

LIS EDUCATION

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1. INTRODUCTION

This chapter reviews the status of LIS education in Asia, except for the Middle East and Central Asia. The Middle Eastern region is covered in another chapter. There is little published information about LIS education in Central Asia. Hence, coverage of this region is deferred to a future version of this chapter. The chapter provides an overview of the history of LIS education in various countries, examines regional trends, especially in curriculum, quality assurance and regional co-operation, and discusses the challenges faced.

Asia is a vast area with diverse national histories, cultures, languages, political situations and levels of socio-economic development. The development of LIS education in a country depends to a large extent on the development of public library service in the country, higher education and academic libraries, and the country's economy and its need for information professionals. This chapter will first examine the situation in individual countries in Asia, and then attempt to identify major regional trends and challenges.

2. Sources of Information on LIS Education in Asia

Information on LIS education in Asia is widely dispersed, found mainly in regional conference papers and occasionally in LIS journals. The only attempt at an LIS journal for the region was *Asian Libraries*¹, published from 1991 to 1999 (with vol. 6-8, 1997-1999, published by Emerald). Some international LIS journals carry occasional articles on LIS education in particular Asian countries. They include:

- Journal of Education for Library and Information Science
- Education for Information
- Libri.

Recent journal special issues on LIS education in Asia are:

- Journal of Education for Library and Information Science, v. 45 no. 1 (Winter 2004) and v. 47 no. 3 (Summer 2006)
- Malaysian Journal of Library and Information Science, v. 8 no. 2 (December 2003)
- Singapore Journal of Library & Information Management, v. 29 (2000) and v. 32 (2003).

¹ Asian Libraries merged with New Library World in 1999.

A snapshot of the situation in the early 1990s can be found in *Asian Libraries*, v. 3 no. 4 (December 1993).

Many countries have their own national LIS journals, usually published by the national library association. Unfortunately, there is neither a comprehensive list of such journals nor a bibliography of articles on LIS education in these journals. Some national journals are, however, indexed by the *Library and Information Science Abstracts (LISA)*. A bibliography of articles on LIS education in Asia is being compiled for the LISEA (Library & Information Science Education in Asia) Web site (<http://dis.sci.ntu.edu.sg/lisea/>).

In addition to the IFLA annual conferences (<http://www.ifla.org/IV/index.htm>), regional conferences are good information sources on the developments of LIS education in different countries. Such conferences include:

- CONSAL (Congress of Southeast Asian Librarians, <http://www.consal.org.sg/>)
- A-LIEP (Asia-Pacific Conference on Library & Information Education & Practice, <http://www.ntu.edu.sg/sci/a-liep>)
- ICADL (International Conference on Asian Digital Libraries, <http://www.icadl.org/>, which usually includes a workshop or panel discussion on LIS education)
- ICLISE 2001 (International Conference for Library & Information Science Educators in the Asia Pacific Region, 2001, held in Malaysia, <http://www.ifla.org/III/misc/iclise.htm>)
- WISE workshop 2000 (Post-CONSAL Workshop on Information Studies Education, 2000, held in Singapore, <http://dis.sci.ntu.edu.sg/wise/>).

To provide a forum for LIS educators in Asia, the Asia-Pacific Conference on Library & Information Education & Practice (A-LIEP) was initiated in Singapore in 2006. The e-proceedings of A-LIEP 2006 (<http://www.ntu.edu.sg/sci/a-liep/A-LIEP2006.e-proceedings.htm>) have been archived on DLIST (<http://dlist.sir.arizona.edu/>). The e-proceedings carry some 31 papers on LIS education in Asian countries and provide an important snapshot of LIS education in the region. A-LIEP 2007 (<http://course.shu.edu.tw/~aliep07/>) was held in Taipei, and A-LIEP 2009 is scheduled to be held in Tsukuba, Japan.

The Web sites of LIS schools are potentially important sources of information about the history and curriculum of LIS programs. Unfortunately, many LIS schools in Asia are not represented on the Web, and many Web sites do not have detailed and up-to-date information in English. Directories of LIS schools and their Web sites can be found in:

- World List of Schools and Departments of Information Science, Information Management and Related Disciplines, maintained by Tom Wilson (<http://informationr.net/wl/>)
- World Guide to Library, Archive, and Information Science Education, 3rd ed. (Schniederjürgen, 2007)
- Directory of LIS Schools in Asia, maintained by the Wee Kim Wee School of Communication & Information, Nanyang Technological University, Singapore (<http://dis.sci.ntu.edu.sg/lisea/schools/>).

A survey of the state of LIS education in Southeast and East Asia was carried out by the LIPER (Library and Information Professions and Education Renewal) project of Japan (Miwa, 2006; Miwa et al., 2006; Ueda et al., 2005). As part of the review, a library educator from each of the following countries – China, South Korea, Taiwan, Thailand and Singapore – was invited to present a paper on LIS education in his or her country. The country reports are available on the LIPER Web site (<http://www.soc.nii.ac.jp/jslis/liper/record.html>).

3. HISTORY OF LIS EDUCATION IN ASIA

In many Asian countries, formal LIS education began around the middle of the twentieth century after the World War II, when many countries became independent and embarked on national development initiatives. Libraries were seen as playing an important role in supporting education, advancing literacy and enhancing the learning capacity of the citizens. LIS training programs were often initiated by the library associations of the countries. At institutions of higher learning, formal LIS education typically started with the university librarian as the program director or head of department, with practicing librarians as part-time faculty. Foreign LIS educators were engaged as consultants and examiners to provide a measure of quality assurance. Over time, the programs became more established, with full-time faculty and a full-time faculty member as department head.

In countries that are part of the British Commonwealth, such as India, formal LIS education often began as postgraduate diploma courses, following the British model, and were later upgraded to Master's programs with the addition of a Master's thesis. In other countries, LIS programs were offered at universities first at the undergraduate diploma or certificate level, and subsequently developed into Bachelor's and Master's programs. In addition, many teacher colleges and institutes of education started offering programs for training teacher librarians. LIS schools offering only a Bachelor's program are usually taught by instructors with Bachelor's and Master's degrees, while schools offering graduate programs have a number of faculty members with PhD degrees.

The development of LIS curricula in the region can be divided into three stages (Table 10-1). Most programs started as library science courses to train librarians

for public and academic libraries (Stage 1). In Stage 2, the library science curriculum was expanded to include information science, with the addition of courses on library automation, applications of information technology, information retrieval, and online searching in bibliographic databases in the 1970s and 1980s. Courses on Internet technologies and the World Wide Web were added in the 1990s. During this stage of development, libraries, librarians and LIS schools were grappling with information and communication technologies.

With the burst of the dot.com bubble in the early 2000s and the arrival of a new generation of librarians and library educators who are comfortable with technology, LIS curriculum development has moved to Stage 3, where technology is not the main focus of attention. Rather, information and communication technologies (ICT) are viewed as enabling forces and tools, and the emphasis is on how to make effective use of technology to manage information and knowledge to serve the needs of users and organizations. LIS curriculum is expanding in two directions:

1. *information/knowledge management*: to prepare information professionals to manage information and knowledge in organizations, mainly in the corporate sector;
2. *digital information services*: to educate a new breed of librarians who can handle both print and digital resources and services, and can continuously adapt to the evolving online environment.

These three stages of curriculum development are reflected in the changing names of LIS programs: from *library science*, to *library and information science*, and more recently, to *information studies*, *information management*, *knowledge management*, and others. There is also a trend towards developing specializations in such areas as records management, archives, digital libraries, etc. In the more advanced Asian countries, many LIS schools are in Stage 3 of curriculum development, while LIS schools elsewhere in Asia are still grappling with a curriculum in Stage 1 or Stage 2.

The estimated number of LIS schools in various Asian countries is given in the Appendix. The numbers were obtained from several sources – country reports presented at conferences, the *World guide to library, archive, and information science education* (Schniederjürgen 2007), and the *Directory of LIS Schools in Asia*. The numbers are only indicative, since the counts depend on such factors as whether only departments or programs in full-fledged universities are included, and what is considered professional-level education in the country. Nevertheless, it can be seen that there is no lack of LIS education programs in Asia.

Table10-1. Stages in LIS curriculum development

Stage 1	Stage 2	Stage 3
Library Science	Expanded to include <i>Information Science</i>	Expanded to include <i>Information/ Knowledge Management</i> (focusing on corporate information and management)
	(with courses on library automation, online searching in bibliographic databases, information retrieval, and information technology, especially the Internet and World Wide Web)	Expanded to include <i>Digital Information Services</i> (incorporating digital libraries, e-resources, Web 2.0 and social computing)

For each Asian country below, we outline the history of LIS education, efforts to develop and reform the LIS education system, the system for accreditation and quality control, the information job market, and major challenges in the context of the country’s economic and political situation.

3.1 East Asia

3.1.1 China

China has a long history of books, publishing and libraries. According to Wang (2006), China’s history of book collections goes back at least 3,500 years. The first book on library science in China was written by Liu Xiang around 77B.C. during the Han Dynasty. It analyzed the national book collections of the time. Only a few chapters remain today. Since then, books on book-collecting and document science, as well as bibliographies of books, have appeared through the ages.

Modern library science, however, was introduced from the West in the early twentieth century. In 1913, American librarian Harry Clemens taught a course on library science at Nanjing University for the first time (Fan, 2006). In 1920, the first library science school, the Boone Library School, was founded in Wuhan by Mary Elizabeth Wood, Samuel Tsu Yung Seng and Thomas Ching Sen Hu, following the U.S. model (Fan 2006; Wang 2006). Within a decade, two other LIS departments were set up, at Shanghai Citizen University in 1925 and Nanjing University in 1927.

In the 1950s, Chinese library science education was influenced by the former Soviet Union. Many books of Soviet library science were translated into Chinese, and China sent students to study library science in the USSR.

Since the market-based economic reforms and opening-up of the country in 1978, China has looked to the U.S. and other countries for new ideas. LIS education developed rapidly after 1980, from 2 LIS schools to 52 in the period 1980 to

1990 (Wu, 2003; Ma 1993). At present, there are 44 LIS schools, offering a variety of Bachelor's, Master's and PhD programs.

LIS schools have changed their names to reflect the expanded scope of the field. For example, the department at Wuhan University was renamed *School of Library and Information Science* in 1984, while that at Peking University was renamed *Department of Information Management* in 1992.

Wang (2006) noted that LIS education in China has evolved into five areas of specialization:

- Library Science
- Information Science
- Information Management/Information System
- Archival Science
- Editing and Publishing Science.

The Chinese Ministry of Education regularly convenes national and international conferences to discuss the development of LIS education. In 1998, with the endorsement of the Ministry of Education, the LIS schools at Peking University, Wuhan University and Hebei University organized a seminar on national LIS education, which decided on the mandatory core courses for undergraduates majoring in information management: management science, economics, information management, data structure and database, information organization and retrieval, computer networks and management of information systems (Fan, 2006). In 2002, the Library Science Discipline Guiding Committee of the Ministry of Education held an inaugural meeting, in which it was agreed to hold a meeting on Library Science Education and Reform annually.

Since 1978, the Chinese government has invested more in libraries, and this has resulted in an increased need for librarians. The 15,500 libraries in mainland China, including 2,700 public libraries, 1,700 university libraries and 4,000 research institution libraries (Wang, 2006) represent a big job market for LIS graduates. However, LIS does not yet have a high status as an academic discipline in universities, and its public image also needs to be improved.

Some of the challenges facing LIS education in China that have been identified by Wang (2006) are:

- Lack of clarity about the core basic knowledge of the LIS field in the new environment, now that the field has expanded to include information science and information management
- Reconciling the two conflicting objectives of Master's programs – preparing graduates with practical skills for the job market versus inculcating research skills in students to prepare them for the PhD program
- Lack of academic preparation of graduates for rigorous research.

3.1.2 Japan

According to Kon (1993), library training workshops were run by the Japan Library Association as early as 1903. In 1921, the Ministry of Education established a librarianship training institute in the Imperial Library, which offered a 1-year program. The training institute was reorganized to become the National Junior College for Librarianship in 1964, and restructured into the University of Library and Information Science in 1980. It recently merged with the University of Tsukuba in 2002. This is currently the largest LIS school in Japan.

However, the first comprehensive LIS program at the university level was offered by the Japan Library School, established in 1951 at Keio University with the help of the American Library Association. The school added a Master's program in 1960, and introduced the first doctoral program in 1975.

The development of LIS education in Japan was influenced a great deal by the Japanese Library Law of 1950, which specifies a program of certification for public library professionals (Ueda et al., 2005). Two levels of public library professionals are specified – librarian (*Shisho*) and assistant librarian (*Shishoho*). According to the law, a person is qualified as a librarian if the person graduated from a polytechnic, college or university, and completed a training program specified by the law. The training program comprises 12 required courses and 2 elective courses (Miwa et al., 2006; Tsuji et al., 2006). The School Library Law, enacted in 1953, requires every school to have a school library and to employ a teacher-librarian (*Shisho-kyouyu*). There is no formal certification for academic or special librarians.

Shisho certification is popular among university students. 296 colleges and universities offer the program, and more than 10,000 students obtain this certification every year (Miwa et al., 2006)! However, less than 10% of these can get a full-time job in a public library. Currently, undergraduate LIS programs are offered by 10 colleges and universities, Master's programs by 8 colleges and universities, and PhD programs by 6 (Miwa et al., 2006).

In 2003, members of the Japan Society of Library & Information Science embarked on a major project called LIPER (Library and Information Professions and Education Renewal) to examine the status of LIS education in Japan, including curricula, employment trends, competencies needed and future prospects, with the goal of reforming Japanese LIS education (Miwa et al., 2006; Ueda et al., 2005). The study included questionnaire surveys, interviews and focus groups of the major stakeholders – faculty, students, graduates and professionals.

Miwa et al. (2006) pinpointed the following challenges facing LIS education in Japan:

- New employment opportunities for full-time librarians are decreasing due to an increase in outsourcing and part-time workers.
- The curriculum of *Shisho* certification programs is inflexible and out-of-date. The curriculum does not take into account the range of ability and experience

of students, and does not cover digital and multimedia information resources, human-information behavior, ICTs and knowledge management skills.

- LIS programs are not subject to quality assurance.

3.1.3 South Korea

The first library school was established in 1957 at Yonsei University, with both undergraduate and graduate programs (Kwon, 2003). This was followed soon after by programs at Ewha Womans' University in 1959, Chungang University in 1963, and Sungkyunkwan University in 1964. The first PhD program was introduced at Sungkyunkwan University in 1974.

In the 1980s, LIS department names were gradually changed to reflect the incorporation of information science, and a diversity of information science subjects were offered in the 1990s. With the Public Records Management Act coming into effect in 2000, LIS schools started offering courses in records management, to meet the demand for record management professionals.

There are currently 40 LIS schools at universities and teacher colleges, offering mainly graduate programs and 11 PhD programs. LIS schools in South Korea are grappling with the issue of the identity of the LIS field, and are reviewing their curricula and defining their research directions.

3.1.4 Taiwan

The first LIS program in Taiwan was an undergraduate library science program introduced in 1955 by the Department of Adult and Continuing Education at the National Taiwan Normal University (Lin, 2004). In 1961, another undergraduate program was introduced at the National Taiwan University, followed by a Master's program in 1980 and a PhD program in 1989. There are now 11 universities offering undergraduate and graduate programs, with most programs called *library and information science*. The exceptions are three programs with the names *information and communications*, *library, information and archival studies* and *digital library*. Lin characterized the recent trends in LIS curriculum in Taiwan as being related to the terms *digital*, *Internet* and *multimedia*. LIS education in Taiwan has particular strengths in digital libraries and digital content management.

Each LIS program in Taiwan is basically accredited by its parent university. However, librarians who wish to practice in public libraries have to pass a civil service examination for libraries. Since 90% of libraries are run by the government, most LIS graduates will attempt the examination. Nevertheless, there are increasing numbers of LIS graduates working as information specialists in the private sector.

Lin (2004) singled out the following challenges facing LIS education in Taiwan:

- The gap between undergraduate and graduate programs, and how to design programs for graduate students whose undergraduate education is in a different discipline
- LIS degrees not given any weight or recognition in the civil service examination, with the result that non-LIS graduates who pass the exam can assume librarian positions in the civil service
- The current emphasis on IT in the curricula producing graduates who are too system and technology oriented, lacking an orientation in the humanities, arts and education
- The need to strengthen communication skills in graduates.

3.2 Southeast Asia

3.2.1 Thailand

In 1951, a special program in library management was offered at Chulalongkorn University under a Fulbright program, where five American academics conducted six courses over a period of five years (Premsmit 1993 & 2004; Butdisuwan 2000). Subsequently, the Department of Library Science was set up at Chulalongkorn University in 1955, offering an undergraduate diploma course, followed by a Bachelor's program in 1959 and a Master's program in 1964. The curriculum was based on the U.S. model, with some adaptations to meet Thai needs. A one-year postgraduate Advanced Certificate in Library Science was offered in 1965 at the College of Education, Prasarnmit Campus (now Srinakharinwirot University) to train school librarians.

There are currently 16 universities and more than 36 Rajabhat Universities (former teacher colleges) offering undergraduate LIS programs, with the names *library and information science*, *information studies* or *information management*. Ten of these offer Master's programs, mostly MA in Library and Information Science. The first PhD program was introduced at Khon Kaen University in 2003.

Saladyanant (2006) reported that in Thai higher education, quality assessment is carried out at two levels:

- external assessment of the university as a whole by the Office of Education Standards and Evaluation (OESE)
- internal quality assessment at the department level.

The Ministry of Education requires each university department to set up its own quality assurance system, which must cover at least four elements: 1.) curriculum administration; 2.) resources for learning, teaching and research; 3.) student support and advising; 4.) needs of the job market and alumni feedback.

The main job market for librarians is in the government sector, especially in educational institutions (Premsmit 2004). However, many LIS schools are revising their curricula to include competencies needed in the private sector.

Problems in LIS education in Thailand include the following:

- Need for more faculty development, especially in emerging areas
- Strengthening research in LIS
- Need for textbooks in the Thai language since most of the teaching is in Thai
- Need to develop more PhD programs to educate LIS educators and researchers.

3.2.2 Malaysia

Lim (1970) and Wijasuriya, Lim and Radah (1975) traced the beginnings of LIS education in Malaysia to the formation of the Malayan Library Group in 1955, which organized classes in librarianship and prepared students to take the Library Association (U.K.) Associateship examination. A formal LIS program was introduced in 1968 at the MARA Institute of Technology (later restructured into the University of Technology MARA) (Jamaludin, Hussin & Mokhtar, 2006). The Institute started offering a three-year Diploma in Library Science program in 1973, followed by a Bachelor's, Master's and PhD program.

In 1987, a Master of Library and Information Science program was started at the University of Malaya. It was suspended after one run, but was revived in 1995. At present, there are four universities offering LIS professional education at various levels, including three PhD programs.

The names of schools and programs have evolved over time. For example, the school at the University of Technology MARA changed its name from the School of Library Science in 1973, to the School of Library and Information Science in 1980, to the Faculty of Information Studies, and finally to the Faculty of Information Management! The name changes reflected expansion of the programs and field of study, to include especially information management in the corporate sector. The undergraduate program has four areas of specialization:

- Library & Information Management
- Information Systems Management
- Records Management
- Information Resource Center Management (for school media management).

A major development in Malaysia is the establishment of an accreditation system for higher-education programs. The Malaysian government established the Malaysian Qualifications Agency to oversee all aspects of quality in higher education, including accrediting higher education programs and qualifications, and supervising and regulating the quality of higher education providers. Within this framework, a *Standards and Criteria for Programs in Library and Information Science* was formulated in 2007 by a committee comprised of representatives from the Malaysian Qualifications Agency, National Library, Librarian's Association of Malaysia, three established LIS schools, and potential employers (Singh 2007).

3.2.3 Indonesia

After Indonesia's independence was recognized by the Dutch in 1949, Indonesia began establishing public libraries in the 1950s in an effort to raise literacy levels. According to Sulisty-Basuki (1993 & 2006), the first LIS program was a two-year "Training Course for Library Staff" established in 1952 by the Ministry of Education and Culture. It became the Library School in 1959, with the course extended to three years. In 1961, the program was moved to the Teacher's College at the University of Indonesia, and in 1963 the Department of Library Science came under the Faculty of Letters at the same university.

In 1982, the education system in Indonesia was restructured. Tertiary education was organized broadly into Diploma, Bachelor's, Master's and Doctoral programs, which is still the system in use today. Currently, 15 universities offer a Bachelor's LIS program and at least 2 offer a Master's program.

Indonesia has gone through tremendous political changes in recent years, and this has had a major impact on LIS education. President Soeharto, who was in power for 32 years until 1998, applied a strong central government policy to standardize the education system in Indonesia through the Ministry of National Education. The Directorate General of Higher Education (DGHE) supervised all tertiary education, including LIS education. DGHE established various committees, called consortia, which determined the curriculum for each discipline, including library science. The Consortium for Philosophy and Literature covered the area of library science. A nation-wide curriculum for LIS education was issued in 1986, and revised in 1992 and 1996. The DGHE also granted approval for the opening of new LIS schools after reviewing submitted proposals. The programs were thus accredited by DGHE.

Things changed drastically after Soeharto stepped down in 1998 in the face of student demonstrations and unrest (Sulisty-Basuki, 2006). In the post-Soeharto era, known as the Reformation Era, more autonomy was granted to regions and cities. Now the DGHE specifies only 52 credits or 40% of the 144 credits for undergraduate programs, leaving each institution to decide what courses to offer for the remaining credit hours. Because of a lack of experienced faculty, professional literature and IT facilities, the LIS schools have difficulty filling the remaining credits. Further, the DGHE curriculum states just the course titles and the number of credits, leaving it to the schools to flesh out the course content. Unfortunately, there are not many LIS books in the Indonesian language, and some good books by left-leaning authors had earlier been banned.

In the new era, any university can initiate undergraduate and graduate programs in LIS without DGHE permission. However, the LIS school must be supervised for two years by the National Accreditation Agency set up by the Ministry of Education, comprised of DGHE officers, academics, and representatives of the Indonesian Library Association. This laxity has given rise to new programs without adequate resources. Many LIS schools do not have good library resources, or ac-

cess to online databases, or good IT laboratories. Also, many graduate programs do not have faculty with PhD qualifications.

Since most LIS graduates are employed by special and academic libraries, LIS schools tend to tailor their curriculum accordingly, thus neglecting school and public libraries, which are generally in poor condition (Sulistyo-Basuki 2006). Furthermore, the majority of LIS schools are in Java and Western Indonesia, with only three schools situated in the less developed Eastern Indonesia. LIS graduates are reluctant to work in Eastern Indonesia, where libraries are in a poor shape, the infrastructure is poor, and there are few opportunities for career development.

3.2.4 Philippines

According to Vallejo (1993), the first courses on “library economy” were offered at the University of the Philippines in 1914. In 1916, the program was raised to a four-year program leading to a BSc in Library Science. In 1917, courses for school librarians were offered at the Philippine Normal School. In 1961, an Institute of Library Science was set up at the University of the Philippines, and a Master’s program was finally introduced. There are currently some 72 universities and colleges offering LIS programs, but many of these programs are LIS majors within a Bachelor of Education program.

The most significant feature of the LIS profession in the Philippines is the licensing of professional librarians by the state. The practice of librarianship is regulated by The Philippine Librarianship Act of 2003, which updates the earlier Act of 1990 (David & Perez, 2006). To practice as a librarian, one needs to hold a *Certificate of Registration* and a *Professional Identification Card* issued by the Professional Regulatory Board for Librarians of the Philippine Regulations Commission. The Act, in effect, recognized the essential role of librarians and libraries in national development and in developing the intellectual capacity of the citizens (Nera 2006; Santos 2003).

The Act defines the scope of the licensure examination and the content of the LIS curriculum. Only graduates with a Bachelor’s or Master’s degree in LIS are allowed to take the exam. Such a regulation enables the Board for Librarians to recommend to the Commission the closing of a library school when a substantial proportion of the graduates do not pass the licensure examination.

There is a big job market in public, academic and school libraries. A professional librarian is required to be employed in every school, college or university – having a professional librarian in the institution is a basic requirement for school or university programs to be accredited by the various professional associations and accreditation bodies. As less than 50% of the candidates pass the exam on average, there is a high demand for licensed librarians. There are about 4000 licensed librarians, which is 10% of the total number of libraries in the Philippines

(David & Perez, 2006)! The image of professional librarians is good and the salaries of librarians are competitive, in some cases comparable to that of deans.

There are, however, some challenges facing LIS education in the Philippines (David & Perez, 2006):

1. A gap between theory and practice, partly due to a lack of materials on theories relevant to the Philippine situation
2. Lack of information materials and learning resources to support the curriculum, and consequently lack of hands-on experience
3. Lack of IT software and hardware
4. Instructors' lack of up-to-date knowledge of current trends, issues and practice of librarianship.

3.2.5 Singapore

LIS professional training in Singapore started as a postgraduate diploma program conducted by the Library Association of Singapore, from 1982 to 1992 (Thuraisingham 1984 & 1989). The instructors were a mix of faculty engaged from library schools in the U.K. and Australia, and local practising librarians. In 1993, a Division of Information Studies was established at the Nanyang Technological University's School of Applied Science to offer an MSc program in Information Studies (Khoo 2004 & 2005). The School of Applied Science later became the School of Computer Engineering. Being situated in an engineering school, the Division developed a particular strength in information technology and digital libraries. The Division merged with the School of Communication Studies to form the School of Communication & Information in 2002.

The Master's of Science (Msc) program has developed rapidly in its 15 years of existence. The curriculum was restructured in 2002 to offer the following areas of concentration:

- Archival Informatics
- Knowledge Management
- Information Systems
- Library and Information Science
- School Media Resource Management.

The overwhelming popularity of the Information Systems and the Knowledge Management concentrations persuaded the school to offer a separate MSc program in Knowledge Management in 2002, and an MSc in Information Systems program in 2005 in collaboration with the School of Computer Engineering. The Knowledge Management program was the first in Asia and one of the earliest in the world. In addition to the MSc programs, the Division also offers a research Master's program and a PhD program.

There is currently no accreditation system for LIS education in Singapore. Since the program at the Nanyang Technological University is the only LIS program in

Singapore, it is seeking to develop a regional accreditation system through collaboration with LIS schools in the region.

The main challenge facing the school is the difficulty of attracting local students to the PhD program and recruiting PhDs in the library science area. The problem of attracting local PhD students is common across all the faculties, due to the pragmatic Singaporean mindset. Most local graduates prefer to enter the industry and secure a remunerative position, rather than devote a few years to PhD research. Of the 15 full-time faculty members in the Division, almost all have PhDs. However, only 4 of the PhDs are in the LIS field and only one of these is a Singaporean. The other faculty members have PhDs in computer science or management.

3.3 South Asia

3.3.1 India

LIS education in India is nearly 100 years old. W.A. Borden from the U.S. started the first training program for library workers at the Central Library in Baroda in 1911 (Sarkhel 2006; Singh, 2003b). In 1929, S.R. Ranganathan introduced a certificate course at the Madras Library Association, which later moved to the University of Madras. In 1937, the course was converted to a one-year postgraduate diploma program (Mahapatra 2006; Mangla 1993). The first department of library science was established at the University of Delhi in 1946. It offered a postgraduate diploma in 1947 and a Master of Library Science in 1951, which was renamed Master of Library and Information Science in 1972.

There were only five universities that offered postgraduate diploma courses before India's independence in 1947. The number increased to 42 in the 1970s. Today, there are some 167 universities offering various kinds of LIS programs (Mahapatra 2006; Singh 2003a & 2003b). An estimated 120 universities offer Bachelor's degrees, 78 Master's degrees, 21 two-year integrated Master's degrees, 16 Master's of Philosophy (M.Phil.) degrees and 63 Ph.D. degrees. However, there is wide variation in the quality, ranging from strong programs at the cutting edge to weak programs with little resources. There is thus an urgent need for internal quality assurance and accreditation of LIS education in India (Sarkhel 2006; Singh 2003b).

To improve the quality of LIS education in Indian universities University Grants Commission (UGC) since its inception in 1956 has convened several Committees to review and make recommendations on various aspects of LIS education (Sarkhel 2006; Rath 2006);

1. Ranganathan Committee on the Development of University and College Libraries, 1959
2. Ranganathan Committee on Library Science in Indian Universities, 1965

3. Kaula Committee on Curriculum Development in Library and Information Science, 1993
4. Karisiddappa Committee on Curriculum Development in Library and Information Science, 2001 (University Grants Commission, 2001).

The Committees make recommendations for standardization of curriculum, enrolment, infrastructure, quality of teachers, teaching and evaluation methodology, and research programs. However, implementation of the recommendations at the various universities is voluntary.

The UGC also set up the National Assessment and Accreditation Council (NAAC) to strengthen the quality of higher education in India (Sarkhel, 2006). The NAAC can carry out institutional accreditation and departmental accreditation. To date, no quality assessment has been carried out on an LIS department.

Varalakshmi (2006) reported that the traditional library job market is stagnant, with the development of public libraries and school libraries being neglected. Promising job markets are in university libraries and corporate libraries in technology companies. Raghavan and Agrawal (2006) noted the emergence of the corporate sector as a growing job market. This is because of the increasing number of multinationals establishing offices and various kinds of centers in India, and the modernization and globalization of Indian companies. More companies have come to realize that there is a need to hire information specialists to handle information management and knowledge management. Raghavan and Agrawal considered knowledge management to be one of the most promising emerging job markets for LIS professionals. They identified another emerging job market as that of the information product/service industry, including e-content creation, e-learning, cataloging and library automation.

Problems facing LIS education in India include (Mahapatra 2006; Mangla 1998; Sarkhel 2006; Singh 2003a & 2003b):

- Unplanned proliferation of LIS schools
- Wide variations in syllabi, teaching methods, evaluation methods and course content
- Inadequate number of faculty members, leading to high student-teacher ratio
- Inadequate resources and infrastructure in terms of classroom space, IT facilities and teaching aids
- Libraries with inadequate collections and resources
- Inadequate opportunities for faculty development
- Lack of internal quality assurance and accreditation system.

3.3.2 Pakistan

A one-year postgraduate certificate program was launched in 1915 by American library pioneer Asa Don Dickinson at the University of the Punjab, Lahore (Anwar 1992; Kaser 1992). This was the first formal program in Asia and the second in the world after Columbia University. The certificate program was suspended after

the foundation of Pakistan in 1947 due to small student enrollment, but was revived in 1950 (Anis 1992).

The first postgraduate diploma program was established at the University of Karachi in 1956, followed by the University of the Punjab in 1959. The first Master's program was introduced in 1962 at the University of Karachi. Currently, seven universities in Pakistan offer two-year Master's degree programs, and an open university offers various distance-learning library science degrees.

The first PhD program was started at the University of Karachi in 1967, followed by several other universities. Recently, concern was expressed regarding the quality of these PhD programs, resulting in the Higher Education Commission (HEC) of Pakistan intervening and suspending some of them in 2006. However, programs with qualified academic staff and adequate resources were allowed to continue with a new "M.Phil. leading to PhD." scheme.

The HEC plays an important role in enhancing the quality of LIS education in Pakistan. To maintain minimum standards and consistency in LIS education, it developed a model curriculum in 2002 that all LIS programs are expected to follow. The model curriculum gives LIS programs the flexibility to adapt it according to their specific needs, resources and available faculty.

Currently, there is no professional accreditation body for LIS programs. However, Ameen (2007) reported that the HEC is developing a comprehensive multi-level mechanism of accreditation, both at the program and institution levels. All universities are expected to establish a "Quality Enhancement Cell" to introduce and implement the procedures in the Self-assessment Manual. LIS programs are also required to participate in this self-assessment scheme, which is expected to improve the overall quality of LIS education in Pakistan.

3.3.3 Bangladesh

Bangladesh has about 50 years of history in LIS education. Islam and Chowdhury (2006) reported that a certificate course in librarianship was offered by the Dhaka University Library in 1952, but it ran for only one session. A Department of Library Science was established in 1959 at the University of Dhaka with a postgraduate diploma program modeled on a similar program of the University of London. A B.A. (Hons) program was introduced in 1987, together with a name change to Department of Library and Information Science. A PhD program in library science was approved by the University of Dhaka in 1978. Currently, 2 public universities offer B.A. and M.A. in LIS, and 12 private institutes offer postgraduate diploma courses.

Islam and Chowdhury (2006) noted that the public library system is poor, so job opportunities in public libraries are limited. It is also rare to find a library run by an LIS professional in a corporate organization. Most LIS professionals work in educational institutions and special libraries, though the government does not re-

quire every school or college to have a librarian. Consequently, remuneration for LIS professionals remains low and career development opportunities are poor.

The following problems are found in the LIS education system in Bangladesh (Islam & Chowdhury, 2006):

- Lack of infrastructural facilities, including classrooms and laboratories
- Inadequate reading materials, including textbooks, classification and cataloging tools, and LIS journals.
- Inadequate full-time faculty
- Insufficient research and resources to support research
- Lack of faculty members with PhD degrees from Western countries
- Lack of job and career prospects, and low social status of librarians
- Lack of national policies relating to LIS professionals and LIS education.

4. TRENDS AND ISSUES

From the above description of the state of LIS education in various Asian countries, it is clear that LIS education is at different stages of development across countries and even across different regions in particular countries. Nevertheless, it is still possible to identify some regional trends, as LIS education appears to be moving in the same general direction due to increasing globalization, advances in information and communication technologies, the growth of the World Wide Web, and the influence of LIS developments in the U.S., U.K. and Australia. These three countries continue to educate a significant number of Asian librarians and library educators, and publish the bulk of LIS literature.

4.1 LIS Programs and Curriculum

Based on the country reports of LIS educators from five Southeast and East Asian countries in 2003 and 2004, Miwa (2006) identified the following trends in LIS education in the region:

1. elimination of the word “library” from the names of LIS programs in order to attract students
2. shift in the educational level from undergraduate to graduate
3. changes in core subject areas from an emphasis on manual-based collection development to ICT-based information/knowledge management
4. depreciation of LIS education for school librarians (except in Thailand)
5. decreasing opportunities for new employment in library markets due to over production of LIS graduates and economic recession
6. low interest among well-educated graduates in seeking employment opportunities in the public library market, which is characterized as offering relatively low social status and wage levels compared to national and academic libraries

7. lack of understanding among employers in accepting LIS graduates as capable knowledge workers
8. increase in the number of faculty with doctoral degrees, who prefer to teach cutting-edge courses rather than traditional library oriented courses.

These trends are true of the more developed countries in the region, which are developing what we consider Stage 3 LIS curricula. There is a further trend to educate information professionals for knowledge management roles in corporate organizations. LIS curriculum has also expanded to include management of digital and Internet resources, and development of new types of information services.

LIS schools are grappling with the following issues in the curriculum:

- defining the Information field and determining the core competencies
- rapid development in information-communication technology, especially Web and mobile technologies, and their implications for the LIS profession and LIS education
- determining what new competencies are needed in libraries as well as corporate environments
- determining how to impart these new competencies to LIS graduates and what resources are needed.

The required new competencies appear to be focused in the following areas:

- application of new information and communication technologies
- handling of digital, multimedia and Web-based information resources
- information/knowledge management in organizations
- soft skills, including communication skills.

However, many parts of Asia are still underdeveloped, with poor communication infrastructure, poor public library systems, and limited access to information technology. As some countries in Southeast Asia (especially Indo-China and Indonesia) have emerged from political turmoil relatively recently, they are still in the early stages of national and economic development, with a poorly developed public library system. Some countries, such as Cambodia and Laos, have no LIS schools. In the poor or undeveloped regions, LIS schools are struggling even to offer Stage 1 library science programs to prepare librarians for public and academic libraries. They have inadequate resources to incorporate information and communication technology into their programs. Within large countries like Indonesia, India and Thailand, there are wide disparities in economic development, library and information infrastructure, and LIS education programs – across the country as well as between urban and rural areas. The situation is exacerbated by the proliferation of LIS programs in institutions of higher learning, without thought for adequate resources and quality assurance.

A major exception is the Philippines, where the library association succeeded in its effort to have the government recognize librarianship as a profession that is essential to national development. State licensing of librarians was established, and the status of librarians and, consequently, the remuneration have improved. Nevertheless, because the country is still struggling with economic development, many LIS programs suffer from inadequate resources.

There is a substantial interest in the region in distance and online LIS programs, and in e-learning. Singh (2003) listed 27 institutions in India offering distance programs. Wang (2007) discussed the need for online LIS programs in Taiwan and the issue of quality assurance. Sacchanand (1998) surveyed LIS distance programs in the Asia-Pacific region. An update to this survey is urgently needed to determine the state of distance and online LIS programs in Asia.

4.2 Accreditation, Quality Control and Reform

None of the Asian countries has an accreditation system for LIS programs that is administered by the national library association, as in the U.S., U.K. and Australia. In most cases, the LIS program can be said to be accredited by the parent university. However, some indirect system of quality assurance has been established by the governments in the various countries.

In India, Pakistan, China and Indonesia, the Ministries of Education have set up national bodies to work with university departments, including LIS schools, to periodically deliberate and publish a model curriculum for LIS programs to follow or adapt to their situation. The model curriculum may be non-binding recommendations as in India and China, specify minimum requirements as in Indonesia, or prescribe a curriculum to be followed but with sufficient flexibility for local adaptations as in Pakistan. Malaysia is implementing a new accreditation system that involves representatives from the government, library association, library schools and employers.

In the Philippines, Japan and Taiwan, the focus is on licensing librarians, rather than accrediting the LIS programs. In the Philippines and Taiwan, aspiring librarians have to pass a licensure exam to work in public libraries. However, this raises the issues of who sets the examination questions and whether the questions are biased toward any particular LIS program. The examination also presupposes a certain set of competencies to be examined, and this has to be reviewed and revised regularly. One advantage of such a system is that it can be used to identify programs whose graduates have low passing rates. The Japanese system mandates a certain minimum curriculum, and all students who complete the curriculum are considered qualified to practice in public libraries.

The issue of accreditation of LIS professional programs has been discussed in regional LIS education conferences and workshops for a number of years. Several LIS educators have expressed the need for a Western-style accreditation system, with a panel of library educators and LIS professionals as assessors. The recent A-

LIEP 2007 conference in Taipei had a whole session devoted to discussing accreditation issues.

In 2000, Majid et al. (2003) carried out a questionnaire survey of LIS schools in Southeast Asia about a regional accreditation scheme. Most of the schools surveyed agreed on the need for such a scheme for LIS degrees in the region, and expressed interest in participating in one. Surveys in other parts of Asia have also found support for regional accreditation schemes (e.g. Rehman 2007). Khoo, Majid and Chaudhry (2003) discussed the issues involved in a regional accreditation system, including identifying an appropriate regional body to administer the accreditation system, problem of determining a framework and set of standards that takes into consideration the needs and situations in each country and still maintain minimum common standards to allow librarians to qualify for employment in other countries in the region.

4.3 Research and Literature

Substantial, high quality research is badly needed to advance library and information service in Asia. Unfortunately there is a dearth of high-quality research in LIS partly because of the lack of trained researchers and PhDs in the region. At the same time, good researchers often choose to work in emerging or theoretical areas, especially in the areas of IT, digital libraries and the Web, that are often not relevant to practical library and information services. There is thus an urgent need to focus the limited research talent on advancing the theory and practice of library and information service in various environments, and on the issues and problems faced in the region.

There is also severe lack of LIS textbooks written in the local languages. Faculty members often have to devote a substantial amount of time writing or translating textbooks in the local language. Fortunately, in many Asian countries, students are able to read textbooks in English, even if they are not comfortable writing or speaking in the language. English language textbooks however do not address the particular issues and situations in Asian countries.

4.4 Faculty Development

LIS faculty development is a challenging issue in Asian countries. The less developed countries have very few PhD holders and very few PhD programs to train researchers and educators. LIS professionals also have difficulty enrolling in PhD programs overseas because of inadequate command of English. There are also insufficient continuing education opportunities for LIS educators to learn about new developments and acquire new knowledge in emerging areas. There is limited funding for overseas travel to attend conferences and workshops.

4.5 Regional Collaborations

Traditionally, the region has looked to the U.S., U.K. and Australia for leadership in the LIS field. There is however a recent trend in higher education in general, and LIS education in particular, to develop collaborations and cooperatives in Asian countries, as many Asian countries are developing rapidly and their universities are developing into world class institutions. Collaborations in LIS can be seen in the joint organization and participation in regional conferences, such as ALIEP, LIPER Workshops, and ICADL conferences, and in student and staff exchanges and visits. Some LIS schools have also set up programs for funding visiting fellows (such as the ACRC fellowships at the Nanyang Technological University, Singapore), and providing PhD scholarships for international students. Research collaborations are also taking place, mainly as a by-product of staff exchanges and visits. At the ICADL 2007 conference, Dr Shigeo Sugimoto and Dr Shalini R. Urs put forward a proposal to form a *Consortium of I-schools in Asia-Pacific* (CISAP) to provide a framework for closer cooperation in the region.

5. CONCLUSION

Most countries in the Asian region have had more than 50 years of history in LIS education. However, LIS education is at different levels of development in different countries because of their different historical backgrounds and level of economic development. However, because of globalization and increasing regional networking and dialog, LIS education in the region is moving in the same direction. It is expected that with the increasing collaboration in the region, an Asian brand of LIS will eventually emerge. Meanwhile, it is important to improve the training and continuing education of LIS faculty, and improve the resources of LIS schools.

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APPENDIX. NUMBER OF LIS SCHOOLS IN ASIAN COUNTRIES

Country	No. of LIS schools/depts
East Asia	
China	44
Japan	8
Mongolia	1
South Korea	5
Taiwan	13
Hong Kong (China SAR)	1

Country	No. of LIS schools/depts
Southeast Asia	
Indonesia	15
Malaysia	4
Philippines	72 (including many teacher colleges)
Singapore	1
Thailand	16
Vietnam	10
Myanmar	1
South Asia	
Bangladesh	3
India	167
Pakistan	8
Sri Lanka	1