Changes in university libraries in Japan

Kimio Hosono

Professor Emeritus, School of Library and Information Science, Keio University, Japan

Abstract

University libraries do their best to show the reason for being in the rapid changing world to which they belong. Before getting into the today’s situations of the kind of libraries, influential institutions such as National Institute of Informatics (NII), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and others are mentioned from the point of view of library services, first of all. This paper then describes the three types of university libraries, namely, national, local public, and private ones since they are quite different each other in many aspects. Basic features of their services and activities are shown as well. Then it outlines briefly the environments under which the libraries operate focusing on NII, e-journals and e-books, digitization, and the Internet. In addition, a new move in terms of institutional repositories, which are said now to be indispensable aspects of the libraries, is also discussed. At present university libraries are faced with a variety of problems and issues and those become more acute as time goes on. This paper thus mentions them related particularly to budget cuts, prices rise of academic journals, shelf capacity, collection development, NASIS-CAT/ILL service, stuff’s expertise. Finally it shows library functions to be reinforced in order for libraries to perform their roles and missions more adequately as an information provider. Necessity working cooperatively with other kind of libraries, for example, public libraries, is also mentioned as a remark.

Keywords: university libraries, library services, library activities, influential institutions, library statistics, problems and issues, institutional repositories,

Introduction

Today libraries of all kinds are in a state of flux. They are struggling to find a new and powerful paradigm, policies, strategies, and tools in order to retain their longstanding roles as information providers. The situation is also applicable to libraries in Japan. The effects of social changes and the economic situation are outstanding and libraries have to deal properly with the problems arising from these changes. The impacts of budget cuts and information technology are particularly predominant in university libraries.

Since the environment surrounding libraries is variable and complicated and the same applies to the institutions whose activities are closely related to libraries, it is difficult to present a clear picture of all aspects of Japanese libraries today. Information on their general characteristics can be acquired from several articles and books, some of which are available on the Internet. For example, Koizumi and others outlined library history, the general characteristics of public, university, school and special libraries, the National Diet Library (which is the only national library), and the Japan Library Association (JLA) and also described education and training for librarianship

Brief information on libraries and library statistics as of April, 1977 are shown on the JLA home page. Information and data from these sources will give the basic conditions and some images of the uniqueness of libraries in Japan.
It is not too much to say that university libraries are typical representatives to indicate how today's libraries are changing drastically. This paper will try to show how these libraries are facing the changes in the environment in Japan and how they are adapting to it. In particular, attention will be focused on recent phenomena which will shape the future of libraries.

**Factors and institutions influencing libraries in Japan**

Before describing the present state of university libraries in Japan it is necessary to mention an inherent factor, namely the organizational structure, which shapes library services as well as institutions which play an important role in the library arena. For example university and public libraries are serving distinct users in different ways, and there are few cooperative activities between them in terms of offering library services so far because of the lack of flexibility in the structure. As the result the volume and quality of services provided by both types of libraries are limited. Sometimes the effectiveness of the services is impaired.

Nationwide organizations which have close relations with and influence on the activities of university libraries are the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the National Institute of Informatics (NII), and the National Diet Library. The most influential from the point of view of daily library services is NII. University libraries are not closely related to the Japan Library Association in terms of their activities so far.

MEXT has been taking initiatives to promote activities and services in university libraries in many ways. It has allocated some of its budget to national universities and financially supported the purchase of e-journals by local public and private university libraries. It has developed a variety of policies, plans, and recommendations under which substantial amount money have been allocated to promote libraries, both directly and indirectly. A typical example is the establishment by MEXT of the NII.

MEXT has also organized an ad-hoc working section in the Subdivision on Science of the Council for Science and Technology in which policies for promoting academic information infrastructures are comprehensively deliberated. The Council carries out research and deliberation on important matters relating to the promotion of science and technology in response to requests from the Minister and provides its opinions to the Minister, thus it is not an inner organization. The Council has six subdivisions and the Subdivision on Science is one of them. A working group has been set up in the above mentioned ad-hoc working section to exclusively study the tough problems occurring at university libraries and find possible solutions for them.

Some other ministries and agencies sometimes take part in promoting libraries. In most case, however, their involvement is not steady. There is no bureau or department in the national government which deals exclusively with library affairs, thus it is hard to say that there is a robust library policy in Japan.

NII, an interuniversity research institute, was called the National Center for Science Information Systems (NACSIS) until 2000. The institute is quite unique in the sense that it plays an important role in the distribution of academic and scholarly information nationally and internationally as well as building the infrastructure for processing such information. NII functions as the bibliographic utility for university libraries in Japan. It does not offer many benefits to other kinds of libraries since its main target is the university libraries. More details of the services of the NII are provided below.

The National Diet Library (NDL) has a close relationship with public libraries. Its response to requests from public libraries to provide back up support for their services to local communities is faster than it was before. On the other hand, it does not have much to do with...
university libraries so far. Recently there is an indication that it intends to modify its policy in order to strengthen relations with the academic world. The activities and services of the NDL are described on its home page\textsuperscript{4)}.

Although the mission of the Japan Library Association is to promote all kinds of libraries in Japan, the emphasis of its activities is on public libraries and it has few connections with university libraries at present. Its brief history, organization chart, publications, library statistics of public and university libraries, library directory, and library laws and statements are shown on its home page\textsuperscript{2)}.

**University libraries in general**

*Organizational Structure*

There are three types of universities in Japan; national universities, local public universities, and private universities. National universities are now called national university corporations, which are independent organizations. Local public universities are established and funded by local governments. The number of national, local public, and private universities and their respective libraries are shown in Table 1.

<table>
<thead>
<tr>
<th>Type</th>
<th>Universities</th>
<th>Libraries</th>
<th>Libraries/Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>87</td>
<td>290</td>
<td>3.3</td>
</tr>
<tr>
<td>Local public</td>
<td>76</td>
<td>125</td>
<td>1.6</td>
</tr>
<tr>
<td>Private</td>
<td>571</td>
<td>964</td>
<td>1.7</td>
</tr>
<tr>
<td>Total</td>
<td>734</td>
<td>1379</td>
<td>1.9</td>
</tr>
</tbody>
</table>

The table shows that users at national universities are, on average, in a more favorable environment in terms of library provision than those at other kinds of university. In fact, national university libraries are the most prominent institutions and only a very few private university libraries enjoy comparable status. The libraries of many private universities are not well equipped and their services are not necessarily good. The same goes for the libraries of local public universities. Thus there is a big gap with regard to quantity and quality between rich and poor libraries. As a result, productive cooperative activities among university libraries are not necessarily easy and effective.

These three types of library have formed different associations, namely, the Association of National University Libraries, the Public University Library Association, and the Japan Association of Private University Libraries.

The Keio University library is a representative private university library. In fact it has taken the lead in all aspects of library activities and services for a long time. The services provided by the library are shown on its home page\textsuperscript{6)}. The building of the old library on Mita campus is an important cultural property and a symbolic representation of the university libraries in Japan.

A dramatic and memorable event which may hold sway over the destinies of the national university libraries is the reorganization and consolidation of the national universities themselves. From April 2004 they have been redesignated as national university corporations. The main aim of changing the structure and establishing such corporations is to make the university managements more autonomous, for example in respect of personnel affairs and budgets. Thus each national university requires more managerial ability than before. As a
natural consequence, their libraries must also clearly justify their existence. This means they should do their best to function more effectively in the new environment.

**Basic features**

The basic features of university libraries have been described by Hosono\(^7\), although some features have changed as time goes by. He mentions topics such as background, current conditions, bibliographic control and related topics, consortia, library housekeeping systems, cooperative activities, digitization projects, research and development activities, and international activities.

Almost all university libraries in Japan maintain local catalog databases, taking advantage of shared cataloging using NACSIS-CAT which is operated by NII (see below). A new trend in current cataloging practice is outsourcing, either hiring contract catalogers or purchasing complete catalog records from outside organizations.

More than 60 percent of holdings in university libraries, on average, are materials published in Japanese language, while the rest are in Western and other languages. The two types of materials are cataloged differently. Most libraries are using the Nippon Cataloging Rules, maintained by the Committee of Cataloging of JLA, for descriptive cataloging of materials in Japanese and several Asian languages, while the Anglo-American Cataloging Rules are used by 71 percent of the libraries for publications in Western languages\(^7\). The most frequently used classification scheme is the Nippon Decimal Classification maintained by JLA. Subject headings are rarely used so far because of the unavailability of a good subject headings list in Japan.

There are several kinds of MARC products in use in Japan. Typical examples are Japan MARC, created by the National Diet Library; NS-MARC, developed by Nippan Toshokan Service; and TRC MARC, created by Thokan Ryutsu Center. Commonly used MARC formats in Japan are NC/MARC, Japan MARC, and MARC21. NC/MARC, a format specific to NACSIS-CAT, is a relatively simple format used by most academic libraries. Japan MARC is a UNIMARC-like format used for domestic publications, while MARC21 is used for foreign publications.

University libraries in Japan began developing mechanized housekeeping systems in the 1980s. The 1990s saw increased standardization of library operations with the establishment of cataloging and ILL systems under auspices of NII, as well as the marketing of various library system packages. Most of library package vendors are Japanese since Japanese language processing is considerably complicated.

Comprehensive statistics concerning university libraries are compiled every year by MEXT\(^5\). These include data with respect to library staff, library buildings and facilities, library holdings, acquisition of materials, expenditures, services, outsourcing library operations, service to the public, and digital library functions. Averaged data for each of the three types of university libraries for 2006 are shown in table 2.

The services and activities of university libraries fall into two groups. The first group comprises services carried out independently by each institution based on its purposes and policies. The second comprises activities carried out through cooperation among libraries. Since the three types of libraries are differently established and funded, they have, until recently, rendered services to users independently without substantial cooperation among them. Under the financial pressures of severe budget cuts and demands for more cost-effective work, libraries have to seek legitimate actions to cope with the pressures and demands. Thus, cooperative activities are becoming more important. Now it is impossible for a library to survive without working together with others. This is the main reason why the three types of
university libraries have established a joint committee. Now it functions as the place where they exchange more precise information about these problems and discuss countermeasures to deal with them.

**The environment of university libraries**

Without doubt the services provided by NII, Electronic journals and e-books, digitization projects, and the Internet have had a tremendous impact on the activities and services of today’s Japanese academic libraries.

| Table 2: Selected statistics for Japanese university libraries, 2006 (averages) |
|------------------|------------------|------------------|------------------|
| Item             | National         | Local Public     | Private          |
| No. of Staff     | 44               | 11               | 15               |
| Total floor space (m²) | 10,826           | 3,699            | 4,290            |
| Shelf capacity (vols.) | 991,494          | 312,793          | 395,176          |
| Holdings books (vols.) | 1,081,945        | 246,580          | 304,291          |
| serials (vols.)  | 19,267           | 3,399            | 3,525            |
| Acquisitions (purchase) volumes added | 10,232           | 4,335            | 6,849            |
| current serials  | 2,176            | 539              | 741              |
| Annual expenditure on library materials (JPY) | 243,193,000 | 46,889,000 | 85,777,000 |

**NII**

The NII functions not only as a service agency but also as a leading research and educational institute for information science and computer science. The activities and services of the NII are described on its home page, which clearly shows the aims of the high-level research and services as well as the coverage of the NII. Its service aspect is closely related to the activities and services of university libraries, although some of the products of its research are applied to its own services. The services outlined below, among others, are relatively more influential for libraries.

*(1) NACSIS-CAT/ILL (Cataloging Information Service)*

NACSIS-CAT began service in 1984 and provides a shared cataloging facility and as the result a union catalog. These services are available free of charge. A total of 1,201 organizations, mostly university libraries and including 99 foreign organizations were participating in the service as of 31 August 2007. NACSIS-CAT has about 8.7 million catalog records and more than 91 million location records for the books as well as nearly 300,000 bibliographic records and more than 4 million location records for the serials as of 22 September 2007. In addition, it has about 1.5 million authority records.

NACSIS-ILL supports interlibrary lending. As of April 2008, 1,066 institutions were taking advantage, while the total number of transactions in FY 2007 was about 1.1 million. Now NII also provides NACSIS-ILL services to libraries in the United States and Korea.
(2) GeNii (Global Environment for Networked Intellectual Information)\textsuperscript{12)}
GeNii is the academic content portal, providing search systems by which users can get access to several databases. The available databases are CiNii (papers, theses, etc.), Webcat Plus (books, magazines, etc.), Kaken (research subjects), and NII-DBR (specialized academic information).

(3) NII-REO (NII Repository of Electronic Journals and Online Publications)
This provides universities and other institutions with a reliable, uninterrupted supply of electronic journal content. This service is offered in response to requests from universities, libraries, and consortia in accordance with licensing agreements with participating publishers\textsuperscript{13)}.

e-journals and e-books
The environment surrounding university libraries is changing drastically. The number of libraries which subscribe to electronic journals has increased rapidly since 2002. Total subscriptions to e-journals in university libraries amounted to 850,000 titles in 2003\textsuperscript{3)}. National university libraries subscribe to an average of 4,900 titles each. Some universities buy about 14,000 titles. Averaged numbers of e-journals subscribed to by each of the three types of university libraries in 2005 were 6,387, 863, and 1,615 titles respectively\textsuperscript{3)}. E-books are now getting popular. For example Keio University Library subscribes to 4,833 different e-books in 2006\textsuperscript{18)}.

Digitization projects
Digitizing projects are flourishing for rare books, old maps, and documents owned by academic institutions. ‘Rare materials exhibition’ at the Kyoto University Library\textsuperscript{15)} and ‘digital gallery of rare books & special collections’ at the Keio University Library\textsuperscript{6)} are the examples of such projects. A link list created and maintained by the Ryukyu University Library provides information on the current extent of digitization efforts as well as digital content produced at national and other university libraries\textsuperscript{7,16)}. The list shows some valuable cultural assets which are usually difficult to see in their original forms. At present these digital documents are accessible to the public in a variety of ways, but they may be reorganized into an institutional repository in the near future. Another kind of digitization is the joint project between Keio University and Google Inc. to digitize rare books and other precious materials owned by Keio and to provide them by using Google Book Search service. It was made public in July, 2007.

The Internet
The popularity of the Internet has formidable impacts, not only on library services but also on the behavior of users in accessing information. The behavior of users changes in the sense that many of them seek information, not by going to physical libraries, but by operating mice and keyboards at their homes or laboratories. Libraries seem to lose their important role as the information source of last resort.

The i-mode, which began in 1999, is a new means whereby Japanese users can get access to the Internet from mobile phones. A number of libraries have introduced such technology to their OPAC systems so that users can access them from their mobile phones. The first application of i-mode to OPAC systems was at Toyama University Library in 2000. A survey in 1999 showed more than 90 percent of users owned mobile phones\textsuperscript{17)}. This shows that the project to offer information by using such technology was timely. Tokyo University Library has also offered i-mode OPAC since May 2001. The service was accessed 11,148 times in FY2005\textsuperscript{18)}. Approximately 90 libraries have embarked on similar service as of February 2006.
However, since users seeking information via mobile phones must cope with the small screen and the input process with the ten-key pad\textsuperscript{17}, it is difficult for them to get detailed cataloging information in this way. Thus many libraries offer only news and general information concerning library services via i-mode instead of full cataloging information from OPAC.

**Problems and issues**

**Decrease in budgets**
The most influential factor on the future of university libraries in Japan is the general decrease in library budgets. For example, Keio University Library, one of the leading libraries, has suffered from pressure of budget cuts. The budget for books, periodicals, online journals, databases, and other library materials was JPY 1,677,071,174 in the fiscal year 2006\textsuperscript{14}, while it was JPY 1,708,349,413 in FY 2004\textsuperscript{19}. It is clear that the budget was reduced considerably. The budget for personnel will be also cut. No university library can get avoid such pressure. Consequently, the situation with regard to the number of professional staff is getting worse and many university libraries are obliged to outsource some of their work\textsuperscript{7}.

**Price rises of academic journals**
The phenomenon of steady rises in the price of scholarly journals is well known internationally. University libraries in Japan have suffered considerably. In particular, the price of foreign journals is estimated to go up by nearly 10 percent every year\textsuperscript{3}. Budget cuts have worsened the situation. As a result a number of libraries have had to cancel their subscriptions. In order to deal with this journal crisis national university libraries and private university libraries respectively have formed consortia\textsuperscript{7}. However, since Japanese consortia are weak in cohesive nature, their negotiating powers with publishers are limited.

**Shelf capacity issues**
It is said that shelving of new books is hindered if more than 70 percent of the shelves are already occupied by existing library materials, yet on average 90 percent of shelf space in all university libraries is already filled. The condition is worse in national university libraries and there are libraries whose collections amount nearly 110 percent\textsuperscript{3}. Many books are kept in corrugated boxes without any means to get access to them. This means that average collection size at many university libraries exceeds shelf capacity or is close to capacity. These libraries are compelled to adopt a variety of strategies to cope with the shortage of shelf space.

Solutions include repositories of overflow materials at off-campus sites, deposit libraries or stacks, shared storage, and automatically operated compact shelving. The Tokyo University Library in Kashiwa campus has deposit stack with automatically operating compact shelving. The stack can store 500,000 items for the present and there is a plan to enlarge its capacity to store 1 million items in the future\textsuperscript{20}. Automatically operating compact shelving has been introduced in several libraries. On the other hand, shared storage programs in the strict sense are not seen so far.

**Collection Development**
The popularity of e-journals and e-books (e.g. netLibrary) as well as the Internet will deprive us of the concept of collection development which libraries have cherished for a long time. Systematic and seamless combinations of traditional printed materials and digital ones are needed for the new collection development policies. This means that some printed materials
will be replaced by digital ones. Today, collection development and the means to solve shelf capacity issues are closely related.

A variety bibliographic, numeric, and full-text databases in many subjects have been produced by scholars and researchers in academic institutions for several decades but the system and procedures for maintaining them properly and efficiently were not developed. The reorganization or integration of such valuable resources by libraries will be meaningful as part of collection development plans since those resources can become more accessible to library patrons.

Cooperation through NACSIS-CAT/ILL
The NACSIS-CAT/ILL service provided by NII is said nowadays to be somehow fragile and unstable in the sense that service quality is decreasing. Some cataloging data provided by member libraries are not good in quality. In terms of ILL procedures some libraries refuse services for requesting libraries. These will impede the sound operation of the service and in the worst case will bring about its malfunctioning. Though several reasons for the troubles can be suggested, the most probable one is cuts in personnel budgets. Decreases in the number of professional staff have led to outsourcing of cataloging work and also encourage a decline in morale of staff because of the increased workload. In order to cope with this problem a project team was set up with members from NII and the joint committee of three types of university library. An action plan prepared in 2005 sets up a training session to raise the morale of staff and qualifies outsourcers for cataloging work to maintain its quality.

Expertise of Staff
Library staff need to have much more expertise or knowledge than before since library environments have changed extremely. The range of topics they need to cover has been extended from traditional technical and public services to advanced information technologies and contracts or laws related to the production and use of digital materials. The needs are usually not fulfilled completely, but some actions are being taken to meet these challenges. For example, the School of Library and Information Science of Keio University has opened a special graduate level course in 2004 to provide library staff with recent theories, knowledge, and skills.

Functions to be upgraded in university libraries
There are many university library functions which need to be reinforced; institutional repositories and information literacy education are typical examples.

Institutional repositories
The concept of the institutional repository is well known and its necessity will be supported by many people. However, only a few universities have established such repositories, while the kinds of roles their libraries will take are not necessarily clear. There is an urgent need for the library world to develop firm policies with regard to setting up institutional repositories. NII is in a position to promote plans to build institutional repositories and to give information like metadata to concerned universities. According to the list provided by NII, there are 82 institutions which have established such repositories as of May 23, 2008.

21)
Information literacy education

As born digital materials spread widely and the number of digital materials in the library increases, user behaviors for accessing information have changed significantly. Search skills and skills to evaluate information resources are more important today than when substantially all materials were in printed form. New programs to educate users in the digital age are therefore necessary. A number of universities are providing users with the courses or tools to make them information literate. Examples include KITIE, a web tutorial system for students at Hiyoshi Media Center at Keio University and a pathfinder at Nagoya University Library.

Conclusion

Assessment of performance and outcome with regard to library services is inevitable. University libraries in Japan have been assessed by university administration and outside organizations. This is a good opportunity for the libraries to indicate strategically their importance and needs - for example, to demonstrate their contribution to research and education and to the benefit of the community through providing direct library services to the public.

University libraries are functioning in an unstable society or community and so more advanced, sophisticated, and unique services are required. Information technology has broken some physical barriers, such as distance and time, for people who are seeking information. We are in an era when borders of any kind seem to disappear. This is also true in the flow of information. The role of libraries as physical places is decreasing, although their role as information providing and navigating agencies is increasing. This means that every library has to develop new concepts, strategies, and plans for providing information services.

It is time to close longstanding rifts between different types of libraries and work more cooperatively to serve the information-oriented users of today. An early sign is seen in Japan in the union catalog networks operated by some prefectural libraries, in which university libraries are also members\(^22\). Promising trials to develop, for example, ILL services between university and public libraries are found in the Tokai Region. MEXT and the National Diet Library are interested in this kind of cooperation and the JLA will be expected to play a pivotal role in the scene.

Notes: This paper is based on my article published in the vol.32, no.2 of IFLA journal (2006).

References

Science. Marcel Dekker. (online update version)
http://www.dekker.com/sdek/abstract~db=enc~content=a713532123
12) GeNii. http://ge.nii.ac.jp/genii/jsp/index-e.jsp
15) Kyoto University Library. Rare materials exhibition.
   http://edb.kulib.kyoto-u.ac.jp/exhibit-e/index.html
16) A link list created and maintained by the Ryukyu University Library.
17) Negishi, M. Development of mobile phone culture in Japan and its implications to library
    services: prospecting information services in coming 'ubiquitous society'. NII Journal,
18) Access statistics of the OPAC by i-mode.
    (in Japanese)