

# **Library Development and Directions for the 21<sup>st</sup> Century**

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## **Abstract**

This paper describes the newly developed importance of libraries and information centers in the dynamic information age of the 21<sup>st</sup> century by exploring into the multi-faceted needs to be met. Various problems and different issues currently confronting libraries in Taiwan, ROC are briefly presented as background information. Strategic suggestions are made for future library development in Taiwan. In identifying future directions, new library laws suggested by Walter Crawford and Michael Gorman are analyzed in a global sense as conclusion.

## **Introduction**

Library, being the reservoir of human intelligence, is an important identification of a civilized and learned society. As we are stepping into the threshold of the 21<sup>st</sup> century, in this dynamic information rich age, the importance of library is made more visible by their positive roles and by libraries' multiple and effective information services through the use of modern and advanced technological products. The total amount of information in the world is estimated to have doubled between 1950 and 1960, tripled between 1970 and 1980. Between 1980 and 1990 information grew by a staggering seven fold.<sup>1</sup> Such a large quantity of information enhanced the following global changes of library/information services:<sup>2</sup>

- The change from custodian to service oriented information provider;
- The change from one medium to multimedia collections and resources;
- The shift from library's own collection to Library Without Walls;
- The change of service modes - instead of readers going to the library, the library coming to the patrons;
- The change of patron's access to the library/information services via computers and electronic networks;
- The change of information delivery - from "in right time" to "just in time";
- The change from insourcing to outsourcing, libraries increasingly out-source administrative tasks such as labelling and jacketing of books.

Plugging into global information market place, the libraries are shifting from "local" to

“global” ones. Consistency with Singaporean statements, the U.S. Information 2000 also identifies the following status of the development of library and information service, they are not only true to the United States but are also accepted as global phenomena:<sup>3</sup>

- Access to information and ideas is indispensable to the development of human potential, the advancement of civilization and the continuance of enlightened self-government;
- The preservation and the dissemination of information and ideas are the primary purpose and function of the library and information services;
- The productivity of the work force and the nation rest on access to information in the post-industrial information age;
- Library and information service is essential to a learning society;
- People of all age groups should develop and sustain literacy and other lifelong learning habits;
- Technological developments offer unprecedented opportunities for application of teaching and learning and new means to provide access to library information services;
- The growth and augmentation of a nation’s library and information services are essential if people are to have reasonable access to adequate information and lifelong learning;
- The future of our society depends on developing the learning potential inherent in all children and youth, especially literacy, reading, research, and retrieval;
- Rapidly developing technologies offer a potential for enabling libraries and information to serve the public more fully, and
- The emerging satellite communication networks and other technologies offer unparalleled opportunity for access to education opportunities to all parts of the world and to individuals who are homebound, handicapped, or incarcerated.

Libraries are, thus, given new responsibilities which also present new challenges. They are required to meet all types of information *needs which include the needs of cultural preservation and development, the needs of social, political and economical developments, the needs of educational development, the need of scholarly research, the needs of scientific-technological developments, the living and recreational needs, and the needs of life-long learning.* They are, thus, considered as the foundation upon which all phases of national development can be made.<sup>4</sup>

### **Current Status of Library and Information Services in Taiwan, ROC**

National developments in Taiwan, Republic of China, too, have recently made greater demands upon library/information services in recent years, as we are aiming at *internationalization, democratization, liberalization, government restructuring and*

*competitiveness upgrading.* Our government has recently made every effort to reform educational system, to promote life-long learning, to reconstruct communities, to build up national information infrastructure and to make Taiwan the Asia and Pacific Regional Operations Center. All of these ventures are expected to be supported by library/information services. Libraries have become access points, switching nodes and mediating agents.

### **Libraries and Information Centers**

According to the recent survey conducted by National Central Library in 1994, there are:<sup>5</sup> 4,313 libraries in Taiwan and Fuchien Area including one national library, 349 public libraries, 143 college/university libraries, 374 high school and technical high school libraries, 718 middle school libraries, 2,283 primary school libraries and 445 special libraries. The total number of libraries have been increased from 3,508 in 1991 to 4,313, in 1994, a growth of 23%. However, it is evident that there are not enough public libraries even though all public-funded college/university libraries, high school libraries, middle school libraries and primary school libraries are required to be open to general public according to government regulations. College/university libraries are known to have better collections, more qualified staff and quality facilities; school libraries are somewhat limited as far as space, collection and staff are concerned.

### **Library Holdings and Acquisition**

Library collection has been for years looked upon as the basis of effective and efficient library services. In accordance with the statistics in 1994, the total library collection in Taiwan amounts to 61,862,387 volumes; 1,303,812 volumes are held by the National Central Library; 12,872,719 are held by public libraries; college/university libraries hold 20,605,541 volumes; high school libraries hold 6,184,302 volumes; middle schools have 4,209,968 volumes; primary school libraries have a total of 12,495,359 volumes and the special libraries hold 4,190,686 volumes.<sup>6</sup> Most of the adequate collections are centered around urban communities, uneven distribution does exist. The library today is no longer evaluated only by the size of its collections. Increasingly libraries focus on the extensiveness of what they can gain access to, instead of the size of their physical collection. The emphasis is placed on providing information and services that the user wants and on foreseeing the user needs.

### **Library Staffing**

Professional librarians or knowledge workers are the backbone for efficient library service. The 1994 NCL statistics shows that there is only one professional public librarian serving every 9,252 people in Taiwan. Shortage of professional staff in public and school libraries is the common phenomenon in Taiwan, even though seven library schools produce almost 300

graduates every year. Librarians are educated in the undergraduate level in short of subject knowledge in spite of the requirement of taking up minors to strengthen their subject background.

### **Library Network and Library Use**

Technological impact upon library/information services was first shown in Tsing-hua University and Tamkang University with experiments on bibliographical information and serial union list in the early 70s. National Taiwan Normal University (NTNU) started its Chinese Educational (CERIC) databases and NTNU was linked with ORBIT and DIALOG in 1978. Software developed at the time were only modular types meeting the needs of individual libraries without overall planning and uniformed common standards. Realizing the importance of overall planning and technical standards for resources sharing and communication, The Library Association of China and the National Central Library jointly studied "Library Automation" related issues. Chinese Character Code for Information Interchange, Chinese MARC Format, Revision of Cataloging rules based on the AACR principles, the adoption of ISBD, ISBN and ISSN, etc., were some of the first successful efforts in the implementation of library automation in Taiwan in the late 70's and early 1980's.

Starting from the late 80's libraries and information centers realized the importance of integrated systems which led to the formation of a Committee investigating and planning a nation-wide integrated library and information network system. The academic library automation projects were greatly supported by the Ministry of Education, but the Information Centers' efforts in this respect seem to have slowed down a great deal. The Academia Sinica and the National Central Library successfully and respectively developed full text databases of Chinese Classics, the NBITNET and Distant Learning.<sup>10</sup> The national university and college libraries also have united their efforts in developing academic networks. These endeavors enhanced the integration of online public access catalog, information retrieval and document delivering systems.

With the availability of TANET (Taiwan academic work), SEEDNET, Hinet and the advent of Internet in Taiwan, we have been the big mover over the last six months, more than trebling the number of Internet hosts from 40,000 in July of last year to nearly 180,000 today, and leafrogging from 30<sup>th</sup> to 13<sup>th</sup> on the list; China Times claimed that there are more than 1.6 million Internet users (8% of the entire population) in Taiwan.<sup>11</sup> It seems that many people are very much interested in using networking resources.

## **Directions for Library Development for the Future**

The White House Conference on Library & Information services made some universally accepted recommendations for future directions as follows:

- Adopt omnibus children and youth literacy initiative;
- Share information via network 'superhighway' ;
- Fund libraries sufficiently to aid productivity;
- Create model library marketing programs;
- Emphasize literacy initiatives to aid the disadvantaged;
- Adopt national policies for information preservation;
- Develop networking equity for low-density areas;
- Encourage multicultural, multilingual programs/staffs;
- Amend copyright statutes for new technologies;
- Ensure access to government information resources;
- Enact national information policies;
- Recognize libraries as partners in lifelong education;
- Designate libraries as educational agencies.<sup>12</sup>

After examining current situation of information and libraries services in Taiwan, the Library Association of China in Taipei presents some suggestions specifically for developing future library/information services.

### **Strengthening Library Infrastructure In Taiwan, ROC**

The administrative authorities to which libraries report to are quite scattered in Taiwan, ROC: National Library is under the auspices of the Social Education Department of the Ministry of Education; college and university libraries are supervised by the Higher Education Department of the Ministry of Education; provincial libraries report to Cultural Bureau of the Taiwan Provincial Government; School libraries are under the jurisdiction of the different educational department of various cities, town, or county governments.

Under such a structure, these libraries are able to communicate with their supervising organizations and their patrons vertically, but few channels for horizontal communication among libraries are available. Overall library policies, horizontal communication and frequent interactions are of indispensable to libraries because cooperative efforts and resources sharing in the information age. We have been fortunate to have a Commission on Librarianship organized in the Ministry of Education. It is a mechanism for coordinating policies and activities among national library and college and universities because these

libraries are subordinates of the Ministry of Education. It has accomplished a great deal in recent years. However, it is very hard for this organization to be responsible of overall policy making, for coordinating with other types of libraries which are not under the jurisdiction of the Ministry of Education. An organization similar to U.S. National Commission on Library and Information Science needs to be established in the Executive Yuan for formulating library/information related policies, for coordination, cooperation and integration of efforts, and for the upgrading of quality library/information services among various different types of libraries.

### **Enactment of Library Related Laws**

In a law-abiding country, we need to have comprehensive legal basis for everything we do. For the upgrading of library/information services in Taiwan, ROC, Library Act is definitely needed. For seventeen years, the Library Association of China has attempted to draft a set of library laws to serve as a basic guideline for library management and services. For several times, the draft was returned by the Ministry of Education or by the Executive Yuan to the Association for revision .

The efforts spent on law enactment have not been very successful until the beginning of 1998 when the Ministry of Education appointed a committee discussing revisions to be made on the draft . By the 20th of May, the revision will be completed and presented to the Ministry of Education for processing. It might again take a long time for the Ministry, Executive Yuan, and the Legislative Yuan to finally enact this set of laws. Nevertheless we do urge sincerely that this set of library laws should be made available soon. Of equal importance is to amend the Copyright Statutes with the following principles.<sup>13</sup>

- Ensure that all library and information service users have access to all forms and formats of information and library materials.
- Provide the right to use information technology to explore and create information without infringing on the legitimate rights of authorship and ownership.
- Encourage networking and resource-sharing, while providing appropriate and manageable credit and compensation for authorship or ownership.
- Permit libraries and information services preferential fair-use status equivalent to that of educational institutions.

### **Active Library Participation in NII Program**

James H. Billington, U.S. Congress Librarian, pointed out that the role of libraries in the NII lies in the ability of digital libraries to store and share knowledge, history and culture. <sup>14</sup> The

major objective of NII is to provide information in a speedy and effective way, so that it can satisfy the needs for economics and academic researches. The United States Congress enacts legislation creating and funding the National Research and Education Network (NREN) to serve as an information superhighway, allowing educational institutions, including libraries, to capitalize on the advantages of technology for resources and sharing the creation and exchange of information. This would depend on information network connecting with all types of libraries. Active and successful library involvement in NII will be crucial to the realization of Global Information Infrastructure.<sup>15</sup>

### **Setting up Knowledge-based Information Service System**

- Libraries and information centers are the entities where organization, interpretation, analysis, evaluation/assessment of information are made. Libraries play major role in manufacturing and importing knowledge through acquisition, abstraction, dissemination and awareness promotion.<sup>16</sup> Producing value-added products to support research and upgrade the productivity of the nation do deserve our attention. Bibliographies, indexes, abstracts, databases, thesauri and standards with which information are made available and accessible are the core of our concerns. The evaluation of information and scientific forecasting also need our immediate attention. While we are promoting digital libraries, we cannot overlook the importance of correct terms and thesauri used in locating correct information. Inconsistencies in Chinese translation of Western terms and vice versa are major handicap for identifying elements of the same subjects.<sup>17</sup> Since Chinese “Han Tzu” is used by many East Asian countries. For the purpose of sharing resources and services, it is necessary to standardize tools such as the information interchange code, subject headings and terminologies.

The following are some of the suggested ways to set up knowledge-based information services:

- Placing the responsibilities of integrating scientific and technological knowledge-based information systems on the National Science Council and that of humanity and social sciences on the National Library;
- Placing the responsibilities of upgrading the quality of value added products on various information centers:
- Placing the responsibility of standardization of scientific terms on the National Institute of Translation and Interpretation:
- Uniting EAST Asian Libraries in standardizing and maintaining information tools.

### **Restructuring Professional Education for Librarians**

The function of library professional duties have changed librarians to be knowledge workers.

Librarians become increasingly viewed as manager of both information and knowledge. They need to be equipped with knowledge management skills to analyze, organize, evaluate information and produce value added products. They should be involved with information generation process; they should help manage digital materials and assist people in dealing with the plethora of information. They will increasingly function as facilitators, enablers, and teachers of network users.<sup>18</sup>

Due to tremendous change of the role of librarians and library/information services, the modes of services and the facilitation of modern technology, revisions have to be made on library and information science education in order to meet the challenges. Undergraduate programs are to be eliminated and the graduate school curricula are to be revised. This attempt will enhance librarians to acquire competencies in computer technology, subject knowledge, business management and professional techniques as well as professional ethics. In other words, the library science and information science, being integrated, should take an interdisciplinary approach. What are the qualifications of a capable librarian should be clearly identified. Their professional performance can be greatly improved by changing our professional educational system and by extensively revising the curricula.

### **Upgrading Library Literacy**

To use libraries intelligently and efficiently is actually required of all well-informed citizens. Due to our teaching methods in the past, efficient use of libraries have not yet received due attention among young people. Library literacy should be started at a young age. Primary schools, middle schools, high schools, or institutions of higher education should incorporate library literacy into their curricula with different approaches to meet various levels of knowledge and information needs.

### **Conclusion**

For decades, libraries have followed Ranganathan's five laws of library Science: Books are for use, every reader his book, every book its reader, save the time of the reader, and library is a growing organism.<sup>19</sup> Even though these guidelines still hold true today. Its reinterpretation made by Walt Crawford and Michael Gorman also identified the following added missions for libraries and information centers:<sup>20</sup>

- Libraries serve humanity
- Respect all forms by knowledge is communicated
- Use technology intelligently to enhance service
- Protect free access to knowledge

- Honor the past and create the future

The above reinterpretation again remind us of the directions:

- Globalization,
- Multi forms of information,
- Digitalizaiton,
- Protection of patron' s rights to get access to knowledge,
- Knowledge based information system and resources enrichment.

That is to say, Libraries/information service should meet the needs of all human beings with all different types and formats of materials and information through intelligent use of technology. Libraries have to ensure patrons' rights to have free access to knowledge and furthermore, libraries not only disseminate information generated in the past but also are responsible for the creation of new knowledge for the future. Adequate resources of these endeavors are the ultimate keys to successful implementation.

## Notes

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