

范豪英教授現任中興大學圖書資訊學研究所兼任教授，自興大圖資所專任教授及興大圖書館館長崗位退休之後，仍在本校任教，並參與大學圖書館、公共圖書館之學術服務。2012年6月范老師在亞洲大學舉辦的「跨領域學習與高等教育國際論壇(The Academy of Transdisciplinary Learning & Advanced Studies (ATLAS)-2012 Biennial Meeting: Transdisciplinary-Transnational-Transcultural)」以英語演講，分享對大學圖書館在未來數位環境下的發展之觀察及看法，此篇文章依據演講內容撰寫而成。

Planning for the Future Decade of Academic Libraries of Taiwan in a Digital Environment

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【Abstract】

Academic libraries in Taiwan are confronted with many uncertainties in the new millennium. Trends of demographic growth and higher education, dynamics and economics of publishing, hi-tech applications in teaching, learning and scholarly communication all have great impacts on operations of these libraries. Based on a review of recent literature and personal observations, the author first addresses factors of uncertainty and their implications for the future. Then, the paper moves on to discuss emerging changes in collection development, services, space, staff, and calls for preparations for such changes. A final note pleads for taking a humanistic approach in an age of technology.

Keywords: academic libraries; Taiwan; emerging changes

I. Introduction

Twelve years into the new millennium of a rapidly changing environment, academic libraries in Taiwan, confronting many uncertainties, grapple with many problems, some of which appear to be universal and some others tend to have more local relevance. Factors of uncertainty affecting academic libraries are many and they may come from various realms. These include the direction and trends of higher education, dynamics and economics of publishing, hi-tech applications in teaching, learning and scholarly communications, and even demographics. Based on a review of recent literature and personal observations on trends in higher education, academic librarianship, and the broader environment, the author addresses areas to urge thoughts on their implications and to call for preparations and strategic planning.

II. Important Factors Concerning Changes in the Higher Education

On broader terms of the educational environment in Taiwan, changes in some aspects have already emerged as very influential on the operations of academic libraries. Rapid expansion of higher education institutions, emphasis on research outputs, regular and rigorous evaluation of academic programs, increasingly market-based orientation, coupled with the shrinking financial resources all have contributed to make colleges and universities very exacting and highly competitive entities, wherein libraries serve their communities. In view of impacts on libraries two important factors concerning changes in the higher education(abbrev. as HE) in Taiwan are discussed as follows:

A. Fast Expansion of HE Institutions in the Face of Low Birth Rate

Among various means of renovations taken in HE in Taiwan, the fast expansion of HE institutions is phenomenal. In 1981 we had a total of 104 colleges and universities, and the number jumped to a total of 163 institutions in 2011. In just thirty years we witnessed an increase of over 56% in the number of colleges and universities.(Ministry of Education, 2011)(Fig. 1) The assets, such as land, capital and personnel investments marshaled in founding these colleges and universities are tremendous.

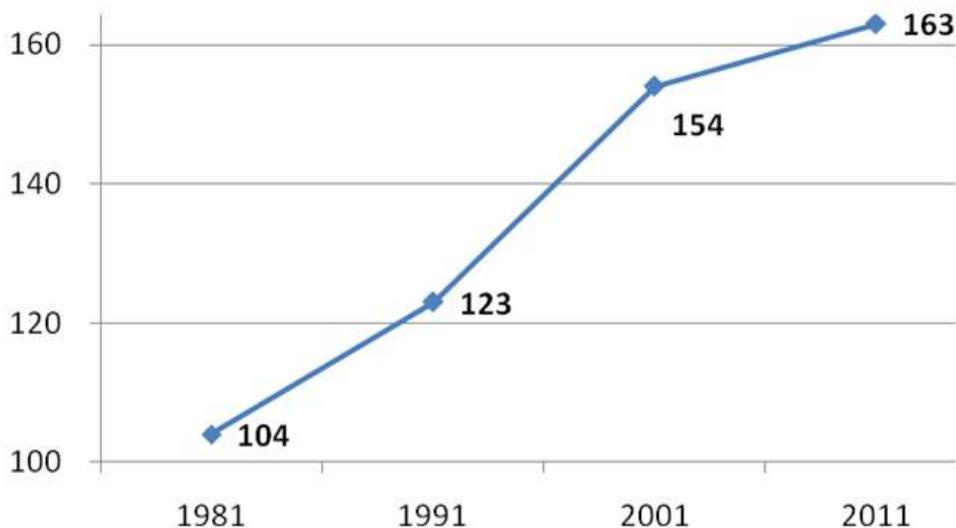


Fig.1 Number of Colleges and Universities in Taiwan

At the same time family structure showed significant changes, and one change that affects higher education in due course is the low birth rate. In 1981 we had a total of 414,069 newborns or 22.97 per thousand and in 2011 the number plunged to 196,627 newborns or 8.48 per thousand, while the total population more than doubled in the same period. Our birth rate has become the lowest in the world.(Ministry of Interior, 2011)(Fig.2, Fig.3)

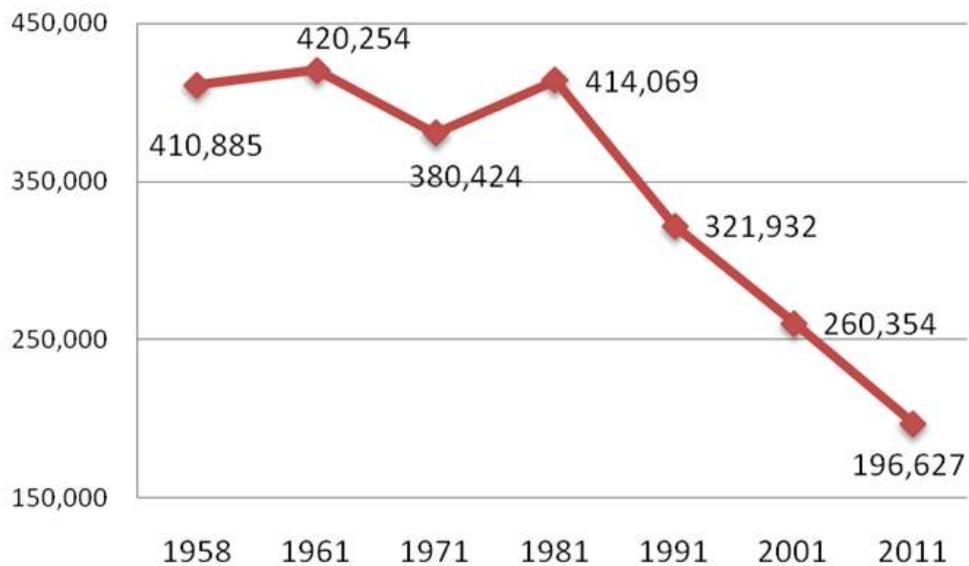


Fig.2 Number of Newborns in Taiwan

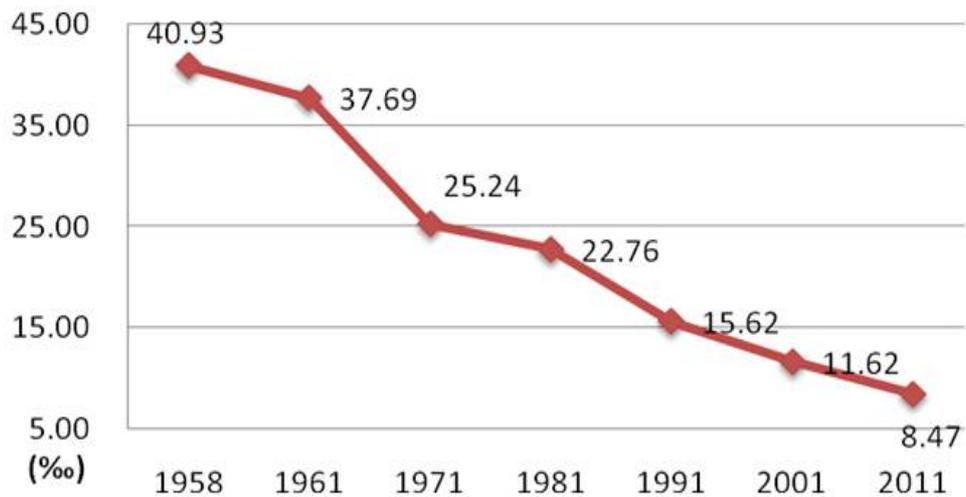


Fig.3 Birth Rate (%) in Taiwan

As a consequence of the fast expansion of HE institutions and the drop of birth rate, it was reported that more than 83% of the 104,608 high-school graduates were granted admission to enter universities in 2003. (Huang, 2003) The college education has clearly switched from education for the elite to education for the masses. The surging admission rate is eroding the quality of students admitted into some HE institutions. What are the implications for the academic libraries? Although each campus is unique and may occupy a different status, some libraries may face the strain earlier than others. Will there be mechanisms established by the library to join various departments in remedial programs for the needed students? Will there be any amendments about collections, services, and programs such as information literacy to address the situation? If the HE system remains the same and the low birth rate continues and becomes a trend, in a decade or two we probably will not have enough students to go around to fill our campuses and many departments and even universities will face the fate of “close-up”. Then, what will happen to academic libraries on such campuses?

B. Cross-Border Education and Research

As a result of the rapid expansion of HE institutions in the last quarter of the last century and influences of increasingly market-based orientation, universities are preoccupied about recruiting international students, delivering joint programs, exchanging faculty and students and encouraging collaboration in research projects. It is a common experience that while walking around a campus, one will meet people of different hair and skin colors and hear different tongues. The implications of the change of homogeneous campuses to internationalization of HE in Taiwan for the academic libraries are many. Since the Chinese is not the easiest language to learn and many foreign students have language problems. Obviously changes in collections, services and staff training should be made to meet the new needs of the foreign-born users. Take staff training for instance, ability in English or another major foreign language will be valued. Most libraries already have their signs in both Chinese and English. But these provide only the very basic directions. Look into the library web pages, one will find that the English versions are few and they seldom go beyond the first page to offer a very rough outline. What about the library announcements and bulletins, guided tours, reference interviews, database or literacy instructions? Are these offered also in English? How many librarians in the public services department are bilingual? If we are to serve an international community, we have to be prepared for them. And since these users are with us already, we have to hasten to make the necessary changes to meet their information needs.

III. Emerging Changes in Library Operations

As we move to the immediate realms of library operations, we could also spot some emerging changes. An exploration on changes in collection development, services, space planning, and staff and their implications are given as follows.

A. Collection Development

1. Changes in Purchased Collections

Collections, whether they are in print, media, or electronic version, remain an important factor to attract users for their library visits, be they physical or virtual. Thus, they still form the foundation of library services. In the U.S. among the top ten trends noted by the Association of College and Research Libraries(abbrev. as ACRL), the first one is on collections: “ Academic library collection growth is driven by patron demand and will include new resource types. “ (ACRL, 2010) The same report goes on to list factors, such as budget reductions, user preference for electronic access to materials, limited physical space, and the inability to financially sustain comprehensive collections, as factors having great impacts on many academic libraries. These same factors are often found and cited by academic librarians in Taiwan too. The author suspects that they are kind of universal. In fact, they already induced a shift from print to electronic resources in the academic libraries. According to data gathered in the Yearbooks of Libraries in the R.O.C., during the period of 2006-2010 the academic libraries faced a generally low increase or even a trim in their total expenditures. As a result expenditures for both printed books and journals saw a general decrease. But the expenditures for e-resources, which consist of e-books, e-journals and

databases, gained over a sound ten percent increase in these years in contrast to the 11% chopped off from the printed journals. The e-resources took about 46.76% of the total expenditure in 2010. (Min, 2010)(Huang, 2011) (Fig.4)

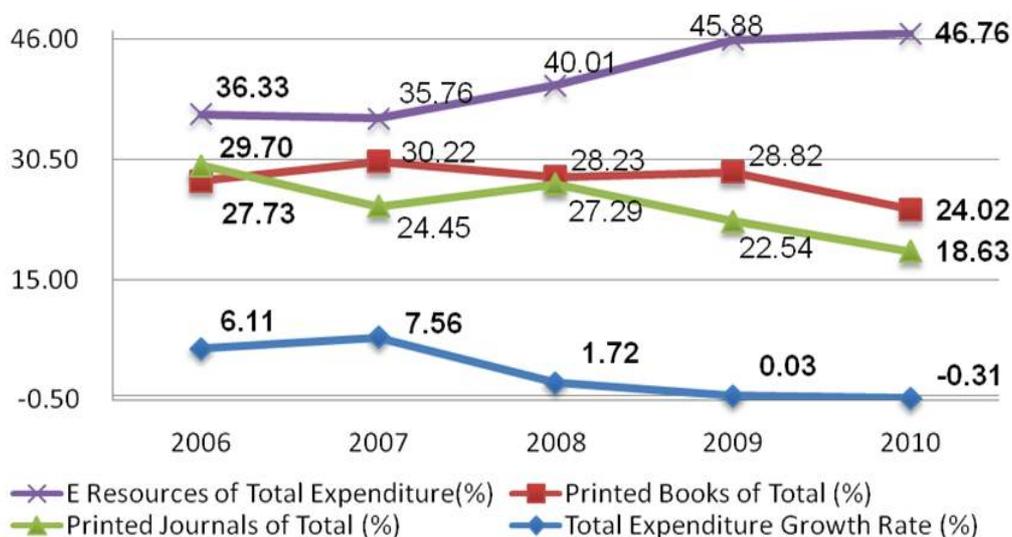


Fig.4 Analysis of Major Expenditures(%) in Academic Libraries

In the recent annual meeting of the academic librarians held in May 2012 the library director of the National Dong Hwa University reported that they spent 50.19% of their funds on e-resources in 2011.(Chang, 2012) The National Dong Hwa University is not the only campus reaching over half of their funding for e-resources. Many large and research-oriented universities usually spent a lot more on e-resources than the average figures.

2. A Move to Digitization Projects

Many university libraries actively engaged in building their institutional repositories, e.g. faculty publications and works and special collections in the library. The National Taiwan University Library initiated many digital archives projects, such as Digital Archives Project and Taiwan-Related Archives Project, involving research specialties of different disciplines, resource sharing between departments and the library, and information technology, to broaden public access to the heritage holdings.(National Taiwan University Library, 2002) The National Chung Hsing University Library built the Taiwan Agricultural History Digital Archives for the same purpose. (National Chung Hsing University Library, 2009) These projects were intended for digital preservation as well as enhancing teaching and learning in these areas. However, without intensive programs of promotion, these archives would largely remain dormant, failing to attract attention and uses they deserve. Furthermore academic libraries usually invest a large share of resources on their digital projects. Whether they are supported by the institutional funds or grants from other sources, libraries still bear costs in staffing, equipment, storage and operations. Under a dire situation of stagnant or reduced budgets, libraries reallocating resources in these digital projects probably need to account for their efforts. With careful planning and proper marketing, the curated local collections of unique items may serve far beyond their own campuses.

3. Enhanced Collaboration among Libraries in Pooling Resources Together

At the turn of the century various consortia of academic libraries have already been organized in Taiwan to negotiate and purchase e-books, journals and databases. Access to full-text materials on line has won hearts of many, maybe most, users but many libraries feel that they are losing their grip on selection and control of collections. Packaged electronic resources, especially journals, are rather forced on academic libraries by aggregators or publishers and they place great strains on library budgets. As many libraries are short of staff, forming consortia to negotiate and purchase is a welcome relief. Collaborations on management and sharing these e-resources further enhance the scope and depth of collections of individual libraries. As consolidations in the publishing industry and the demise of a number of smaller publishers in the western world bidding academic libraries to pay closer attention to them continue, these collaborative efforts will also persist. The traditional resources sharing among academic libraries through NDDS(Nationwide Document Delivery Service), a national interlibrary loan system, pool resources together to supplying needed monographs or articles to users of member libraries. An improved interlibrary lending service through RapidILL, offering 24-hour turnaround time, is put to use by 10 academic libraries now (National Chung Hsing University Library, 2011). It has proved to work well for research-oriented institutions.

These practices indicated that under the pressure of stagnant or reduced budgets, academic libraries are moving toward more e-resources and intensify their collaborations in an attempt to offer a faster and better information service.

B. Services in a Digital Environment

As undergraduates and perhaps most of our users grow up with the Web and Google, they are naturally imbued with technologies and the digital environment. They turn to search general engines like Google to satisfy their needs of daily life and they also use them to do their academic work. Information sources offered by such fast and easy finds may not be extensive or authoritative as those sources housed in or subscribed by libraries. But they are often considered “good enough.” Providing traditional services of lending materials and answering questions have little attraction to these users. Academic librarians could mitigate the practice by providing vigorous information instruction programs through cooperation with individual departments or colleges, guiding users to proper search engines, to select and evaluate data and citations. Then, library resources need to be embedded into systems and tools our users visit daily. For example in the U.S. OCLC ‘s WorldCat linking Google Book project supply connections of search finds and library holdings. In Taiwan we link findings of Google Scholar searches with library holdings. Both practices are linking library holdings to general search engines to enhance visibility and uses of library collections naturally. Also on each campus students tend to use the course management system for academic work. If libraries work their way into such systems to provide e-reserve or course related materials, library collections and services would gain more effective uses. Actually in a Digital environment academic libraries already embrace modern technologies and devices in their services. Book due

notices and library announcements are regularly sent through e-mail. Library services could be reached by mobile devices and announcements are further sent through social networks like Facebook and Plurk. No doubt academic libraries will adapt to changes and evolve with technologies in the future. Also collaboration within and beyond the institutions are also important in providing services. If a library chooses to stand alone, it will simply be bypassed.

C. Adjustment of Library Space

Guy R. Lyle, a specialist on college library administration, once remarked that “Prior to WWI, library buildings were conceived as monuments to their precious contents, books.” (Coughlin & Gertzog, 1992) Since then, even though librarians adapted modular building design with more flexibility in mind, academic libraries continued to be built to house large collections. The collections had been acquired under a philosophy of “just-in-case”, and many librarians thought the more collections the better they could satisfy users’ information needs. Now a shift from a “just-in-case” to a “just-in-time” perspective brought us to user-driven acquisitions, print-on-demand options, RapidILL services and last but not the least, a move to lean on e-resources. Approaches like these together with retiring print collections to compact shelving, off-site storage, or digital formats will free library spaces to be repurposed. Furthermore, advances in information technology, publishing and scholarly communication, and the networked environment enabling tremendous changes in teaching and learning modes, also alleviate pressures on library space. Remote uses of library collections and services call off a lot of physical presences by users. In the last few years unconventional areas were designated in renovation or new library projects. First, we witness a surge of learning commons. A sizable learning space reserved for students to work, especially in groups, through information collection, analysis, organization, and finally to produce their own research results in written reports. The room is equipped with plenty of computers and networked environment. The place is meant for students to exchange for ideas, to socialize and in some libraries users are even allowed to drink, eat and relax. Setting up learning commons is quite novel in Taiwan, since learning in the library had been regarded as some serious and venerated business. No drink, no food, and no talk used to be the norm and practiced for many years. Without exception, well designed learning commons have become a hit on campuses and attract lots of users. Other repurposed spaces in the academic libraries such as presentation rehearsal rooms, writing labs, and cafes, like the learning commons are being installed recently. Conference rooms, seminar rooms, art galleries, auditoriums have been a part of the academic libraries for quite some time now. Of course, we still have the quiet study space for individual users, facilitated with networked environment and mixed carrels, tables, and some soft seating. Library spaces are much more than storages, quiet study areas, offices and the like; the repurposed spaces are varied and they are managed differently. From time to time, library spaces need to be re-assessed with their uses and functions in mind and they are to be repurposed when necessary.

D. Library Staff

ACRL in its top trends report repeatedly reminds academic librarians in America that technology will continue to change services and required skills. (ACRL, 2010) This is also true in Taiwan. Google family, discovery tools, open content, new social networking tools, Youtube, mobile devices all have brought great technological changes that affect libraries. Technologies impact not only the way libraries are used but also the nature of collections. Technologists and non-LIS(Library and Information Science, abbrev. as LIS) staff may increase gradually to lend necessary support. Pressed by technology changes and changes in higher education in Taiwan, professional librarians need to intensify their formal education and expand their skill sets to provide adequate services to users. LIS programs are challenged to provide relevant formal education while professional associations should get busy with suitable continuing education courses and workshops for on-going training. Since some academic libraries delegate duties of information support of specific colleges or departments to subject specialists, librarians may need a second diploma to work as subject librarians. For those who are already in the workforce, they need to know that 5 years from now on they may not be doing the same thing they are doing today. New and more required knowledge and skills simply drive librarians into constant learning. At the same time academic libraries need to be willing to encourage and support staff development.

IV. Humanistic Approach in an Age of Technology

Since advances of information and communication technology, new formats of information resources, especially e-resources, appeared and users of academic libraries have come to a very different scenario than their parents did some 20 years ago. On-line searches seem simple, easy, and fast through Google and other general search engines. Personal visits to the libraries are no longer required; via the internet information is literally available at one's fingertips whether the user is in the dorm, classroom or anywhere. It seemed that the wonderful world of "paperless information system" that F.W. Lancaster, a well-known scholar in library and information science depicted in library literature around 1978 finally arrived.(Lancaster, 1978) However, twenty years later the same author observed that "Perhaps the most adverse outcome of contemporary technologies is a trend toward dehumanization." (Lancaster, 1999) For many of the generation who grew up with Google, Internet, Baidu, Wikipedia, cell phones, and the like, they are happy with fast finds. But for others who need comprehensive and critical analysis of search results, a librarian-mediated search or consultation proved to be more useful. In Taiwan it is also becoming difficult to find a human being at the other end of a telephone line. A call to any bank may have to be negotiated through layers of taped directions and listen to prolong taped music before one could reach the desired financial advisor and ask him a question. It is rather disconcerting. Libraries could offer in-person services to those who need consultation or help with the more difficult questions. The author largely agree with Lancaster in that, " We need to reduce our preoccupation with technology and increase our concern for library users as individuals with individual needs."(Lancaster, 1999) Adding "sometimes" as a prefix to the above quoted remark would reflect our current position better. But then the author totally agreed with his conclusion that "We need more warm librarians."(Lancaster, 1999)

These above observations of changes in the higher education and a Digital environment could be dealt with planned measures in response to them. Challenges that we face are many and some of them are complex. But none of them is beyond our capabilities. Why? As libraries are not alone in making information and knowledge available in communities, with careful planning and proper measures taken, academic libraries will change with new technologies to serve their users.

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