IS THE FUTURE HERE YET? MANAGEMENT TRENDS IN ACADEMIC LIBRARIES

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"It's tough to make predictions, especially about the future."
Yogi Berra

INTRODUCTION

"Historically, the objective of the organizational structure was to institutionalize and stabilize; in the organization of the future, the goal will be to institutionalize change." (Nadler and Tushman, 1999, p. 49) To reflect about the future of any endeavor without considering the present would be to ignore the historical role of the past and its undeniable impacts on the organization's day-to-day business.

Towards the end of the last millennium, many librarians feared that their function would become obsolete and irrelevant. However, almost a decade into the 21st century, these same librarians are relieved because the reality of today proved the contrary and they are now positioning themselves to step into a bright future. Academic librarians are recognizing that the fear that once existed regarding the irrelevancy of their role that haunted the profession at the end of the last century was greatly exaggerated. Today, librarians continue to practice their function and activities in a hybrid library environment. However, this "new" information economy has forced many to re-examine the university library's roles and means for achieving its objectives. Indeed, the electronic era will continue to bring issues that will require a whole new set of answers. It is crucial that library managers seek and present these answers.

Academic libraries have been undergoing convincing pressures from its external macro-environment during the last decade. The most notable changes are related to budget restraints, new communication technologies, need changes from its patrons, and pressures to flatten the organization's hierarchy. These changes, according to Travica (1999, p. 174) affect "the organization of work, organizational structures, technology, professional abilities, power distribution and cultural values."

In order to better comprehend the impact of these changes in academic libraries, it is necessary to grasp the context of how these changes affect higher education institutions in general.

The objective of this paper is to present and discuss the future of academic library management as researchers have pointed in the pertinent literature and provoke a reflection whether or not academic libraries have reached their envisioned future.

FACTORS WHICH STIMULATE CHANGES IN HIGHER EDUCATION INSTITUTIONS

Although at times higher education institutions are criticized for being slow in responding to changes which have been occurring in society, Dougherty & Dougherty (1993) state that there is no doubt that their structure and practices are being transformed.

Two conditions which are greatly responsible for this impact on the speed of these transformations are the globalization and the adoption of new communications and information technologies. Castells (1996), more than a decade ago pointed the following characteristics of this paradigm shift known as the "Knowledge Economy":

- *Information is considered as being a raw material* acting on technology and vice versa.
- The *pervasiv*eness of the effects of new technologies is molding every individual process and collective existence.
- The *logic or topology of networks* which are well adapted to the complexities of the interactions reaching unpredictable developmental patterns can be implemented in all types of processes and organizations.
- *Flexibility* allows organizations and processes to be reconfigured in a society characterized by constant changes.
- A growing *convergence of specific technologies* is characteristic of highly integrated system

The attractiveness of the opportunities presented by new technologies is pressing universities to offer open and virtual learning to satisfy the interests and needs of its communities.

The international consortium known as "Universitas 21" formed by 18 universities signed an agreement with "News Corporation" in order to have a substantial share of the higher education international market. Mr. Rupert Murdock, owner of News Corporation, welcomed the new business stating that News Corporation made a strategic decision as it entered the distance education market utilizing distribution platforms, advanced technologies and the existing market segment. A very lucrative initiative between leaders in the provision of higher education with a world wide leader media organization is a very strong proposal." (Universitas 21 apud. Byrne, 2000, p. 3).

Commenting on his scenario, Byrne (2002) stressed that this reality clearly illustrates three strong answers to the globalization challenge. First, the formation of alliances and consortia or international partnerships (a strong tendency within universities today); second, the alliances to facilitate the distribution of products and services by means of powerful telecommunications technology, and third, the development of educational programs right at the work place. A successful format of this type is the corporate universities. Another format which gains more and more enthusiasts is the alliances amongst universities and companies. University professors and researchers are being hired by business establishments to present continuous informal and formal

education, tailor-made to satisfy the specific needs for training and educational developments, using various e-learning processes. In 1992, however, more than 15 years ago, Forbes Magazine reported that 200,000 consortia between schools and companies were built in the last 10 years". (CRAMER & LANDSMANN, 1992, p. 131)

This format presents advantages for both types of institutions. For one side, the university which seems to always be underfunded receives an economical boost allowing it to devise more ambitious programs, set and accomplish higher goals, and improve its attractiveness, while on the other side, business and industries acquire an intellectual mentor, knowledge resources, and customized specialized education for its employees.

However, according to Gordon, (2000) many sectors of higher education… are still reluctant to accept the idea that it is possible for a university to become an economic enterprise (a channel of job promotion and economical development) while at the same time retaining the traditional academic ideals, such as academic freedom and autonomy and the search for truth and excellence.

There are several serious external environmental impacts that higher education institutions face, such as the following:
- the university faces a paradigm shift towards becoming an economic enterprise
- government money is diminishing at a fast pace
- globalization of higher education is increasing, and as a result, universities suffer from competition with the commercial sectors entering the educational market
- continuous learning and non-traditional students are now variables and factors which higher education cannot afford to lose sight of or neglect
- the students' market as well as their needs are also constantly changing
- advances in technology, which empower the arrival of virtual institutions without physical barriers or constraints or geographical frontiers, as well as the development of online teaching make the place where students meet an irrelevant factor (LEWIS, 1997)

Although a whole decade has passed, we continue to see these technological trends dominate the educational scenario. The challenges are immense but higher educational institutions (and why not also libraries) need to take advantage of the following features offered by this digital environment:

- *Accessibility*: the capacity to overcome geographical barriers.
- *Availability*: the ability to overcome time barriers.
- *Search strategies*: the capacity to investigate new work forms.
- *Efficiency*: the capacity to make information available the fastest way possible.
- *Researchability*: the possibility to make questions in ways not possible with print texts.
- *Dynamic*: flexibility presenting information in various ways and the capacity to redesign it.
- *Interdisciplinary*: the possibility to search diverse fields and explore new approaches about the same topic.
- *Collaborative nature*: the ability to incorporate conversation and debate between peers in a specific work environment.
- *Aspects of multimedia*: capacity to integrate text, image, audio, and video.

- *Linkability*: the use of hypertext to unite a document to a similar material.
- *Interactivity*: the ability of the user to not only read and see a piece of information, but also to integrate it with digital text or images and use it in many creative ways.
- *Processing qualities*: a computer's capacity to accomplish routine chores repeatedly with a high degree of accuracy and efficiency, freeing the user to concentrate in intellectual activities.
- *Spatial capacity*: the ability to see objects under multiple dimensions and relationships, and the possibility to easily surf among archives of information.
- *Encyclopedic capacity*: the almost unlimited potential of the computer to store and exhibit bit volumes of information without physical format restraints.

Each one of these features is an extraordinary opportunity to improve and expand the virtual university, and contributes to re-think the academic university and its management. The changes that higher education is being led to undergo in order to be compatible with this new scenario greatly impacts academic libraries – its nature, processes, services, and structure.

IMPACTS OF HIGHER EDUCATION CHANGES ON ACADEMIC LIBRARIES

The traditional oral teaching method in a classroom setting is not, necessarily, the most efficient instruction method, considering that distance education programs literally takes the instruction to the student. With all the technology which is involved in this "new" means of learning, the students are "freed" of the restrictions imposed by the traditional classroom. These developments in the educational system present peculiar situations for university libraries by affecting the means by which information and services are delivered to their users. (PROBST, 1998).

Several revolutions which universities are facing today directly affect the nature and core of the library's activities. Neal (2000) mentions several, such as the following:

- The *personal computer* revolution and electronic data networks are enabling people to have instant connectivity to large amounts of digital information.
- The revolution of the *mobile phone*, including the satellite technologies are expanding the sense of freedom (i.e. not being dependent of a specific physical space) in order to access an information when and where one desires.
- The revolution of games, integrating sound and image, is cultivating a generation of learners and consumers who require a more sophisticated presentation of multimedia information, with improved visual graphics, integrated and interactive.
- The revolution of the *hypertext* is building powerful links between millions of archives enabling a more "smooth" navigation through the Internet cyberspace.
- The revolution of *ATM/self-service* is reinforcing the concept that the services to users should more and more be initiated and controlled by them.
- The increase of the *number of older people* working towards a College degree, bringing to the academic environment a larger quantity of individuals who have their own families and

diverse responsibilities, seeking to improve their abilities and knowledge in order to pursue a more promising career.

- The revolution of the *intellectual property* is creating conflicts between the information providers and their market, while the copyright of electronic information is being revised.
- The *information revolution* is creating a tension between how people consider information, either as a good or as a product.

This transformation which is occurring in the higher education context as an answer to this reality challenges the university library to rethink its fundamental role and the nature of its own existence. The focus of the acquisitions processes, syntheses, navigation, and storage of information should, more and more, stress the interactive access to digital multimedia information at the place of greater convenience to the user and the creative and innovative application of the information technology. This "virtual university" requires the development of large digital contents, new storage strategies, information and knowledge management, more sophisticated search strategies and techniques, more reliable and safer access and distribution systems, and new management approaches. (NEAL, 2000)

According to Lewis, (1997), any measures and techniques devised by higher education institutions to make itself pertinent to this context will significantly affect university libraries, their services, structures, and facilities.

These factors point to a library which will integrate market-oriented enterprise management approaches with different forms of information repackaging and distribution both of which will serve as a portal for aggregating all the learning experience and practice of the community which it serves, virtually or not. (NEAL, 2000)

A Delphi study conducted by Feret & Marcinek (1999, p. 4) identified several factors which influenced the university library's future, based on the opinion of 23 specialists of 10 different countries. "Most of them agreed that (a) the libraries will have to introduce paid services and seek for sponsors on continuous bases; (b) cooperation between libraries will be inevitable; (c) information provision through the Internet and the training of the users to utilize all of the IT capabilities will continue to grow; (d) libraries will be profoundly involved in distance education projects, providing informational and technical infra-structure; (e) there will be a significant number of staff to offer technology-based information services and less in traditional sectors of the library."

According to that study, the academic library will also be more involved with the university's informational infra-structure as a whole, supporting research initiatives and providing personalized alert services to researchers. Issues related to document digitization and information distribution via the Internet, associated with quality standards of electronic information resources will absorb more and more the attention and time of the information professionals.

Therefore, the changes that universities are induced to make due to pressing external factors will disgorge into the library. If the library desires to maintain relevance with the university's community, it will need to adopt competitive structures.

LIBRARIES NEED TO DEVELOP COMPETETIVE STRUCTURES

Technological changes are altering the way in which modern institutions are being structured. The power of the computer has reached the worker's office, and the thin and sometimes obscure boundaries between the library's functions, activities and services, information systems, computer center and telecommunication departments have led managers to reconsider their assumptions about the traditional organizational structure. Many institutions are developing organizational structure models that reflect the new roles and alliances that organizations are adopting today. (PITKIN, apud. PROBST, 1996).

In order to deal with the impositions set forth by this scenario, academic libraries also need to renovate, innovate, recreate their functions, crusade a different working philosophy, which will consider globalization and market demands, priorities, management styles and, of course, their organizational structure. Careful attention needs to be given to less tangible aspects, such as, how to align its strategies to a new organizational culture and leadership style without neglecting the organizational structure which needs to be reviewed. In the words of Berrings (cited by Gerryts and Pienaar, 1999, p.1), "The fundamentals of librarianship are being shaken by today's informational environment and the changes which are occurring are revolutionary. It is not a matter of new forces conquering the existing structure; it is a true revolution in which a whole structure is being built."

The days of the vertical hierarchal structure are numbered. The key to the success of this "new" library, which will take in consideration the environmental changes, needs to be more like a network, allowing multiple contacts, with fewer frontiers, allowing greater agility in the decision process. BERRINGS, (1999) cited by GERRYTS and PIENAAR, (1999).

Many leaders are searching for creative ways to develop and implement strategic and flexible organizational structures adequate to satisfy competitive challenges and individual and social expectations. According to Nadler and Tushman, (1999, p. 51), "Instead of thinking in terms of decades, the ritzy of change in the environment will require the organizations in the future to change significantly its fundamental strategies regularly between 18 months and 5 years, depending on its business. It is not uncommon today to hear executives talk about strategic cycles in terms of "web years," a time frame comprised of three to twelve years."

A study developed by King (1998) identified that the university's library structure should be based on a few key factors, including the need to reposition itself in the market from a "guardian" library of local collections to one that would be a "gateway" to information, beyond the library's wall; it should store information resources in electronic format and invest and increase its information technology facilities as a propeller agent of information services. These ideas served as the bases for the following principles laid out in the construction of La Trobe University Library:

- Guarantee maximum flexibility to facilitate the internal restructuring depending on the user's needs in constant evolution.
- Provide different types of spaces to accommodate a large spectrum of activities and services which libraries can offer, such as individual and group spaces, spaces which require the active assistance of the library personnel, service counters, self-service areas which

stimulates independency and autonomy, "one-stop" shops, spaces for teaching and training information literacy; spaces to store information in varied formats with the most relevant technology; spaces that will characterize the library as an information commons, etc.

- Set zones to differentiate and protect each type of space to accommodate diverse interactions, noise levels, and technological support.
- Incorporate new standards for physical space in areas, which provide access to print and electronic materials as well. Greater space for individual "workstations" where users can spend more time with greater comfort. (King, 1998)

Another research undertaken by King (2000) involving 38 library directors offered several assumptions that they had in common which influenced planning the library of the future. These assumptions included:

- Print resources will still be needed, but access to electronic documents will increase. The balance between the two formats varies depending on the knowledge area. More space will be needed for electronic access.
- There will be more access from places off-campus, but there will be users that will bring their own equipment (e.g. lap tops) to be used inside the library.
- The independence of users and demands for "self-service" spaces will increase, but they will need to filter the spectrum of options which will be available in the building. The "one-stop shop" concept for electronic resources, assistance and tools will increase in its importance.
- A physical environment which will be visually and psychologically attractive will be required; users will continue to study and learn in different ways, demanding differentiated spaces and equipments.
- Users will demand more flexible hours and 24-hours access to computer installations due to the increasing opportunities for flexible learning.
- The future will witness the importance of information literacy and the role of the librarians as instructors as well as developed abilities in information research.
- There will be greater demand for specific installations to support users with physical deficiencies.

Some of the results of this study reflected the need to create a stronger synergy between the library, technology, and teaching processes. Some of these specifications were:

- 24-hour access to information technology (IT) laboratories.
- Specific physical space (isolated spaces) to allow for greater access to specific collections, computers, photocopiers, printers and individual study areas.
- Flexible learning spaces with network access.
- "Workstations" equipped with electronic information access, including multimedia resources and software. A specialist monitor should always be present.
- Production installations and equipments so the user can develop his own materials in the most varied formats possible.
- Adequate environment for teleconference.
- Proper physical installations to enable users to participate in online and network discussions.
- Plug-ins for laptops, whether their own or borrowed from the library.

- Specialized installations for researchers, totally equipped to offer information access and retrieval. Equipment with access to all sorts of software, printers, scanners, etc., with the assistance of technical personnel.
- Reserved areas for advanced graduate studies and research.
- Free access to compact collections.
- Areas where users can relax, cybercafés and eating facilities.
- The increase of physical integration of related areas, such as information technology, student support, teaching, and learning. An information commons.

Several of these alternatives were also pointed out by Banks (1999) as being essential for the planning of the library's physical plant and structure of the future.

A longitudinal study conducted by Townley (1997) comprising the years of 1983, 1989, 1991 and 1996, reaffirms that although printed books and periodicals were still in use by the majority of the American academic community, one can observe a significant increase in the use of technological tools to access desired information and that the use of web homepages and gophers are substituting the use of the library's online catalogs.

Although a few studies conducted by Fox (1995, 1999) pointed to the decrease in the construction of new library buildings, the Association of College and Research Libraries prepared a study emphasizing that the independent learning trend makes the role of the information professionals more significant in order to provide orientation regarding the use and evaluation of information. Crawford (1999) defends the idea that libraries will need greater space in the future to accommodate the incessant increase of collections, meetings, study, research, equipment and IT. Baughman and Kieltyka (1999) demonstrated in a study that strong library collections have a positive correlation with larger academic productivity and greater institutional positioning.

It is not easy for many librarians to observe that automation and all of the information technology linked to it, including the Internet, stimulate and demand changes in the form, nature, and scope of the library's activities. However, it is undeniable that the introduction of technology allows them to accomplish more, quicker and more precise with less expenditure. These changes challenge directors to rethink policies, standards, philosophy, and work values.

Changes provoked by the implementation and use of the online catalog and automated systems used to retrieve information are presented and discussed in Shepherd's paper (2000) where he affirmed that the conversion to the online catalog brought efficiency levels never before felt to library users. Shepherd (2000) alerts us, however, of the existing dangers that need to be avoided during the change process, i.e. bad communication; failure to anticipate possible technical problems; failure to deal with fear and insecurities of the unknown and uncertainties; and failure to understand, anticipate, and prepare for resistances.

Certainly there are evidences and study results indicating that services, functions and physical space of libraries are going through gradual but substantial transformations as an answer to the concerns occurring in the higher education environment – the repositioning and restructuring of the universities. The academic library of the future will be more similar to a work office or even a research laboratory than to a building where documents are stored, independent of its format. In this

environment, students and researchers will integrate information in many formats and media. (RETTIG, apud King, 2000).

The real implications of this new format of academic endeavor regarding the physical plant and library structure are still speculations and they have not yet been completely explored. There is still need for more complete user studies to identify more efficient search strategies, how patrons select and use information sources and how the library's physical space and structure can help. (KING, 2000, p. 6)

Several suggestions or proposals of future academic library models were published in the pertinent literature as the new century came along.

TRENDS

Model A. Integration of the Library with Information Technology (IT)

Gordon (2000) presents a model that integrates the Library with the IT functions. According to her, in order to facilitate the library's strategies, many institutions are deciding to merge institutional areas based on the convergence of information and technology to deal with changes required by their market and also as a means to create opportunities to increase the cost/benefit ratio.

Furthermore, Gordon points out that (2000, p.2) "… as university libraries use information technology network services and service areas offering technology based products increase, it is not hard to see why many managers started to realize that there is a very close link between these two areas, thus resulting in many benefits."

A paper written by Jennings (1998) from the University of Canberra described the reason why and how the integration between libraries and services based on IT in the University began in 1993. The main advantages of this process mentioned are the ability to develop a unified vision of information and communication to the entire campus, the possibility of translating this vision into a resource development strategy which would lead to the implementation of a very broad policy, the provision of better services, and the creation of personnel development opportunities crossing sectoral and professional boundaries.

Gordon (2000) reports a research developed by the Australian National University, which demonstrated that similar initiatives, in that country, have been adopted. Of the 24 participating libraries, 12 reported that both, the library and the IT services managers were under the same executive area at the University. Of these twelve, four reported that the same person was responsible for both, the Library and the IT services. The study concluded that models like this one offer greater communication, cooperation, and integration opportunities.

> To achieve this intent, the University decided to build a place, which would home a library and a computing center as one unit. The building was constructed to allow the greatest synergy possible between the two

sectors. The people working on networks and educational technology are located beside the reference librarians; computer technicians and help desk personnel work side by side to the circulation desk librarians or staff; the people responsible for collection development are close to the media center people; the administrative reception area accommodates both the IT services manager and the library Dean, and these two share the same secretary…. The objective, however, is to create a fusion, develop a synergy, and provoke a consolidated approach of information management in the University. (GORDON, 2000, p3)

In reality, this library is totally based in IT. This "integrated facility" embraces provision of and access to printed or electronic information, considering a rich technological environment. The result would be a new blend of functions and space, integrating information resources, sources, technology, equipments and resources for production using the talents and abilities of the professionals. In this model, library functions and technology-based services are integrated to a point where it becomes difficult to distinguish where one ends and the other begins.

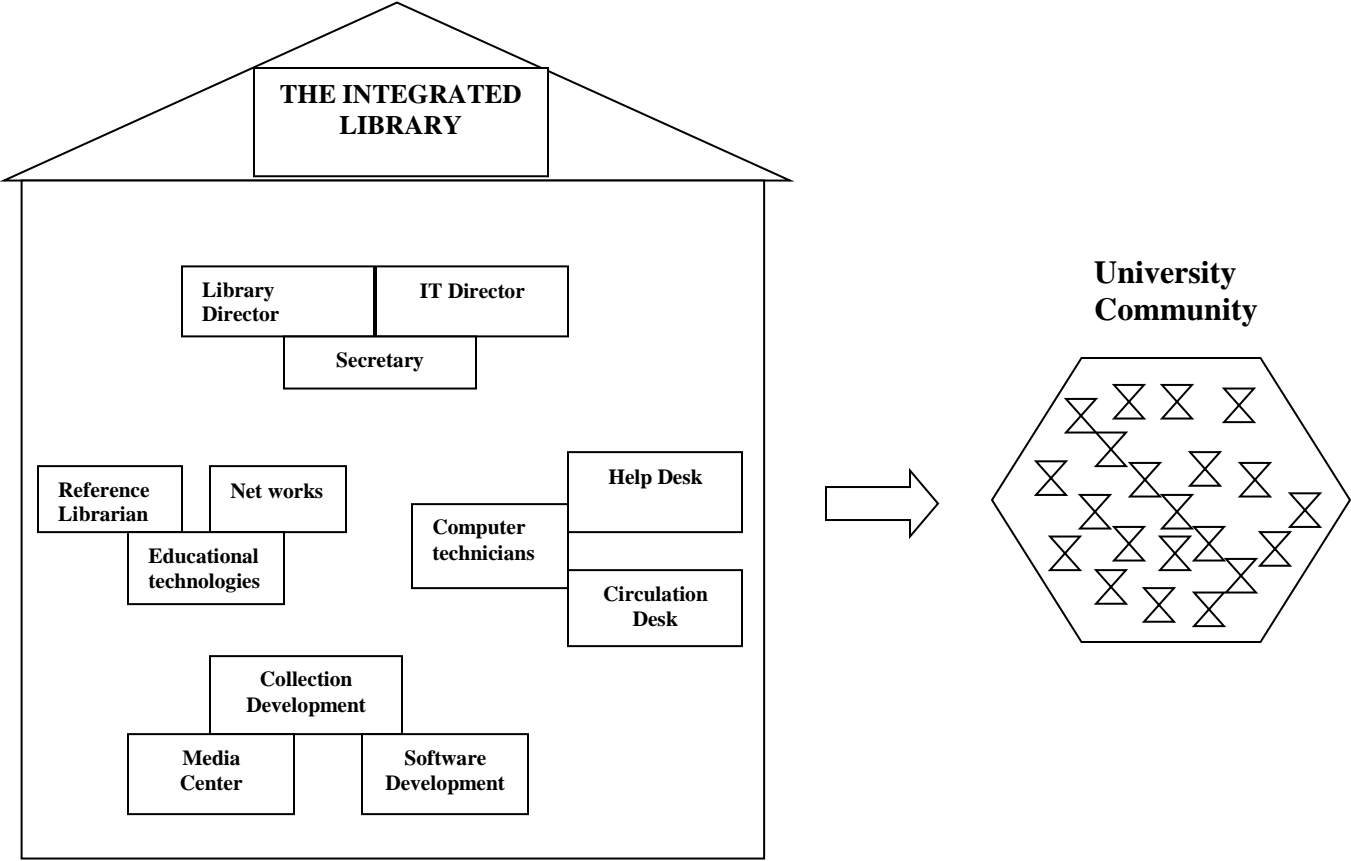A model representing this type of library structure is represented by Figure 1 below.

FIGURE 1 – THE INTEGRATED LIBRARY

Model B. The "Next Generation" Libraries

This type of library satisfies the needs of patrons in today's Internet/information economy, while maintaining the necessary flexibility to evolve into future generations. However, in order to present and accentuate the characteristics of this so called "next generation" library, as presented by Green (2000), it is paramount to briefly point out the evolution or development of libraries in general.

The traditional library of the last century was a physical identity located within specific geographical boundaries, which served a well-defined group of users or a specific community. This library was composed mainly of printed books and serial publications until the last half of the twentieth century, when then expanded its collection to include microforms. The reference services were limited to serve users who came into the library's doors or who called by phone. Access to the materials was possible using the card catalogs, lists of acquisitions and printed indexes. Interlibrary loan was provided to registered users who could not satisfy their informational needs utilizing the materials within the library's collection. (GREEN, 2000, p.1)

Green (2000) affirms that the next step in the library's evolution came with the "automated library." This one was like the traditional ones with slight differences regarding the use of automated catalogs and indexes and online access of services such as OCLC and RLIN. This distinction, however, was only related to format. The group of users remained the same, as well as most of the services offered by this type of library. However, the new access tools shook the foundations of the library world, and techno stress became a popular term. The library world was in ebullition. Uncertainties and doubts captured the profession. Was this the end of the profession? Would it become irrelevant? Would librarians learn to use the new technologies as fast as they were developed? Will the physical book cease to exist?

Conversations regarding techno-stress and techno-fear eventually gave way to discussions about hybrid libraries. In a hybrid library, the materials in electronic format reside side by side with printed documents. The online catalog and electronic indexes became the standards. Information services were then, like today, conducted both by traditional methods and electronic means. As librarians embraced new technologies, they discovered that well-constructed web sites could provide access to the information that users need. In reality, what limited the expansion of the library services were the community's needs and not its geographical location. (GREEN, 2000, p.2)

As Green (2000, p. 3) presents and defends the "Next Generation" library model, he also asserts that "the prevalent literature reports discussions surrounding the virtual, digital, and hybrid library. However, it is possible that the short life span of the electronic information, high costs to digitize centuries of printed documents, coupled with the copyright implications of electronic documents, make it almost impossible for us to glimpse, in the near future, virtual academic libraries replacing the most common hybrid library of nowadays. What we are seeing today is libraries digitizing special collections."

The concept that the virtual library is a collection developed to serve local communities poses controversial feelings. While many librarians see themselves as being bridges between the

hybrid and virtual libraries, it is important that they also reject old and rigid standards regarding the determination of who are the library's patrons, in order to include virtual users that might exist outside the traditional local communities. In a world where the access to information is no longer restricted to the printed book, why should the users' needs be limited by the hybrid library? (GREEN, 2000)

The "Next Generation" library emerges to satisfy this need and fulfill this gap. It is in the effort to expand the frontiers and as the library accepts the virtual user outside the community's boundaries, virtual libraries will surrender their space to the "Next Generation" model. The emphasis of this model is the delivery or distribution of its services with value added service to satisfy virtual users, wherever they may be located geographically.

In Kansas City, Missouri, the Linda Hall Library of Science, Engineering and Technology passed through these changes. According to Green (2000, p. 3) "One of the most important steps for any institution desiring permanent, fundamental change is the reassessment of traditional job functions and the accompanying revision of staff structure." Its structure will affect how the activities are going to be conducted. Some sectors might have to be unified, others broken down, and still others will assume new and different responsibilities. When the library changed from the old model to the New Generation Model, the number of information requests received increased from 30,588 to 107,461.

A model representing this type of library structure is represented by Figure 2 below.
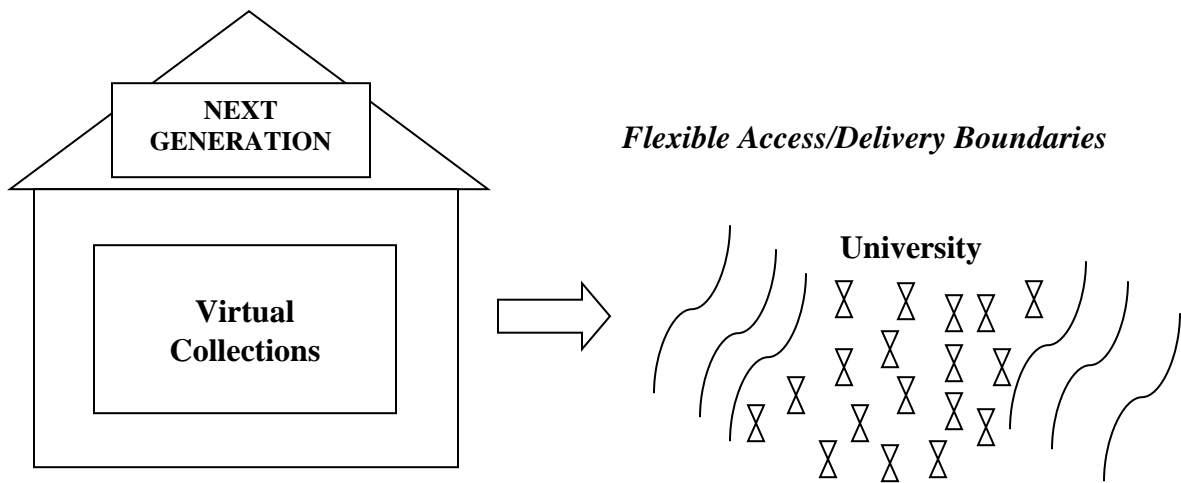

FIGURE 2 – THE "NEXT GENERATION" LIBRARY

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Model C. Information Commons

According to Beagle (1999, p. 82) an *Information Commons* is "a new type of physical facility specially planned to organize the work and distribution of services around a totally integrated digital environment." This model proposes areas for individual IT workstations, providing access to numerous software tools, and instantaneous help desk. It also makes available specialized personnel on information resources, computer technology, references, and media.

This model is harnessed to a wider and more holistic idea, integrated to a "one stop shop," concept, allowing the student and the researcher to accomplish their academic tasks and information access activities, retrieval and production of different formats of academic materials – all at the same place. Thus, the Information Commons, asserts King (2000) is

> characterized by individual and collaborative computer workstation areas which provides access to a wide range of software tools, not just information resources, ready access to assistance from staff with a range of specialist skills (computer, reference and media) providing a continuum of service, and individual and group work spaces with close physical access to the specialist assistance and the technology.

One of the earliest libraries to adopt this "model" or structure was Leavey Library at the University of Southern California. The "Information Commons" structure was introduced with the objective to "meet changing needs in a digital environment." (King, 2000, p. 4)

A model representing this type of library structure is represented below by Figure 3.
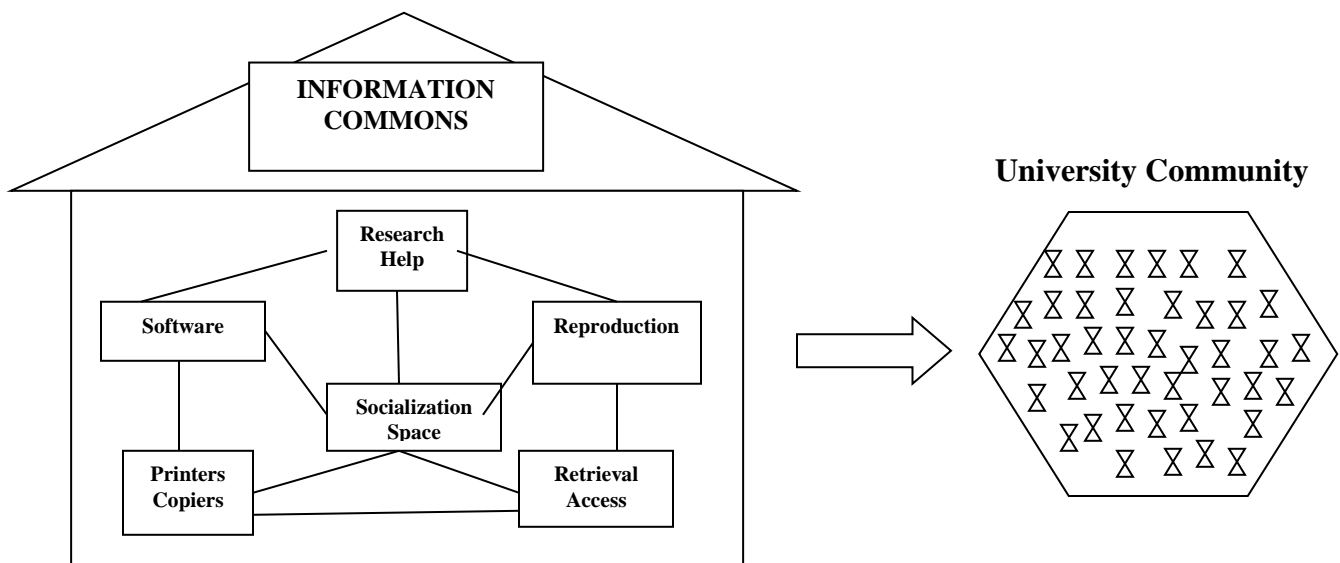

FIGURE 3 – INFORMATION COMMONS

Model D. The Learning Center

The Learning Center, proposed by Leighton and Weber (1999) is a model where its central focus is the support bridge of the academic program to the university's culture and experience -- offering all of their components under one roof by the interaction of books, technology, technical support, faculty, students, and colleagues. Academic studies are offered with other educational experiences and alternatives in intellectual and social spaces.

A model representing this type of library structure is represented below by Figure 4.
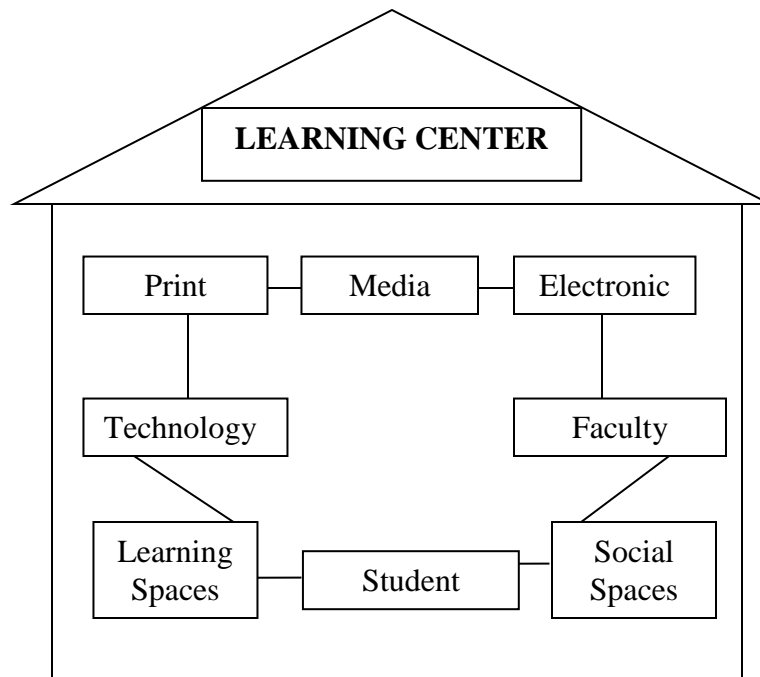

FIGURE 4 – THE LEARNING CENTER

Model E. The Decentralized Model

In this model, the university library of the future will concentrate its efforts in the distribution of different access points to its services. It would be a continuation of the "library without walls" concept. Few services would be centralized in a specific physical facility. Most of the services are offered in small information laboratories scattered throughout the campus, in places closer to the users, at class buildings, dorms, offices and laboratories. We could call them "information igloos" or "information booths"

A model representing this type of library structure is represented below by Figure 5.

DECENTRALIZED MODEL

LIBRARY

FEW CENTRALIZED SERVICES

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UNIVERSITY COMMUNITY

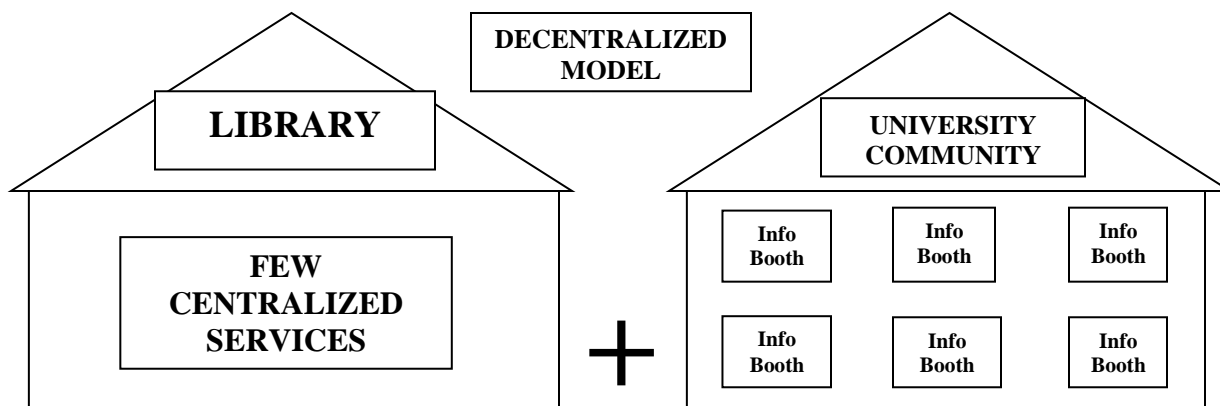| Info Booth | Info Booth | Info Booth |
| Info Booth | Info Booth | Info Booth |

FIGURE 5 – THE DECENTRALIZED MODEL

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Considering the above proposed models, the university libraries are challenged to maintain themselves coadunated with strategies and policies while in the process of restructuring, preparing to better adjust to the new social, economical and educational demands. It will also be very important to keep a **close** watch on the changes related to behavior, needs, and requirements of groups of users who are more and more heterogeneous, vocal and virtual, in order to quickly realign its services and structure to satisfy their needs.

Regardless of the model that is adopted in the future, the library needs to choose one that will be visible and identifiable at the University and will serve as a marketing tool for attracting students, teachers, and researchers thus keeping the University at a competitive advantage.

Table 1 summarizes the library trends presented above in this paper.

TABLE 1 – LIBRARY TRENDS

FEATURES	THE INTEGRATED FACILITY	THE NEXT GENERATION LIBRARY	INFORMATION COMMONS	THE LEARNING CENTER	DECENTRAL-IZED MODEL
MAIN DISTINCTION	Convergence of info and technology	-Internet/info economy -No geographical boundaries -Virtual collections	Integrated digital environment & social space	Integrated with the educational process	Distribution and different access points to the library's services
MAIN CHARACTERISTCS	-Synergy -Consolidated approach of info management in the University	-Flexibility -Delivery of Services -Distribution of	Instantaneous Help Desk	-Few services centralized in a specific facility -Services offered	- Offers complete learning experience under one roof. - Interaction of print

		services		in small labs scattered on campus	materials, technology, social and teaching spaces
MAIN EMPHASIS	Unifying structure libraries & IT	Delivery of services to a wider community	One-Stop-Shop	Holistic learning experience	Information Booths
BENEFITS	-Develop an unified vision of info & communication -Greater communication, cooperation and integration of resources and services	Unlimited community access	-Specialized personnel on info resources, computer technology, reference and media -Accomplish academic tasks & info access activities, retrieval & reproduction all in one space	- One place for full learning experience. - Easier contact with teachers, technical support personnel, and information professionals	Closer to changing user needs -Access points at user's most convenient places

CONCLUSION

As we describe and analyze the university library's role, it is necessary to realize that users, according to Skiadas (1999), don't see the library as a place were they can find information, because to them the Internet (well or not) already does that. However, the central mission of the university library in the 21st century remains basically the same since its inception – that is, to provide users with the information they need. But we do understand the other functions have been included due to many changes that we have already described in this paper.

The classic library function, however, has not changed. What really has changed are the broadness and techniques used to accomplish its role or roles. Libraries today are caught between the traditional and the virtual model. In this process, the emphasis has changed, from an organization that fulfilled the needs of the university community through tangible information sources, available *in loco* to one that provides access to information independently of its location to anyone who desires to obtain it, and more, in the format and "means" that best meets their needs or interests.

Another change that the library of today must face is in taking a more pro-active approach in the teaching/learning process. As the teaching process becomes more and more virtual, the library needs to adopt a more flexible position because the "new" patron wants new forms and alternatives to accomplish his academic obligations.

Without this pro-active intervention in the educational process, taking for granted this new teaching model, such programs are taking the risk of offering packaged information contents and resources, without the student having had the opportunity to get involved in this important research process in search of quality information. Such programs steal from the students the motivation to develop several important abilities, such as, abilities to locate, select, prioritize, search, analyze,

criticize, and integrate information. These restrictive formats of content distribution thwart the student from adopting a learning attitude for life. (KIADAS, 1999)

Librarians today who stay seated waiting for patrons to come in and be served will surely face extinction in the near future. To survive, they need to be outside the library building networking, getting involved in academic projects to guarantee that the information needs of faculty and students are actually met. The librarian's main function will be to select and organize electronic contents, integrate information, and train the community to access relevant information in a more effective way. This implies that they will need to actively be part of the educational team.

They should teach faculty how to find information resources which will better support the academic programs. They should help faculty develop course programs that will motivate students to do research, search, evaluate, and synthesize information rather simply give hand-outs with everything ready.

Therefore, the academic library will have to pioneer opportunities to establish its value as an active player and partner in the development of academic programs and the university's success.

There are a few points worth pointing out if we are living in the future yet.

Flexible Structures

If we accept the fact that external factors exercise a great impact in the development of organizational structures, then we need to constantly monitor and revisit these structures. Unfortunately, many managers assume a more centralized and control attitude as he/she faces an uncertain and unstable future, full of dramatic changes. However, since there is no reason that can lead us to think that IT development will be restrained, the only way for higher education and academic libraries to survive is to develop flexible structures compatible with the ever going changes. (GORDON, 2000)

Objectives of the Information Infrastructure of the Future

Jerry Campbell (1998) from the University of Southern California believed that any informational infrastructure for the future should have four key objectives:

- Reach a new cost-efficiency level, increasing personnel productivity; while at the same time reducing human intervention. This means that the traditional means and approaches need to be abandoned. In another words, if this infrastructure lacks the potential to add value, we need to interrupt the process or activity.
- Create a higher level of service. This will demand larger allocation of resources, new abilities, and a greater disposition to select the right opportunities.

- Develop research and development competencies. If we think creatively, it is possible to restructure work to make it more innovative, creating value and new opportunities to serve this "new" market.
- Quickly develop a flexible organizational culture so it can generate esprit de corps concealing this new mission. Values, culture, and shared goals are becoming more and more important and is obligating people to escape from their comfort zone. Conflict management and negotiation abilities will become part of the organizational structures which are developed to change frequently and respond immediately quickly answer to the emerging opportunities.

Strategies to Deal with Changes

The sooner we realize that academic libraries will be constantly interrupted by changes, the better we will be able to develop strategies to cope with and take advantage of their impacts. Shepherd (2000) suggests the following strategies to deal with theses changes:

- Understand the objectives of the proposed changes
- Identify and communicate possible limitations and deficiencies of the new system or model
- Demonstrate how the changes will improve the quality of work and will increase efficiency as a whole
- Establish and maintain open communication channels
- Motivate employee to participate and be involved
- Allocate resources to make the change project a viable one
- Develop and apply recruitment and selection techniques that will emphasize the familiarity of the candidates with IT and their predisposition to work in a work environment characterized by quick changes
- Recognize that training, development, and continuous education will be an integral part of the management processes in order to

    a. Establish a basic comprehension of the issues related to IT development and the formation of competencies in this area
    b. Increase the trust and competency of the people whose activities are directly affected by the technological developments
    c. Explore new ways in which technology can improve the efficiency and quality of the information services offered to patrons
    d. Restructure activities
    e. Improve managerial decisions.

According to Shepherd, (2000, p. 7), "Anticipate and answer to technological changes almost always lead to the reorganization and possible transfer of human resources. Such restructuring should be planned and implemented after careful reflection, recognizing and respecting human values without forgetting the need to develop and adopt strategies that will reach the libraries objectives."

In this new century, librarians have reached more challenging goals, providing quicker and more effective access to informational resources to library users and educating them to manipulate it more efficiently. We have seized key responsibilities and have expanded our functions in today's nebulous informational, technological and educational frontiers. But if we want to reach success in this new informational endeavor, we need to redefine the image of our profession, promote a pro-active role of libraries in higher education, constantly evaluate the library's organizational structure to guarantee its adequacy, and finally, we need to constantly remember the words of the Greek philosopher Heraclitos: "Nothing is so durable than change."

Is the future here yet?

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