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ACADEMIC LIBRARIES AND LIBRARIANSHIP IN TRANSITION: Where Is Information Technology Taking Us?

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Academic libraries and librarians are now struggling to find a place amidst tradition and change while dealing with increasing operational costs, unstable students enrollment, library customers' growing and changing needs, as well as with changes in information access, storage, and retrieval. All of these seem to be effecting change in the role of academic libraries and librarians' responsibilities. New information technology is another leading force driving libraries and librarians into what seems to be a hard-to-figure-out role in the new millennium. These changes are taking place at the same time that universities in the United States are trying to bolster the value of academic degrees that are waning under public and government pressure. The possible effects of these forces on library cooperation, library education, information globalization, and the mission of the librarian are discussed in this paper. These could be precursors an incipient paradigm that Academic Librarianship needs to think about and develop. It could be a time when we US academic librarians need to seek something more than the comfort of that of what they know; we need to go beyond the current mindset. To illustrate this push and pull, the experience at the Healey Library of the University of Massachusetts in Boston is used to show how a library and its librarians are grappling with dramatic changes.

1. WHAT'S GOING ON?

In my last five years at the Healey Library of the University of Massachusetts in Boston (U Mass Boston), I have seen more changes than in my first ten years of professional experience. Many of us could not imagine some of the new information technology developments that we now have at our fingertips. The world has definitely moved into the age of information globalization. We can now connect at an amazing speed to any graphic-rich and information-linked sites around the world. Certainly, these are exciting and thought-provoking times were scholars and laymen feel that they can access electronically anything they virtually need. This is something that in a-not-so-distant future could be true thanks to new information technology.

Nonetheless, all of these NIT developments come with a price tag. Admittedly, hardware is getting cheaper. Yet, getting the money is another story. It is really scarce, making it hard to keep up with software and hardware changes needed to access remote databases, CD-ROMs, networks, and use newer platforms. Our funding seems to get leaner while new information technology grows exponentially. Not long ago UMass - Boston Healey Library's budget was for salaries, operational expenses, and for library materials such as books and journals. Now our budget pays for these as well as software, hardware, and database access fees. The library also has to keep up with student and faculty demands for electronic and print materials needed for teaching and research. Yet, our funding has virtually remained the same.

This situation is not unique to Healey Library or to Massachusetts. It seems to be universal, although there are academic libraries that enjoy better funding than most. Nonetheless, even prestigious universities like MIT and Brown are feeling library budget blues and are collaborating with other libraries. For example, the Boston Library Consortium (BLC) was

formed over 25 years ago as a way of sharing resources. Obviously this need continues, BLC has grown from seven to sixteen members. A few years ago Brown joined, MIT, the University of Massachusetts five campuses, Woods Hole Oceanographic Center and Marine Biology Laboratory, and ten other academic libraries. Clearly, economic pressures have geared academic libraries and librarians to move from independence to interdependent collaboration.

Throughout the United States we see more consortia agreements fending library operation cost increases. For example, UMass - Boston Healey Library and BLC are planning a joint remote storage program and are negotiating electronic access fees with vendors. It is clear that it is impossible for one library to attempt to acquire all the resources - print or electronic - that it might need for its students and faculty. It is clear that our boundaries need some more stretching. Our libraries are moving into boundary-spanning cooperation activities. Our library tradition of self-sufficiency cannot be maintained in a world where information is exploding every minute. We certainly need to move from independence to inter-dependence. Clearly NIT has made resource sharing and information access easier. But, at the same time we need to provide traditional and innovative services that run from basic reference work, bibliographic instruction, collection development, and expert assistance handling information technology.

As noted academic libraries funding is not increasing, as a matter of fact United States higher education is under pressure and review. The traditional role of American universities is now been tested and contested under heated debate. Accountability is demanded from public universities and colleges. Questions on the value of an academic degree surface constantly on the media. Newspapers and magazine articles are looking at the raising cost of going to school - a 234% tuition increase from 1980-1995 - suggesting to the general public that a college degree does not necessarily correlate with increased earnings. Not long ago going to college and getting a better chance in life went hand-in-hand. Well, not necessarily, some US analysts suggest that college-graduate earnings did not increase relative to the cost of college education. These pressures are driving many colleges to adopt business-like strategies. Schools are redesigning curricula in hopes to make it more practical to employers, students, and communities. More and more colleges and universities are establishing better accountability practices and fiscal discipline methods. The public's growing feeling of uneasiness at university and college education effectiveness has brought to higher education a sense that we need to do more with less. American higher education has in the past enjoyed unprecedented resources and finds it hard to do more with less. Yet, we need to do more with less, no question about it. Thus, universities are effecting changes to improve their image and make their operations more efficient while retaining their traditional values.

These values seem to embody almost absolute autonomy and academic freedom, and access to vast resources, including library materials. These are the same values questioned by the existence of new universities such as Phoenix University. At Phoenix University, faculty tenure is virtually unknown, so are the traditional library services which I grew up with and was trained for. Yet, this university is not the only one offering virtual library services. Slowly some colleges and universities are offering remote access to their distance learning programs instead of setting up libraries and classrooms on off-campus locations. These new models make it patent that there are other ways for US higher education to do business.

With the advent of electronic reserves, the availability of full-text journals, and reliable fast-turnover document delivery services the traditional academic library seems to be very expensive. In some academic circles there seems to be a perception that libraries are bottomless pits. Admittedly, library services and collection costs can be mind-boggling especially in an age of questions and concerns on the cost of colleges and universities. Thus, many librarians are wondering: Will libraries be a thing of the past? Will school accreditation agencies stop requiring libraries? Can technology supplant academic libraries? Could higher education in the US adapt or adopt the Phoenix University's model? We will revisit these questions later. Now lets go back to some issues that interplay in the future of academic libraries and higher learning.

2. WHERE IS INFORMATION TECHNOLOGY TAKING US? IS INFORMATION TECHNOLOGY OUR GUIDING LIGHT?

The rising cost of higher education and its perceived diminished yield is not the only issue that American higher education is pondering in its restructuring. Two other major forces that are reshaping the future are NIT and student learning - known by most as general education reform and both are intertwined.

General education reform was initiated for school systems, community colleges, universities, and colleges later on. One of the main thrusts of the higher education general education reform is to prepare students and its graduates to be life-long learners that can use their learning experience as a frame-work to resolve problems at work, in the community, and so on. This is a shift into a more practical education. Thus, the shift from resource-based focus to teaching improvement for long-life learning.

NIT is now intertwined with general education reform. Clearly, information technology has changed how students, faculty, and academic librarians work. Students and faculty are using the Internet more. It is becoming a learning and teaching resource. For example, at UMass - Boston, faculty is developing homepages that they and their students use as repositories for their research and for discussion on topics such as women studies, art, poetry, and for many social science disciplines as well. Expository writing, discourse, and other fundamental research skills are brought together in a hands-on learning experience where information technology offers capabilities impossible to have on printed papers. These student/faculty projects are tangible examples of how technology is changing learning and it can be used to promote general education reform values.

This general education reform and NIT marriage goes beyond the examples presented before. Faculty are working using traditional research methods and relying on information technology to connect to research locations from their desktops. More and more faculty members are using e-mails, databases, and the web to tie a network of researchers together. Libraries are using NIT to improve their operations and to have information access that was impossible to have a few years ago. For example, at Healey Library we are using the Internet's high-speed connectivity to access remote databases such as FirstSearch, Academic Expanded Index, and other favorites making it a daily information access tool. And this is not happening at UMass - Boston only, it is happening throughout the country. Furthermore, Internet II is a consortium of academic institutions that is working to augment the Internet's speed and capabilities for research and education, and to use it on high-end new applications. In October 1996, President Clinton announced the Next Generation Internet (NGI) - a very high-speed network initiative to connect government, academic, and R&D institutions together at a speed one hundred to thousand times faster than current Internet. Certainly this NGI will promote more high-end research and development in academic institutions. All of this is going on while the National Science Foundations is redirecting its very high-speed backbone network services project to improve connectivity among hundreds of universities and research laboratories.

Clearly, NIT is not the only force behind the changes in American higher education and academic libraries. Nonetheless, it is very clear that NIT is a very important agent of change.

3. WHAT IS THE FUTURE OF HIGH EDUCATION AND ACADEMIC LIBRARIES IN THE US?

Keep in mind that US higher education is expected to do more and more with less. This creates an internal and conceptual push and pull for most of us. Some of us want to come through these changes unscathed.

Yet, it will be downright impossible because changes are beginning to hit home. On the other hand, our higher education system leaders find it difficult to implement drastic restructuring and prefer to resort to incremental changes that leave the underlying structures more or less untouched. This might be good for now, but it might not be enough if the pressures continue to grow. Clearly with the uneven tension created by these forces it is very hard to predict what other changes higher education will have to experience. More so since the incremental changes in American universities do not deal with possible down-to-the-bone across-the-board reductions that can hinder survival.

We can almost try to imagine the future of higher education and academic libraries; yet our vision will be diffused at its best. It becomes even harder to envision this future if we think about the forces behind these changes. The future becomes even harder to imagine if we think of how quickly NIT is developing; we cannot forecast what turn it might take in ten years. Certainly NIT could bring new and dramatic changes to higher learning and libraries.

Do-more-with-less restructuring could be part of these unforeseen changes. If so, this restructuring could wipe out some of our campuses traditional organizational structures. As it could also change scholarly communication and some disciplines as we know them. As colleges and universities continue to embrace and use information technology it is highly possible that knowledge distribution will grow exponentially. With this growth and changes our colleges and universities might need to develop ties with other institutions of higher learning to keep up and carry out their role.

Status, prestige, autonomy, and vast resources -- trademarks of the best universities -- could languish with the development of regional, state, or global university or college resource sharing networks. Scholarship could be readily accessible and universally shared. Students and faculty could interact worldwide with the general public providing better information to those who need it.

4. WHERE DO ACADEMIC LIBRARIES GO FROM HERE? WHAT LIBRARY SERVICES WILL THEY PROVIDE?

As noted earlier, academic libraries have amassed collections that will not be in digital format in the near future. Our clients will still need access to those non-electronic resources for years to come. In addition to this, libraries have knowledgeable staff whose expertise is to keep those resources, organize them, and provide access to these. They are experts in handling vast amounts of resources and mapping out research strategies to information seekers. Keep in mind that information is booming and will continue to do so. The librarian's mission in this sense shall remain unaltered. In this torrent of ever-expanding availability of information, Ortega y Gasset's words are truer than ever. It sounds like libraries will remain like information repositories, yet I think that the mission of academic libraries will be more active than that.

As mentioned earlier, faculty is expected to do more with less. The teaching role of faculty could greatly expand with the use of new information technology. Think about distance learning technology and of its possibilities for classroom instruction in a global setting. Do you think that with these new demands and the ever-growing amount of e-mails, teleconferences, and research discussions on the web or other media, your faculty and students are going to have time to visit libraries?

One could imagine that librarians would have a reference role serving their clientele via the Internet. Libraries could expand their document delivery services delivering non-electronic resources to the desktop. As discussed earlier it is impossible for any library to aspire to have everything its clients might need. Thus, academic libraries will rely on regional, state, nation-wide, or global networks to find needed documents for their clients. These networks will be connected by a very high-speed Internet where clients can electronically request any resource and have it on their desk in a matter of hours or days. This is will certainly require library cooperation as its best. Clearly, the groundbreaking agreements that UMass - Boston Healey Library is working out with BLC could be precursors to this new library service model.

Library instruction will continue to be the responsibility of academic libraries and librarians. Faculty will have to rely on librarians to teach students now to use NIT and how to evaluate information sources. This is an electronic slant of the old partnership between faculty and librarians. Think that as time change, and the amount of information continues to grow, people could need more assistance. The delivery of such assistance and information retrieval instruction will just be on a different media. In preparation for these brave new academic libraries, library schools will continue to teach NIT in its current curricula. There will be a need to prepare librarians on learning styles and teaching methods. Library schools will also have to teach customer centered services.

5. SOME FINAL THOUGHTS

Let us go back to two of the questions raised before: Will academic libraries exist in the future? Will accreditation associations require libraries as they do now? My answer is that academic libraries do have a future in higher education. Academic libraries will be an integral part of the learning and teaching experience of students and faculty. I am not sure that higher education accrediting will require academic libraries as we know them. Think about Phoenix University and other institutions that provide library services very differently from most universities and colleges. These are leaders in this world of change, precursors to a new academic paradigm.

It is also clear that higher education expenditures will go to NIT to fund distance learning and improving connectivity. In academic libraries, funding will be devoted to pay for full-text databases fees and to offer digital images of non-electronic resources in their collections. Libraries will have to rely on other partners or consortia libraries to fulfill their gateway-to-knowledge role.

However, a word of caution. I believe that changes in colleges and universities could be slower than anticipated.

Furthermore, these changes will take place unevenly. Every higher education institution will have to ponder what to prioritize; thus change will be more strenuous than we might think. Remember that, libraries do not have the same resources or serve similar clients. Thus, changes such as those envisioned will have to pass many hurdles before they are implemented.

Some universities and libraries will have at their disposal large sum of gifts or grant monies that most of us will not have, therefore it will continue to be an uneven change and survival of the best fit. Changing a higher education system and the beliefs that surround it will not happen easily. I am sure that there are plenty of changes that you and I will see and we will all wonder where do we go from here.

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