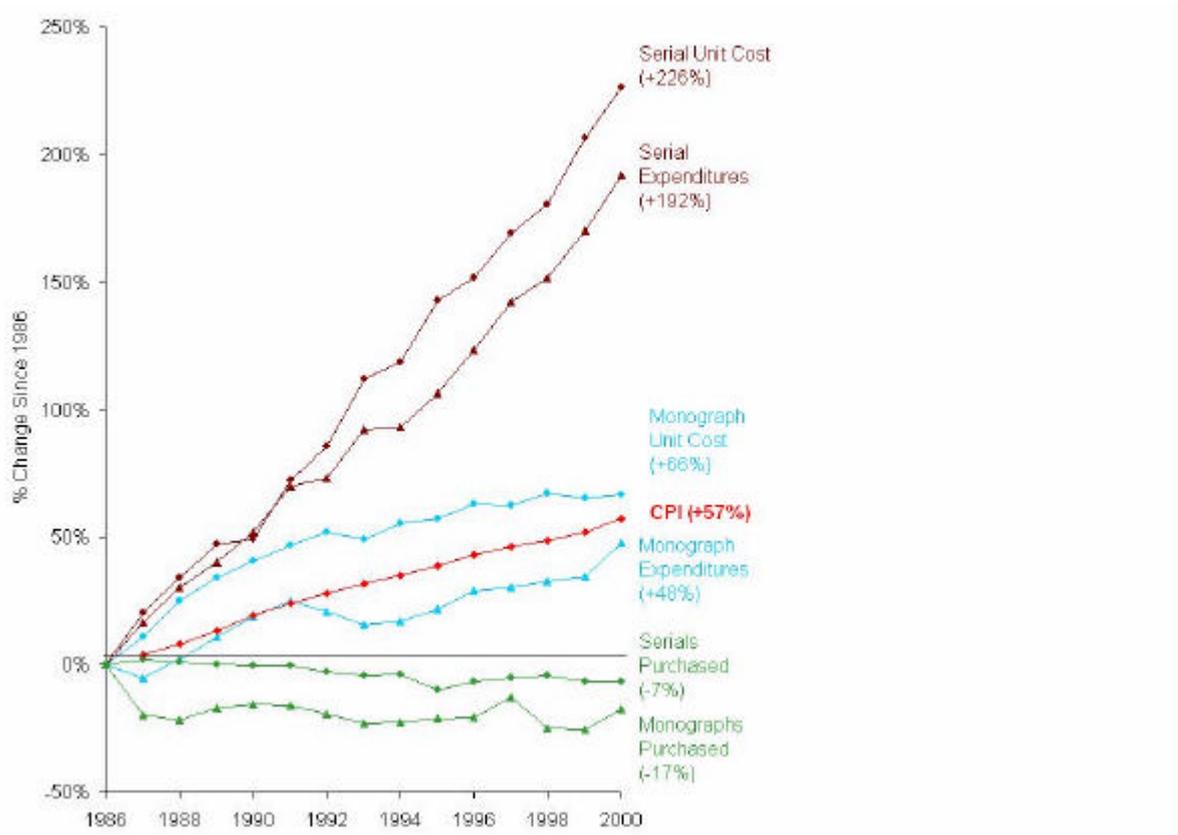
During the interviews with faculty and students considerable frustration was expressed about the lack of resources in the Library. Students talked about getting resources from friends, faculty spoke of requesting resources from colleagues at other institutions and researchers have developed alternative networks for their key needs. The impact is not just time lost in seeking information. Faculty have had to alter courses because of a lack of relevant resources. Researchers have indicated that grant requests have been critically assessed suggesting an inadequate review of the literature. Of even more concern is the “information divide” that is widening between students and faculty with the latter able to use personal resources and networks of colleagues at other institutions to support their information needs. The impacts are real: a poorly resourced library impacts on education, research and service. By any measure or comparison it is clear that the Health Sciences Library is under funded and the most visible and critical impact of this is the nature of the collection.

The Association of Research Libraries’ (ARL) analysis of changes to monograph and serial costs and acquisitions (1986-2000) dramatically illustrates the problem (see below). The financial struggles facing the Health Sciences Library are endemic in academic libraries throughout North America and are problems experienced in all the McMaster University libraries. If McMaster is to maintain its tradition of strong libraries then it will have to invest significant new resources.

In a related issue, the nature of the allocation of central funding to the McMaster libraries was unclear and unresolved. Neither the Director of the Health Sciences Library nor the University Librarian was able to explain the rationale for allocating a certain percentage of central resources to the HSL. While 18% was often mentioned it was not documented or codified. The University Library Budget Submission 2002/2003-2004/2005 to the University Planning Committee implies a 14% allocation. It would appear that there is no formula or agreement and that the annual allocation by those responsible for University budgeting is arbitrary. As the campus evolves and changes and as the costs for scientific literature increase dramatically it is critical that the

distribution of library funding be based on an agreement that ensures that the allocation is both fair and predictable.

Monograph and Serials Costs in ARL Libraries 1986-2000



Not only has funding for information resources been insufficient it has also been unstable. A series of one time only adjustments to the Library's budget has offset the problem of a particular fiscal year but it has not allowed the predictable funding required for long term development of services and resources. As a key example, this makes it very difficult for the HSL to invest in valuable and cost effective multi-year consortium purchases.

Throughout the consultations there was widespread and vocal concern about support for the basic sciences. A similar issue arises in interdisciplinary areas. Both the Health Sciences Library and the Thode Library have responsibilities in this area yet it appears that the coordination of acquisitions is either not well done or not well understood. Given this overlapping responsibility it is essential that collections policies and procedures be developed between HSL and Thode to ensure that the basic sciences are adequately reviewed and resourced. The collections development procedures of the libraries are

very different (although this is being reviewed as a part of the University Library review) and this contributes to the problem.

Statistical comparisons with other institutions can be fraught with problems. However, the Health Sciences Library at Queen's University represents the closest possible comparator for the Health Sciences Library at McMaster University and can be used to reveal the magnitude of the information resources shortfall.

Library Materials Expenditures					
(data from the Association of Research Libraries)					
Reporting Year	1998	1999	2000	2001	% Change 1998-2001
QUEEN'S	\$656,750	\$681,896	\$689,632	\$807,269	22.9
MCMASTER	\$566,806	\$556,845	\$571,011	\$690,233	21.8
Annual \$ Increase (McMaster)		\$(9,961)	\$14,166	\$119,222	
Annual \$ Difference (McMaster/Queen's)	\$89,944	\$125,051	\$118,621	\$117,036	

Over the four years the overall percentage increase for both institutions in library materials expenditures (e.g. books, journals, multimedia) is approximately the same and both libraries increased spending substantially in 2001 (after a few years of increases well below inflation). However, the different in real dollars is considerable. In addition, a substantial part of the 2001 HSL expenditures were one time budget allocations. If Queen's can be viewed as a reasonable comparator then the problem is clearly outlined.

A four part adjustment strategy is needed for the information resources budget:

1. move full 2001 expenditures to base IR budget (\$159,000 base increase).
2. achieve parity with Queen's as a reasonable comparator (\$120,000 base increase).
3. create a new base fund to cover DD/ILL subsidy to cover current ILL/DD costs and to anticipate increase in usage after the introduction of the subsidy (\$100,000 base increase).
4. introduce inflation protection in subsequent years to protect these investments against erosion (annual inflation in scholarly resources remains at 10% annually).

However, these new investments in information resources without the corresponding new investments in information technology (IT) will be very problematic. IT is not merely the infrastructure for accessing and using information resources it is more importantly the critical environment for learning within which these information resources will operate. The recommendations regarding information resources must be seen as linked strongly to those addressing information technology.

4.1.1 Implement the Access Model with Increased IR Funding

The Access Model (developed at the University of Guelph in response to a similar crisis) links expenditures to a variety of access modalities. At the heart of the model is the principle of acquiring resources in the least costly manner hence maximizing the use of funding while maintaining rapid access to information resources. As the cost per use of an information resource changes (e.g. a specific journal) the model shifts purchasing to a different access modality (e.g. from print subscription to electronic; from electronic subscription to document on demand; from document on demand to electronic subscription). This just in time model (rather than the “just in case” model that predominates in academic libraries) has a significant disadvantage. Because collections can change over time (either by modality or whether they are owned or simply accessed on demand) the notion of a comprehensive, historical collection of the health sciences literature is no longer possible. The model is highly sensitive and responsive to the current needs of users but less sensitive to the development of a broad and inclusive collection. The use of this model can contain spending by focusing expenditures on high use material and seeking the lowest cost solution for the provision of information. It relies on the ability to track usage and costs, the availability of a rapid, client centered interlibrary loan and document delivery system and finally the willingness to adopt marketplace innovations for accessing information resources. For an overview of the Access Model at the University of Guelph see Appendix B.

Introducing the Access Model successfully also requires the base increases to the information resources budget outlined earlier. The budget shortfall the HSL has experienced must be addressed in order to let the Access Model achieve the greatest effectiveness and efficiency in expenditures.

4.1.2 Interlibrary Loan and Document Delivery Service (ILL/DD)

The Access Model described above relies upon an effective ILL/DD service. While the ILL/DD service at the HSL is heavily used it should become an even more central resource for students and faculty. Policies, procedures and resourcing needs to change to make it easy to use and responsive to requests. In particular the user charges for ILL should be completely removed; the Library should subsidize the use of ILL/DD and encourage and facilitate the use of external collections and resources rather than creating financial barriers to access. The concern about “frivolous” use is unfounded given the experience of others where this practice is commonplace. Resources such as CISTI Source should be freely available for faculty and designated others to use on demand and unmediated by the Library. Allocations should be made to academic departments for them to use freely and according to their own need. The costs for this are significant but the services are impressive and they respond in a timely manner to the needs of clients. The introduction of the VDX ILL system as part of the Ontario Information Infrastructure (OII) initiative of the Ontario Council

of University Libraries (OCUL) will be a key piece in enabling direct user ordering of materials (e.g. unmediated service). Finally, the Library should establish agreements with document suppliers to broaden the resources available and facilitate rapid delivery mechanisms (such as print-only ARIEL stations in high traffic client areas). The relatively high cost of on demand acquisition should not deter the Library from pursuing this sort of “pay per use” strategy.

4.1.3 Consortial Licensing

Significant new funding is required for information resources and, as much as possible, this should be used to pool funding from other institutions to enable large scale consortial licensing. The partners and mechanisms for this are mostly in place: the other McMaster University Libraries, the Hamilton and District Health Library Network, the Coalition of Academic Health Libraries (COAHL), OCUL Information Resources (OCUL IR) and the Canadian National Site Licensing Project (CNSLP). Consortial licensing of electronic resources is an essential strategy to leverage purchasing power. This has been particularly successful in the so-called “money in the middle” strategies (such as CNSLP) whereby the process enables competitive bidding from vendors to achieve the best possible terms. Because of the severe budget constraints the HSL has not had the available funding to maximize such a purchasing strategy. While money is the enabler, leadership is also necessary. The HSL should take a leadership role in bringing together partners within the health sciences community both regionally and nationally to create or use existing vehicles to facilitate consortial purchases. The COAHL negotiations for an Ontario-wide license for the OVID information product is a good direction; it should be followed by dozens more.

4.1.4 HSL and Thode Collections Policy

One of the strongest complaints arising from the interviews for this review was from faculty in the basic sciences who felt their key information resources were not being supported by either the HSL or Thode. Faculty were not aware of how to address this situation; many felt voiceless and powerless. The needs of the basic sciences must be addressed in a manner that is more client focused. A large part the problem arises from the libraries (HSL and Thode) not coordinating their actions based on an overall strategy. The HSL has to recommit its support for information resources in the basic sciences. The HSL and Thode should investigate a joint collections policy (and related funding arrangements) to ensure that these resources no longer fail between the cracks. Given the objective of rapid transition to primarily digital collections (something that is achievable in many of the basic sciences) it seems appropriate that this coordination happen under the auspices of the Digital Information Services Committee utilizing resources from the Central Digital Resources Fund.

4.1.5 Reserve

The Reserve collection in the Library is very heavily used. In many ways it has become the core collection, the “textbook” in a curriculum that philosophically resists such concepts. The use of the Reserve collection is staff intensive and the resources are only available to those who can come to the Library (e.g. no remote or electronic access is possible). While increasing purchases of electronic resources will reduce the importance of the Reserve collection it is likely to remain as a means of ensuring access to key materials. The Library should aggressively move to an electronic reserve system (there are many options available) and license short term access to electronic versions of the key articles. Currently the costs for such licenses are quite variable (including some outrageous examples from some publishers). However, in order to support the full range of educational programs (particularly to remote students and faculty) this will become essential. Another short term step is to make the Reserve collection a controlled but open access collection allowing students to locate and charge out their own materials. There are many successful implements of this strategy to serve as models. This will reduce the needs for staff intervention and precipitate the move to an electronic service.

4.1.6 Weed Collection

The Library should undertake an extensive weeding of the book and journal collection. Consideration should be given to completely withdrawing these materials rather than moving them to storage. While a weeding project was done recently there is much more that could be removed. This will not be an easy task because it will challenge some of the core concepts of what it means to be a library. However, given the aggressive move to digital collections and the concurrent reliance on external resource suppliers it is apparent that Library space currently devoted to lower use materials could be more effectively used as group learning space.

4.2 Information Technology (IT)

Sophisticated information technology is essential to effective library service. Without a strong IT environment guided by vision, inspired by leadership and backed by resources the Library (and many other services on campus) cannot be successful. Enabling such an environment is a multifaceted responsibility but it begins with a campus vision of IT as a transformational agent.

In his report on academic computing at McMaster Professor Platt noted that “the result of this chaotic situation is that McMaster has fallen three to five years behind many institutions in applying technological tools to the pedagogical mission.” (from [A Proposed Organization for Academic Computing at McMaster University](#)). In the “Internet time” that now guides IT development and implementation three to five years is

three or five generations of innovation. McMaster has devoted a considerable amount of time to reviewing its computing infrastructure and directions. It is hoped that the results of the Platt reports will provide the structures to put McMaster into the forefront of IT and its application to teaching, learning, research and services. However, it is not clear that the proposed directions will provide the leadership and vision required. As systems and services converge and integrate (both at the local level and through the Internet) it is not possible to separate the concepts of academic, administrative and research computing. While identifying these separately may create attention and focus, it is also possible that this will establish a divisive metaphor and result in fragmented strategies.

A significant, and negative, outcome of the management of IT at McMaster is the complex set of players responsible for providing and supporting IT. These groups and units appear to work very independently from each other with no overarching vision and supporting resources. The groups include the Health Sciences Library, the McMaster University Libraries, Computational Services Unit, Faculty of Health Sciences, Computing and Information Services, and the IT groups within the other Faculties and the affiliated hospitals. Each has a role to play and objectives to meet but the various parts are not contributing to a holistic vision despite the fact that the user community for whom these resources are being enabled is virtually the same.

Information technology is the fuel of the transformed library and the enabler of the comprehensive digital environment in which faculty, students and staff live and work. The Health Sciences Library IT expertise and infrastructure are severely limited.

Some examples will illustrate the issue:

- The Library's website (<http://hsl.mcmaster.ca>), while linking to much information, reflects an information architecture limited to hierarchical menus and static pages. The design and layout lacks the expertise of professional information designers and architects. While the web is recognized as the Library's most important information system, it does not receive the technical support and expertise necessary to design and operate such a critical service.
- The user work areas throughout the Library have no access to power (for laptops) let alone network connections or a wireless capability. Users are required to use either Library or CIS workstations and these are severely restricted in their functionality or availability.
- Another example is Tom Flemming's excellent health information website Health Care Information Resources (<http://hsl.mcmaster.ca/tomflem/top.html>). This widely acknowledged resource would be transformed (and become far more manageable and effective) as a web enabled database rather than as a series of static pages.

The vision of service and innovation arising from the staff is not matched by the necessary IT resources to create truly sophisticated tools. As a result the potential is not

realized; the good ideas cannot be brought to life. The discussions initiated by the Library about the use of personal digital assistants (PDAs) is forward thinking but, again, their vision exceeds the ability of the infrastructure to support such an innovation.

The Library's IT expertise needs to be enhanced (see recommendations elsewhere about a systems analyst) but more fundamental is the need to integrate the Library's desires with an IT vision and infrastructure for the Faculty and the University. To let the Library move forward unilaterally with its own PDA program or its own wireless infrastructure (or any other IT innovation) would further balkanize these initiatives and significantly risk their success.

IT leadership needs to emerge at a variety of levels. The Library needs strong client focused IT leadership and a sophisticated IT environment upon which to build effective and innovative library and information services. The Faculty (working with its affiliated hospitals) needs an IT vision and strategy to underpin its innovative learning, teaching, research and service objectives. This Faculty vision must work closely with the campus to ensure a linkage to campus wide opportunities and implementations . Working together these three levels can deliver the services critical to the required transformation.

4.2.1 McMaster University IT Vision

Without wanting to pre-empt or challenge the review of IT currently underway at McMaster it seems apparent that the University is looking for vision, leadership and strategically focused resources. While this review is about the Health Sciences Library there is nothing that would have more impact on the HSL (and the other libraries) than the identification of senior, strategic leadership for campus IT that would create not only an overarching technology vision (IT) but also a vision of how information and information services (IS) could work and link together to create a rich, seamless university environment.

4.2.2 McMaster University Portal

At present the key information technology resource on campus is the web. Recreating the campus web environment as a portal would signal a critical move to a user centric information integration strategy. While "portal" is the current buzz word to describe these capabilities it might be more descriptive to call this the "campus online community." A portal infrastructure would enable the sophisticated, personalized services that facilitate a dynamic information environment.

University and library websites are currently very "corporate." Since they can only reflect one view they are by necessity compromises designed to respond to the widest possible audience. As a result they lack individual meaning and can often overwhelm the user with too much information or too many services (much of

which is not relevant to the particular user). Portal software allows users to construct their own, more relevant view of the available resources and information services while still ensuring that they have access to the full range of information.

From a library perspective using a portal website would allow faculty and students to easily create their own view of library resources. It might have links to their favourite e-journals, the full text lead editorial from the latest issue of JAMA, notification of interlibrary loan availability, new books added to the Library's collection of personal relevance (based on a user determined profile), tables of contents from specified e-journals and links to key websites or reference texts. Dynamic links from other websites would ensure the portal site reflects updates and changes (e.g. medical news feeds or streaming of statistical data). On a more mundane level, the portal would have all the personal information necessary to automatically complete forms for a user while requesting services (interlibrary loan requests, alerting services, authentication on remote system, etc.). This would enable a single login process for all IT resources and reduce the frustration of frequent online form filling.

A clear advantage of the portal approach is that it allows the user to determine what is important (and hence what is highlighted on the personalized main portal page). Similarly another advantage is that the user can also determine what is not as important (and relegate these items to a second level page that would be viewed only as needed).

The campus portal is part of the key IT infrastructure necessary upon which to layer library services. To be most effective and information rich it should be a collaborative service of the major information providers on campus (e.g. the libraries, CIS, Registrar, Public Relations, etc.) It cannot be developed locally (e.g. within the Faculty); it must be a campus wide initiative.

4.2.3 Associate Dean Information Services and Technology/Chief Information Officer

While the Faculty of Health Sciences has made important steps to focus on IT and especially learning technologies (in particular with the appointment of Dr. Mike Marrin, Associate Dean, Continuing Education as Director of Learning Technologies) the IT environment in the Faculty remains a complex mosaic of unrelated systems and services. Information technologies are viewed as critical to the success of teaching, learning, research and service and yet there is little coordination within the Faculty and even less with the rest of campus. Like the campus, the Faculty needs leadership and vision to realize the potential of IT. It is recommended that a strategic leadership position such as an Associate Dean Information Services and Technology or a Faculty Chief Information Officer be established. Such a position would create the vision and marshal the resources necessary for the Faculty in general and the Health Sciences Library in particular.

to leverage IT as effectively as possible. This IT professional would be responsible for interlinking the IT environments of the Faculty and the affiliated hospitals to ensure smooth access to authorized resources and services by all relevant faculty, students and staff. In such a model the Computational Services Unit would be the responsibility of the Associate Dean/CIO.

4.2.4 Access Through Library and CIS Workstations

The workstations in the Library are the key resources to access the digital environment. Unfortunately these devices are unnecessarily constrained, poorly maintained and available for limited hours. The Library workstations are allocated specific and limited functions; some access MORRIS, others access Medline, yet others access different information resources. This fragmentation of access requires the user to literally move from workstation to workstation to accomplish a comprehensive search. The very limited use of the computers in the AV area of the Library (again restricted to only certain functions) illustrates the nature of the problem. Integrated access to all information resources is essential but additionally these workstations should access email, LearnLink and similar productivity tools (e.g. Word, Excel, SPSS, SAS, etc.). All these are tools for learning, teaching, research and clinical work. An arbitrary focus on “library” services ignores the integrative nature of IT and the real needs of library users. The Library must be a resource for accessing and using the full realm of digital resources and services. It is certainly possible to designate some small number of workstations for unique and special purposes.

The distinction between Library and CIS workstations (the latter having been segregated into its own separate area with hours of availability that don't match the Library's hours of opening) is dramatic and unfortunate for users (see the recommendation on the CIS lab in section 4.3.2). The turf war revealed by this (who owns what, who pays for what, who support what) only hurts the faculty and the students. While the resulting poor user service is the major concern of this review the underlying issue is the lack of coordination and cooperation around the provision of effective IT for the academic community. The current situation appears to be mostly about administrative control and very little about service to faculty and students. The Library, CIS and the Faculty of Health Sciences must develop a sustainable strategy (with an appropriate funding and support model) that responds to the critical need for student access to IT.

4.2.5 Proxy Servers and Authentication/Authorization

Off campus access to the information resources and services of the Library relies on the availability of a proxy service to properly authenticate and authorize users in order to comply with contracts and licenses. Users accessing the resources from Thunder Bay via Sympatico or Rogers, for example, need the same level of access as those on campus using the McMaster network. The current campus proxy service is frustrating, confusing and unnecessarily so. CIS has

implemented a “browser side” service when a “server side” proxy (e.g. Easy Proxy) would far more client friendly. Numerous complaints were received about the nature and effectiveness of the proxy solution (from both Library staff and users). While this is a highly technical issue it is revealing of certain attitudes. The proxy service is “user hostile” and as such reflects the lack of a client service philosophy. The service in turn complicates the ability of the libraries (and presumably other departments as well) to serve clients who are remote from the campus or who access the campus from other ISPs. The disjuncture between the academic goals of the libraries and the enabling IT infrastructure is the source of the most serious concern.

While the complications of the proxy environment seriously undermine the libraries, proxy servers are still just a band aid solution. The real need is for true authentication and authorization for effective management of people and what they resources they can access and use. The implementation of authentication and authorization system that will include all individuals associated with the University should be a high priority for McMaster. It is a core component of the recommended portal (to enable the personalized services and resources, and to manage information about people) and it is essential for the libraries to offer advanced information services.

4.2.6 Wireless Laptop Program

Working in conjunction with CIS and the campus network experts the HSL should pilot a wireless laptop program as a means to enhance access to workstations and facilitate flexible use of space Library. The physical layout of the Library is conducive to a wireless installation. The Library could provide laptops on loan from the Circulation desk to qualified users which could then be used throughout the Library to access the full range of information resources, learnware and productivity tools. It would be possible to limit access to these laptops to students in the Faculty of Health Sciences in order to contain demand and maximize impact on certain programs. These laptops could be part of a lease program to ensure that technological refreshment occurs every three years.

4.3 The Library as Learning Commons

Much discussion has occurred about the space occupied by the Library. While the physical library has been described as the “heart” of the Faculty many issues and problems were raised: the Library is tired looking, the space is fragmented, it is too busy, too noisy, too small and too big. While there is an understanding of how digital resources will transform the services and resources of the Library there has not been a guiding vision of how the physical space needs to be similarly transformed. Space is still a critical element of a fully functioning library. How that space is designed, allocated and used must be informed by a new vision of the Library.

The traditional space allocation model for libraries (centered on physical collections, individual study space, small service areas and a support area) is no longer effective. The physical library needs to be re-conceptualized as a “learning commons” so that the use of this space can be redesigned to more effectively support learning. It must be emphasized that this is a Learning Commons not an “information commons” as has been implemented widely in academic libraries. The focus is on learning not just information or computing.

The current allocation of space reflects a collision of conflicting needs. It does not match the usage or desire of users, some of it is heavily used (group study) and other parts are used hardly at all (AV area). Some high traffic services (Reserve) are also designed to be staff intensive. The emphasis on paper collections dominates the use of the lower floor. On top of all this the Library is showing its age. Structurally it is fine and, the concerns about stairwell notwithstanding, it is flexible and open space. However, the décor is tired and uninspiring.

Nothing generated as much discussion and commentary during the interviews than the issue of noise in the Library. While many were passionate about the issue (some wanting to curtail the noise, others wanting to further facilitate group interactions) it is important to recognize that the noise problem is really emblematic of a larger discussion about the nature of libraries in a changed learning environment.

As libraries transform themselves into the Learning Commons it is evitable, indeed it is a requirement, that staff and users engage in discussion, debate and dialog. Learning is a contact sport – it requires engagement, it is by its very nature noisy. However, quiet study space or isolated group space is also a requirement. Currently the allocation of space in the Library reinforces conflicting objectives (e.g. quiet and group areas, individual spaces adjacent to major service areas). Generally speaking the upper floor should be used for active learning and service space (no single study carrels and no assumption it will be quiet) while the space on the lower floor needs to be reallocated to isolate different activities (group study, individual study, collections, quiet, noisy, etc.). It appears that the stairwell amplifies noise in the vicinity; an area which unfortunately includes quiet study on the upper and lower levels and a series of public service areas (reference, circulation/reserve, computer lab, and the main entrance) that quite reasonably generate discussion (e.g. noise).

Anecdotal evidence suggested that the HSL is excessively busy and as a result noisy because students don't like to study in the other libraries on campus (it was reported that they are too dark and have no group space). In fact the other libraries provide a range of types of study space and are well used. There is considerable group study space at Thode and students find it very effective. It is not the case that the HSL accommodates a disproportionate number of students studying and learning; all the libraries on campus are heavily used. Increasing user space in all the campus libraries will be an important requirement as the “double cohort” arrives and as programs become more group learning focused and resource or inquiry based.

4.3.1 Learning Commons: Expanded and Integrated Services

The essence of the Library as Learning Commons is to integrate into the facility all the services and resources that students and other users need to achieve their learning objectives. The concept is a one stop, comprehensive and integrated learning support area that leverages the centrality of the library, creates focus through integration and supports the synergy of different experts working together to meet the needs of students, faculty and staff.

For the HSL it means thinking beyond traditional library service responsibilities (e.g. reference, circulation) and partnering with others that also provide key learning support (e.g. information technology, learning and writing services, statistical expertise, clinical skills, teaching or instructional skills).

Renovations to the upper floor of the Library could result in an integration of service points so that reference, circulation, information technology, learning services and writing expertise could all be accessed from a single area. This service point would also act as a referral area so that users could be guided to specialized services or individual consultations as required.

The Learning Commons is a client centered approach to learning support that breaks down the artificial divisions among groups that are focused on the same general objectives. It responds in particular to the needs of students to have available, accessible and coherent help and assistance. There is a significant cultural shift necessary to be successful. If the needs of the client (students and faculty) are held uppermost in mind then the culture will develop in response.

4.3.2 Re-Allocation of Library Space

The use of space throughout the Library reflects a mixture of conflicting services and desires. With the exception of new space created by covering the stairwell (see below) it is not recommended that the Library expands its space but rather that the existing space be utilized in different ways.

The Feasibility Study for the McMaster University Health Sciences Library by Moffat Kinoshita Architects (December 2000) provides some valuable insights into the needs of the HSL and should be reviewed again in conjunction with plans that emerge subsequent to this review. However, the consultants underestimated the rapid transition to electronic resources and hence overestimated the need for housing print collections. The plans for the Library are dominated by a continuing focus on print resources. The aggressive and pervasive move to electronic resources coupled with an expansion of access via workstations in other parts of the building, at home and remotely will significantly alter the space needs and requirements.

The following comments are examples of how the existing Library space could be re-allocated and re-aligned to respond to changing needs and diverse requirements.

- establish the upper floor as a service area and a space for group interactions (e.g. noisy space area) and create differentiated space on the lower floor to separate and isolate specific types of use (group, individual, noisy and quiet).
- maximize window space for people (either for individuals or groups) and move resources such as collections and photocopiers to the middle of the floor or to the interior walls. Consider creating another photocopier room.
- arrange the stacks in regular blocks and use the positioning of these blocks to create separated areas where space can be used in different ways. These “pods” could be designed group space or quiet study space by the nature of the furniture provided (e.g. tables and chairs or individual carrels).
- allocate group space around group study rooms in the south end of the lower floor and create more group study rooms along the interior walls of the lower floor. As much as possible the group study rooms should utilize glass and/or frosted glass panels to allow light and maintain an “open” feel.
- move the current serials shelves to the lower floor (recognizing that quickly the majority of new issues will arrive electronically rather than in print) and replace this area with group learning space.
- dismantle the CIS lab and distribute the computers throughout the Library. The room is a blight and a barrier to access. Eventually, through the laptop program, computers will be distributed throughout the Library.
- integrate the circulating collection in the History of Medicine Room with the other monographs on the lower level and move the locked cases containing the rare materials to an area adjacent to the stacks on the lower level. Mediated access will still be necessary for this collection but its use is relatively limited.
- change the existing History of Medicine Room into a multi-use facility that would act as a teaching and instructional room when required and an openly accessible space for group learning at other times.
- completely overhaul the AV area (it is dramatically underutilized). There are numerous options: group study rooms, quiet study area, areas for Learning Commons support staff and consultation space. One option would

see this area established as a Learning Commons reserved for students within the Faculty of Health Sciences. As such it could contain resources and services targeted specifically to their program of study thereby more effectively managing space and resource allocations.

4.3.3 Stairwell

The Moffat Kinoshita report recommended that the stairwell be covered in order to 1) create additional upper floor space for group activities and service support, 2) curtail noise which is amplified by this large opening and 3) isolate the lower floor to enable flexible use of this space. If this is not possible because of financial constraints or other limitations then a variety of other measures should be introduced to mitigate the affects of this opening:

- introduce “white noise” to dampen sound on upper floor
- allocate area on lower floor around stairwell for noisy activities (e.g. group study areas)
- clear indication for users that the upper floor will remain noisy (e.g. not suitable for quiet study)

4.3.4 Create a New Library Entrance

The Library entrance is dark, uninviting and serves to isolate it from the rest of the building. The entrance needs to be renovated to make it visible and open. The use of glass, light and open space will draw attention to the entrance and attract people into the facility.

4.3.5 Redecorate the Library

The Library is showing its age and vintage. Paint, re-carpet and generally upgrade the facility to create an inviting, comfortable and light filled Library. It should be a place of which to be proud; a centerpiece for the Faculty’s vision of learning and research. Maximize the amount of light that is available into the interior of the floors, provide comfortable seating areas specifically for social purposes and introduce artwork and other stimuli to encourage reflection.

4.3.6 Food and Drink

Food and drink policies are currently the bane of many libraries. Traditional values about the nature of a library (quiet, no food, no drink) collide with a new generation of users that want (even expect) a more casual, comfortable environment. It is recommended that the Library follow the trend at other libraries and deal with food and drink as a waste disposal issue rather than as a prohibition. This would relieve staff of having to act as food and drink police (a difficult and demoralizing task) and encourage responsible user behavior.

There is one important caveat: this will only work if all the campus libraries adopt a similar strategy. Acting unilaterally would be problematic for the HSL. As a result the HSL should open a discussion with the McMaster University Libraries and users of the campus libraries to review this issue and develop a common strategy.

4.4 Staff for the New Workplace and the New Vision

At the center of any library is its staff. The Health Sciences Library is fortunate to have a talented and dedicated staff. In the interviews for this report the engagement of staff for was obvious. When faculty or students made negative comments about the resources or services of the Library they were also quick to praise the skills and helpfulness of the staff.

The non-professional, support staff of the Library have significant concerns about their roles as the Library evolves. For the most part the staff of the HSL have a long service record and are experienced library workers. However, staff are very concerned about being de-skilled and anxious about discussions around the “digital library” because they feel they lack the required skills. The Library has not articulated a vision of how the Library will evolve and has not been clear about how staff will contribute to that vision. This ambiguity is understandable (few libraries have been able to provide such a clear path) but it has lead to anxiety among staff. Perhaps an underlying contributor to this situation are the mental models of staff and, to some extent, Library managers that are still rooted in a print based library culture where staff are “clerks” in a “factory” or an “assembly line” hierarchical model. The new model of libraries is less about controlling processes and inputs and more about creating value for users based on effective services and resources (outputs). Support staff, under the general direction of managers and with specific objectives, can provide these new services. The Library needs to re-characterize staff roles within the new vision of the emerging digital library and begin an aggressive training program to build skills and facilitate the new work.

Complementing the support staff is a strong contingent of professional librarians. Many of the librarians are nationally acknowledged leaders in the health sciences library community. The problem is not lack of ability or dedication but numbers; there are simply too few librarians to properly respond to the mandate given by the Faculty.

The concept of the library as Learning Commons reinforces the strategy of librarians as learning colleagues that is already well established in the Health Sciences Library. This role for librarians continues the strong tradition of having libraries integrated into the academic programs, providing leadership and being academic colleagues with the faculty. While the consultations and interviews raised numerous concerns about the Library there was undisputed and highly positive support for the Library’s initiatives in actively contributing to the educational programs. Faculty, students and administrators all highlighted this role particularly within the areas of information literacy, critical appraisal and managing information. It is clear that librarians have been welcomed and fully accepted as part of the learning environment and that the Library has responded by

providing increasingly valuable services and expertise. Maintaining this level of involvement and effectiveness will be difficult. The Library needs to allocate its professional librarians carefully to ensure that this role is continued. In particular it will be a key challenge to expand this to electronic learning modalities (e.g. e-PBL and other technology enhanced or delivered programs).

The Library should take advantage of anticipated retirements to realign staff resources to where the critical needs are and will be: librarians and IT professionals. This is not to suggest that support staff are not important but rather to recognize that the challenges the Library faces will require professional expertise and leadership. Unless the Faculty and/or the University provides adequate and responsive IT staff (as described earlier) the Library will be obligated to hire its own IT staff or continue to be constrained in this fundamental area. In conjunction with this the Library requires additional professional librarians primarily focused on digital services and liaison with the user community.

4.4.1 Staff Development Program

The Library should create and fund a staff development program tailored specifically to new skills that support staff will need for the evolving library. Based on the renewed vision which should emerge from consideration of this review and from ongoing strategic planning the Library should identify and articulate new staff skill needs and conduct a skills inventory of existing staff. The program should identify specific learning objectives: for example, working in groups, meeting skills, communication, productivity tools (word processing, email, web) and database maintenance. As much as possible staff should be encouraged to express an interest in some of the new roles and new skill development opportunities. However, the goal of such a program is to provide broadly based skills and abilities for all staff as well as specialized skills for some staff.

4.4.2 Systems Analyst

The Faculty should fund a new position in the Library for a systems analyst. This IT professional is required to provide the technical expertise to create and maintain the information architecture for digital library services and resources. Ideally this person will work with colleagues within the Faculty and the University to weave the Library's information services and resources into the larger fabric of the campus IT environment.

Without this expertise the Library will not be able to integrate its information resources and services into a coherent, well functioning system. The complexities of the IT environment and the sophisticated demands of Library users (and Library staff) require a dedicated staff person with professional IT expertise. CSU has not been a source of this kind of technical support for Library.

The required interoperability of information systems suggests a systems analyst who is proficient with integration technologies, applications and related toolsets.

They should be comfortable with network technologies, programming application software and scripting tools like JavaScript and Cold Fusion. Working with the HSL librarians (to establish goals/priorities) and the current Computer Systems Specialist (to maintain the systems environment) the systems analyst can provide the systems leadership and technical skills necessary to implement and sustain a powerful digital library environment.

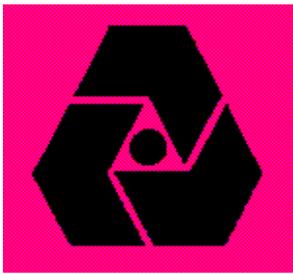
4.4.3 Librarians

The Faculty of Health Sciences should consider funding at least 2 new librarian positions: 1) an Information Resources Librarian with a strong focus on digital resources, access and delivery systems and licensing issues, and 2) a Liaison Librarian who would work closely with the user community to define needs and design services. The growth of the Faculty in virtually all dimensions (teaching, learning, research and service) necessitates enhanced professional librarian resources. The success of the librarians in working with the educational programs in particular suggests that this approach could be extended to the research and service areas.

4.5 Revitalizing the Hamilton and District Health Library Network

Established in 1970, the purpose of the Health Library Network is to “enhance the ability of each member to provide quality library and information services to the health care community it serves through resource sharing and other cooperative efforts.”

<http://www.hsl.mcmaster.ca/network/>

	<p>Hamilton Health Sciences (Chedoke Hospital, Henderson Hospital, General Hospital, McMaster University Medical Centre) St. Joseph's Healthcare - Charlton Site St. Joseph's Centre for Mountain Health Services City of Hamilton, Social and Public Services Hamilton Regional Cancer Centre Niagara Health System Mohawk Institute for Health Sciences Joseph Brant Memorial Hospital St. Peter's Hospital Long Term Care Best Practice Resource Centre</p>
<p>Hamilton and District Health Library Network</p>	

The members of the Health Library Network (HLN) serve both unique communities of users specific to their institutions and, increasingly, an overlapping community of users shared with other member libraries. For example, the Faculty of Health Sciences has faculty, adjunct faculty, students and even staff located at many of these sites. In many cases the clientele of these libraries are also the clientele of the others libraries. This,

combined with the cooperative strategies inherent in electronic resources and digital services, makes the HLN a coordinating vehicle for health libraries in the Hamilton area that could create a seamless set of services and resources to this intertwined user community.

The concept and the potential of the HLN has been challenged by the pressures of shrinking budgets and limited staff resources. As hospital libraries in the HLN have become staffed and resourced differently it is clear that the partnership model that traditionally focused on the Health Sciences Library as a provider of resources to the other members could be replaced with a model that emphasized shared goals and objectives and a shared responsibility and contribution. While members have their own distinctive requirements and responsibilities, it is clear that more than ever the opportunities and challenges are shared not unique. From this perspective, the HLN is more than merely worth preserving, it is a key strategy for resource sharing, cost containment, shared services and consolidated expertise.

From a user perspective the balkanization of library services throughout the various health library service providers is confusing and frustrating. Users expect the regional health libraries to cooperate to reduce, eliminate or at least make invisible the barriers that complicate access. Notwithstanding the underlying complexities of licenses, different computing systems and access means, budgets, and a variety of other factors it seems likely that the impact of intensive collaboration on users is more powerful and valuable than the difficulties in resolving these problems. It will, however, require a new, revitalized vision of the Health Library Network. It will require that all parties set aside the history of the Network and focus on the synergy and effectiveness of a new arrangement and vision.

A culture has emerged within the Network that is not conducive to moving forward. The hospital libraries have evolved and wish to be more independent and the HSL has become preoccupied with its internal challenges. A culture of competition or isolation has replaced the cooperative spirit that was the foundation of the Network. HLN members have expressed concern about a lack of client service from the Health Sciences Library and the HSL has expressed concern about the importance of the HLN in fulfilling the HSL mission. Turf issues are obscuring an important opportunity to serve the shared user community. It is ironic that at a time when electronic resources would enable closer cooperation among these libraries that what is experienced by users is less cooperation and an increasing number of barriers.

A new HLN will require new or reallocated resources and, most importantly, a desire to collaborate that is fueled by a sense of responsibility for the extended user community. A revitalized Health Library Network is dependent on the collective will to change and reshape the vision. Many things are possible: shared district wide licensing of information resources, an integrated library catalogue of district wide health libraries (using MORRIS) and a rich and sustainable health libraries web presence.

A new Network model should be constructed as a true partnerships where all members contribute and receive services. Value and fairness can be ensured through a compensation formula or methodology that assigns costs to transactions and nets out charges on an annual basis. Such a model can enhance access to information services and stabilize, if not reduce, costs. This will require compromises by all parties to achieve the benefit of collaboration. If the potential is to be realized it will need to be nurtured by clear leadership.

4.5.1 Hamilton and District Health Library Network Summit

A multi day meeting should be held as soon as possible to brainstorm a new vision for the Network that recognizes the changing organizational settings and advances in information technology. This vision should be operationalized with a clear understanding of shared objectives, governance, procedures, resource allocation, and evaluation. The Summit is an opportunity to reinvent the Health Library Network. It should be coordinated with professional facilitator and include input or active participation by members of the user community to ensure that the focus is on maximizing benefits to users.

4.6 Fundraising and Development

Fundraising and development work are time consuming and often frustrating. However, an effective development program is now essential in any university environment because of the need to diversify resources and to engage the larger community in supporting the goals of the institution. Through its Friends group, special evenings and auctions the Library has undertaken a variety of development initiatives and has had some important successes. However, it is not clear that the Library is a participant in a well understood development plan that connects the needs of the Library and the Faculty. There are many development activities but not a good strategy that guides these activities and allocates the resources necessary to be successful.



Fundraising can represent as much as 40% of a library director's time commitment. While this may not be appropriate in the case of the HSL it does illustrate the need for the Director to refocus on this aspect of library administration and for staff to recognize the importance and impact of this work.

4.6.1 Development Strategy

The Director of the Health Sciences Library and the Dean and Vice President, Health Sciences should define a development strategy for the HSL that identifies specific goals, establishes key initiatives and allocates the necessary resources. This plan should be linked to the new vision of the Library that positions it as a leader and innovator in the provision of health sciences information resources and services. It should recognize the role the HSL can play in supporting the development work of the Faculty as a whole as well as articulate the specific goals for the evolution of the Library. As the Library reinvents itself and acts on this new vision one of the most important development opportunities is to name the Library after a benefactor who wants to support this new initiative and be linked to the success of the Library and the Faculty of Health Sciences.

4.6.2 Fundraising Leadership

The Director should consider delegating some responsibilities to senior Library staff in order to devote more time to Library development and fundraising initiatives. The importance of this work can not be overestimated. Each member of the Library staff must see the value of fundraising, recognize how they can contribute to it in their daily activities and acknowledge the time required of the Director for it to be successful. However, it is the Director of the Library that donors want to interact with; it is the Director who must describe the new vision of the Library that will excite donors and attract support.

4.7 Culture of Assessment

It is instructive to note that initially the idea of an external review was not well received by Library staff. While the process whereby the review was conceived and initiated may well have solicited this reaction, the response of the staff speaks to a culture that is uncomfortable with the evaluation of its services. Such a defensive posture is not unusual or unexpected. Like many libraries there is not a culture of assessment at the HSL that facilitates the ongoing evaluation of its activities.

Staff raised a number of issues with respect to the management of the Library. There were concerns about “micro management”, lack of staff autonomy or empowerment and comments about ineffective communication. These concerns notwithstanding the Library was widely held to be a good place to work. The HSL makes a significant attempt to bring they staff together to consider issues and to build a sense of community (the Library retreats are important and admirable examples of this).

A more serious concern centered on the Library’s attitude towards client service. While there is lots of evidence to suggest otherwise it was the feeling of many users that the Library was not sensitive to their needs or responsive to the problems they experienced. An key example, repeated by many, was how difficult it was to locate information (e.g.

there were too many places to look; different lists existed and none were comprehensive).

All these concerns, from both Library staff and Library users, highlight a key aspect of the Library's culture that should be addressed. The Library must become more comfortable evaluating itself. It must be able to examine how it is organized, how it operates and how effective it is. It must accept that changing circumstances will require adjustments and it must be willing to identify services that are no longer effective and need to be ended, altered or redesigned.

4.7.1 Culture of Assessment Workshop

At least two Library managers should attend the "Creating a Culture of Assessment" workshop offered by the Association for Research Libraries (for further information see: <http://www.arl.org/training/institutes/culture.html>). These managers should then lead an initiative within the Library to incorporate evaluation into the work of all Library staff. Guided by a commitment to client service this emphasis on assessment will provide the means for the Library to critically appraise its own services and make the appropriate adjustments and changes.

4.7.2 Future External Reviews

It is recommended that the Health Sciences Library engage in another external review within the next 5 years. It is further recommended that the next review be conducted by a team of consultants (2 external and 1 internal) and that the Library prepare for this review with an preliminary analysis that identifies key issues to be addressed.

4.8 Leadership and Management

There has never been a more difficult time to be in a leadership position of an academic library. The pace of transformational change coupled with the challenges of constrained resources have left library directors with critical choices about how the library is to evolve. Difficult decisions must be made in a time a great ambiguity.

The new Dean and Vice President, Health Sciences has established a bold new vision for the Faculty. It is a vision driven by an aggressive goal of positioning the Faculty of Health Sciences as a world class resource for health sciences education, research and clinical service. What is not clear is how the HSL can contribute to that vision. While it is true that within the Faculty many administrators and faculty are still coming to terms with this new vision (there are tensions and misunderstandings as well as widespread support and excitement) there appears to be a disconnect between what the Faculty wants and what the Library sees as its goals and objectives.

The Health Sciences Library has, in some ways, resigned itself to a position of inadequate funding and hence less than optimal service. Years of struggling have left managers somewhat discouraged. At the same time there is a feeling among some of the managers that the Library is “owed” the necessary resources. In fact, the leadership of the Library (the Director and the management team) can no longer “expect” new resources based on the historic role of the Library. Instead they must attract new and secured funding; they must transform the Library into a magnet for support. The re-visioning of the Library that is an underlying theme of this review must begin with a renewed management commitment to alignment with the vision of the Faculty of Health Sciences (in particular) and McMaster University (more generally).

The recent Health Sciences Library Plan 2002-2003 (see http://hsl.mcmaster.ca/plan02_03.htm) presents a useful opportunity to comment on some aspects of leadership and management. The document attaches a management workplan to the Library’s overall mission and goals and as such is a guide for administrative focus and action. This is important and useful. However, what does not emerge from this document is the emotion or the passion that should fuel the HSL to be an exemplary service and resource. The plan is characterized by the use of words such as “explore”, “discuss”, and “investigate.” It is more passive than proactive; it is not inspirational or motivational.

Perhaps the most revealing section is that which refers to the “Collaboration Goal” and its related projects. Collaboration is the key to success in the future of academic libraries. The increasing service demands and the continuing financial constraints require a collaborative approach (no one library can do everything themselves) and fortunately the digital environment enables such a direction. Collaboration is exceedingly difficult; a collaborative partnership is not a means to fast and efficient decision making. However, managerial effectiveness is not the goal; the goals are more effective resources and services for users. The collaboration goal needs to be operationalized with a commitment to truly working together as a core value in developing resources and programs. It needs specific targets or objectives that enable collaborative outcomes. A proactive leadership role from the Health Sciences Library is necessary to nurture collaboration, to seek it out and to develop collaborative environments where none existed before. This is the role of the Director but equally the roles of the Head of Collections and Technical Services and the Head of Public Services (both of whom need to take a stronger leadership role in this area).

4.8.1 Conversation and Dialogue

The Dean and Vice President Health Sciences, the Associate Dean Academic and the Health Sciences Library Director are key to the alignment of the vision with the actions of the Library. There is great potential for the HSL to be a centerpiece of the new vision of the Faculty. This potential is currently obscured by uncertainty about how the Library contributes to and embodies that vision. This recommendation is one that encourages communication and community building among these key leaders of the Faculty. It does not suggest that are

problems but rather than in a time of rapid change and cascading responsibilities it is often difficult to communicate the vision, foster understanding and leverage the necessary action. This is not a time to be unclear about roles, expectations and overarching goals.

4.8.2 Passion and Excitement

While it might be odd to conclude a report with a recommendation of this nature it is important to recognize how critical inspiration is to a healthy, committed and purposeful library. Perhaps it is a result of the financial challenges or perhaps it is a result of the pace of change but whatever the reason the Library is in want of infectious enthusiasm. While the Library staff and management still have excitement and passion for the Library mission it has been dulled over time as they have struggled with many challenges.

There is no recipe to address this. However, nothing will inspire staff and instill confidence in the user community than Library leadership that is publicly committed and optimistic about the value of libraries to the academic enterprise and the role that the HSL in particular can play in the lives of its users.

5. Conclusion

The Health Sciences Library needs to reinvent itself within the context of the Faculty of Health Sciences and McMaster University. That new investments are required is undisputed. However, the Health Sciences Library must earn those new resources by redefining options, taking risks and exploring new ways to achieve its fundamental goals. Just as the physical facility is tired and dated so too is the information resource and information service infrastructure. Because of various constraints (e.g. funding, staff) the Library has not been able to move rapidly to become a digital information resource and as a result its status as the heart of the Faculty has been diminished.

The recommendations of this review are a combination of strategic directions and tactical actions that will reorient the Library and allow it to become a more vital and influential resource in the lives of its user community. To do that these recommendations and the actions built upon them must be adopted through a community process supported by the Faculty of Health Sciences and lead by a re-energized and re-focused Library management.

Libraries continue to be central to the academic mission of the university. The dramatic changes in information technologies that are redefining libraries have resulted in even more profound roles. The needs of faculty, students and staff are great and the potential of the Health Sciences Library is obvious. It is hoped that this review will allow the Library to seize the opportunities it has and regain the status that Dr. Jenny Blake (Class of '77 and a past chair of the Undergraduate MD Programme) spoke of when she said:

“The library is the heart and soul of the medical school...
In traditional medical schools the seat of learning
is a bench in a lecture hall.
At McMaster it is the library.”

Appendix A

Prioritized Recommendations and Estimated Costs

Information Resources	
1st Tier Priorities	Estimated Cost
4.1.1. Implement the Access Model with Increased IR Funding	\$159K (annual) to cover 2001 one time increase and \$120K (annual) to enhance IR purchasing
4.1.2. Interlibrary Loan and Document Delivery (ILL/DD)	\$100K (annual)
4.1.4 HSL and Thode Collections Policy	No cost
2nd Tier Priorities	
2nd Tier Priorities	Estimated Cost
4.1.3. Consortial Licensing	Expenditures will flow from increase in IR funding
4.1.5. Reserve	\$50K (one time); \$5K (annual); impact on IR budget
4.1.6. Weed Collection	Undetermined costs will be incurred if weeded collections move into a storage facility

Information Technology	
1st Tier Priorities	Estimated Cost
4.2.1. McMaster University IT Vision	No cost
4.2.3. Associate Dean Information Services and Technology/Chief Information Officer	\$100K+ benefits (annual)
4.2.4. Access Through Library and CIS Workstations	\$100K (one time) for renovations
4.2.5. Wireless Laptop Program	\$50K (one time) for wireless install and infrastructure changes; \$30K (annual) for equipment lease
2nd Tier Priorities	
2nd Tier Priorities	Estimated Cost
4.2.2. McMaster University Portal	\$100K to \$400K (one time) for software; \$20K-\$40K (annual) maintenance; assumes available servers and staff
4.2.5. Proxy Servers and Authentication/Authorization	\$ 700 (one time) for proxy software

Space and Infrastructure	
1st Tier Priorities	Estimated Cost
4.3.1. Learning Commons	Dependant on options selected
4.3.2. Re-Allocation of Library Space	
4.3.6. Food and Drink	
2nd Tier Priorities	
4.3.3. Stairwell	Dependant on options selected
4.3.4. New Library Entrance	
4.3.5. Redecorate the Library	

Staff and Staff Development	
1st Tier Priorities	Estimated Cost
4.4.2. Systems Analyst	\$55-60K + benefits (annual)
4.4.3 Librarians	2 x \$45-50K + benefits (annual)
2nd Tier Priorities	
4.4.1. Staff Development Program	\$5K (annual)
4.7.1. Culture of Assessment Workshop	\$3K (one time)

Leadership and Management	
1st Tier Priorities	Estimated Cost
4.5.1. Hamilton and District Health Library Network Summit	\$2K (one time)
4.6.1. Development Strategy	No cost
2nd Tier Priorities	
4.6.2. Fundraising Leadership	No cost but assumes new librarian positions are filled
4.7.2. Future External Reviews	\$10K (every 5 years)

Appendix B

Acquisitions Allocation Mechanism: the Access Model

**Senate Library Committee
University of Guelph**

January 25, 1999

The Senate Library Committee, based on the extensive review undertaken by the Allocations Subcommittee, recommends acceptance and implementation of the Access Model as the means of allocating the Library acquisitions budget.

Summary

The following are the main features of the Access Model:

- one budget pool would be used to acquire all journals and journal articles.
- provision is made for a transition among four main modes of delivery or access depending primarily on the cost per use of a journal title.
- a second large budget pool would be used to acquire books or multimedia using existing collections policies to develop subject profiles for approval plan ordering.
- effective liaison between librarians, faculty and students will become increasingly important to the management and enhancement of Library resources.
- on an annual basis the Allocations Subcommittee would review the general operation of the model and report to the Senate Library Committee.
- the entire allocation mechanism will be reviewed 3 years after implementation by the Senate Library Committee and reported to Senate.

How Has This Issue Been Examined?

The Allocations Subcommittee has met regularly since September 1997. It has submitted two major reports to the Senate Library Committee (SLC) and the University community between October 1997 and December 1998. In its first document, Library Acquisitions Allocation Mechanism: Principles and Goals (March 1998) which was presented to Senate, the committee reported that the current acquisitions allocation formula is not adequate for future library needs. This observation was well received by the University community when discussed in the winter semester 1998.

In a second consultation document released in October 1998, the committee examined the criteria, objectives, and principles originally set out and, in the context of different models, proposed the possibility of a more centralized system for both journal and book/multimedia resources. This allocation model is called "Access." It has been discussed widely by departmental library representatives, chairs, directors,

interdisciplinary program coordinators, and deans. A particular effort was made to include student consultations and feedback.

The committee believes there is considerable support for the Access model because it strives to improve access to library resources and to manage the costs of material, especially journals.

What is The Access Model?

The Access Model provides journals, journal articles, books, multimedia resources and documents to users in the most cost efficient way using a funding base and resultant acquisitions budget that cannot sustain the traditional approach to provision and delivery. This model aggregates the current Library and academic allocations and creates larger pools of money to enable "Access." This Library budget pool would be used to acquire all resources including paper subscriptions, electronic journal subscriptions, electronic texts, books, multimedia resources, computer-based indexes, document delivery (DD) and Interlibrary loan (ILL) and resources shared through the TriUniversity Group of Libraries (TUG). It is a combination of the existing \$3.5 million in academic and library acquisitions budget lines for 1998/99. Essentially, there would be two main allocations of money: 1. books and multimedia; and 2. journals.

1. Books and Multimedia

The committee, and the University community, strongly believes that a budget for books and multimedia resources should exist that is independent of the allocation for journals. Books and multimedia resources are important teaching and learning components of many courses and provision for their acquisition should not be compromised by cost increases in journals.

The committee proposes to merge the majority of book/multimedia budgets for all departments/schools and the Library into one main fund. In this model, undergraduate, general books would be acquired by "profiles" developed using existing collections policies used in "approval plans" with selected book vendors to purchase and review books on a regular basis. Approval plans have been used successfully for decades in major academic libraries throughout North America. The advantages include: 1) a more systematic coverage of publishers; 2) faster deliveries and provision of cataloging which would expedite availability for users; 3) less reliance on finding reviews which appear long after publication; 4) an opportunity to review and select books in hand; 5) the potential to rationalize some subject purchases within the TUG framework, and 6) the opportunity to provide better interdisciplinary support by establishing cross-departmental profiles.

Faculty and students could also continue to request "firm orders" as they do now by accessing vendor databases or print catalogues/reviews and by submitting these to the Library. These firm orders would not be part of the book/multimedia budget allocated to the profiling system. In addition, the committee recommends that the current practice of

supplementing academic book expenditures from Library trust funds, such as the successful Parent's Library Fund program for undergraduate books, should continue.

Since profiles and approval plans are new concepts for Guelph and require significant planning time to establish properly and effectively, the committee recommends that the book/multimedia proposal not commence until fiscal 2000-2001 and that the existing budgeting process for monographs continue in fiscal 1999-2000.

The committee recommends that a minimum \$700,000 (or the equivalent of 20% of the acquisitions budget) should be allocated to books/multimedia in the following manner:

\$500,000 approval plan
\$100,000 firm orders
\$100,000 held in reserve

The reserve allocation of \$100,000 would be integrated into the approval and firm order allocations after the phase-in period.

ISSUE: Formulas and Guidelines

The committee believes that it remains possible to use a formula for book allocations, but thinks any formula should measure subject coverage need rather than numbers of faculty/students, etc., as in the case of the existing library formula. Determining need depends to a great extent on knowing what is published in various disciplines. The one year delay in implementing a central funding scheme will allow a review of possible formulas that could be utilized in 2000-2001. Similarly it will be necessary to establish guidelines for firm orders which will remain outside the profiling plans. These guidelines should include information about how departments would share in the firm order plan and how carry forward amounts could best be used to the entire benefit of the University.

2. Journals

One of the main features of the new Access model is the provision for a transition to other modes of delivery depending (in most cases) on the cost per use of a journal title (which the Library began tracking on a semester basis in 1997). While different circumstances may alter the order somewhat, the methods and priority of sequence are as follows:

Priority 1 . electronic journals: available from anywhere on or off campus; access is immediate; can be used by many simultaneously; sometimes less expensive than print equivalent.

Priority 2a . TUG paper holdings: costs shared with TUG partners; access is fast if items are on the shelf; delivery is provided quickly through TUGdoc; cost of copying is fully subsidized by Library.

Priority 2b. electronic delivery of articles to Guelph: Library pays per article requested; fairly inexpensive if few articles are requested per journal title; access is relatively fast; delivered directly to offices without Library mediation for faculty or graduate students.

Priority 3. paper copy in Library: access is fast if items are on the shelf; requires user to come to the library; users pay photocopy costs.

Priority 4. traditional interlibrary loan/document delivery: longer turn around time; Library pays per article requested; relatively inexpensive; slow access for users.

Shifting from one access modality to another would normally be done by librarians in consultation with relevant faculty and departments or programs. For instance, a title which is getting high document delivery requests relative to the cost of the journal would be proposed for subscription to either the electronic version (if available) or a paper subscription. Likewise, a paper subscription that is getting low use would be recommended to be replaced with document delivery as the primary delivery mode. Similarly criteria will be needed to recommend such shifts as those from paper subscriptions to electronic versions or from TUG paper subscriptions to electronic. Decisions and arrangements regarding changing journal access modalities and the provision of new journals would be reported to the Chief Librarian (or designate). On an annual basis the Allocations Subcommittee would review the general operation of the model and report to the Senate Library Committee.

These journal access modes are attractive in combination with suitable campus and in library computer hardware infrastructure and a strong in-library journal collection for undergraduates and disciplines that continue to rely on the print format.

ISSUE: Cost Per Use

The main criteria used to decide which method of delivery is the most cost effective for each journal title should be based on cost per use. Presently, there exists extensive data for use to assist in determining journal modes: 1) barcoded journal library use data; 2) use of SwetScan and AVISO interlibrary loan DD/ILL traffic; 3) and TUGdoc journal transactions among Wilfrid Laurier, Waterloo and Guelph libraries. However, other important considerations such as "core value" to a discipline, traditional areas of strength for TUG journal holdings, and availability of document delivery systems must also be factored into decisions about journal access.

ISSUE: New journals

Given the establishment of consortial arrangements, Canada Foundation for Innovation (CFI) funding, reinvestments in the acquisitions budget and the potential for less expensive access to electronic journals, the opportunity may be at hand to (re)acquire additional journals and strengthen the Library's resource base.

The Access Model for journals includes the creation of a new journals fund which will allow the Library to acquire selected new titles and, over a 3 year trial period, determine their use, value and to select the most cost effective access modality. An allocation of \$25,000-50,000 per year would allow new journals to be acquired at the same time we are managing access to existing titles.

ISSUE: User Fees

The committee continues to believe that we must resist a user fee for delivery of articles or documents from such sources as TUGdoc (material from the TriUniversity collections) or through such services as interlibrary loan or SwetScan.

With specific reference to SwetScan there was some concern that service costs will outpace Library resources. Given that SwetScan is primarily used for faculty and graduate research purposes and that it is considerably more cost effective than the traditional journal subscription, the committee feels its first choice is that, when necessary, additional funding should be made available to the Library for this type of service. In the immediate term the Library could improve efficiencies within the SwetScan operation by installing Ariel workstations around campus in sufficient numbers to eliminate courier costs and by taking advantage of a consortial deal with CISTI to reduce document costs. If necessary the Library could cap accounts by the number of articles provided or implement a user charge. At this point, there is no urgency to introduce either of the latter scenarios since the Library's budget projections for the service appear to be sufficient

ISSUE: Liaison

The committee believes the existing liaison between the Library and departments is working well and should continue. The Library and departments should continue to use the present liaison arrangements (librarians and faculty library representatives) to rationalize changing modes of access on an on-going basis and that these decisions be reviewed a subcommittee of the Senate Library Committee on an annual review basis.

Faculty in departments or programs would contact the appropriate academic liaison librarian with a request(s) for new journals and provide documentation as to the reasons for inclusion into the collection. The librarian, in consultation with other liaison team members, will deal with these requests using existing collections policies, criteria, guidelines and procedures approved by SLC. Librarians could discuss requests, get further information as needed, consult faculty, and make a decision on requests. The identification of new resources or new journal titles is greatly facilitated since Library assessments are an integral part of new courses or course/program changes introduced through Board of Undergraduate Studies and the Board of Graduate Studies or through various departmental and program reviews.

Appendix C

Acknowledgements

Such a review is only possible because people contribute to it fully and openly. The faculty and students of the Faculty of Health Sciences and other areas of the University were generous with their time and forthright in their opinions. The staff of the Health Sciences Library were always helpful and responsive to any questions or concerns I might raise. Many others helped me to shape an understanding of the Library and the larger McMaster University context. I very much appreciate their assistance.

Michael Ridley

Chief Librarian
University of Guelph
Guelph, Ontario
N1G 2W1

(519) 824-4120 x2181
(519) 824-6931 FAX

mridley@uoguelph.ca