



LIS development and challenge in East Asian Countries of Taiwan, Korea, and Japan

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Abstract

Library and Information Science (LIS) development in East Asian countries had been through stages of Library Science, Library and Information Sciences (Studies), Information and Library Sciences (Studies), Information and Communications. Currently, School of Information is a trendy title for schools of the kind. Although the LIS of USA has great impact on Asian countries in terms of curriculum and employment. However countries of this hemisphere have their own LIS direction of development. Each and every institute has its own background and path of development as well. In general, LIS profession endeavors steps of 1) to acquire forms of information resources, 2) to be able to utilize information technologies for communicating among information resources, 3) to create or utilize interface for information services, and 4) to conduct communication and education to users as to transform information into knowledge and/or intelligence. LIS Education institutes face challenges while going through each step. This paper discusses current status of LIS development in East Asian countries of Taiwan, Korea, and Japan. It analyzes to what extent the endeavors has achieved and challenges met in terms of curriculum development, the quality of education and related issues from viewpoints of LIS educators. It provides basic reference and concrete suggestions for the regional cooperation in the profession.

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I. Stages of Development and Impact of US LIS Education

This section discusses the LIS Education Development in East Asia, Degree levels and Parent Institutes of LIS Education.

1. LIS Education Development in East Asia

Library and Information Science (LIS) development in East Asian countries had been through stages of Library Science, Library and Information Sciences (Studies), Information and Library Sciences (Studies), Information and Communications, or Communication and Information. Currently, School of Information is a trendy title for schools of the kind. At the initial stage of LIS Education in the middle of 20th century, US LIS Education has been playing a great impact in Asian area as the fact that most qualified instructors received their LIS degrees from USA. It came to no surprise that most curriculum structure of LIS Education Institutes were similar to US. As Table 1 LIS Education and Curriculum Emphasis shows that different stages of Technical Services and Technical Services beyond printed materials transformed to information-oriented library services via systems and databases, courses are more on information services, human/computer interfaces, and information systems. The current situation of Reader Services had been advanced to be beyond libraries with interactive functions. For the administrative Services, the emphasis also moved from collection-oriented to librarians-oriented, and then, reader-oriented services. Overall development of LIS Education has been keeping pace with the societal development and technological development.

Table 1. Stages of LIS Education and Curriculum Emphasis

Stages of LIS	Curriculum Emphasis
Library Science	-Technical Services -Reader Services -Administrative Services
Library & Information Science (Studies)	-Technical Services beyond printed materials -Reader Services beyond libraries -Reader-oriented administrative Services
Information & Library Sciences (Studies)	Information-oriented library services via systems and databases
Information Science (Studies)	Information services, human & computer interfaces, and information systems
Information & Communications	Information services through communication theory and practices

2. Degree levels of LIS Education Institutes

However, countries of East hemisphere have their own LIS direction of development. Each and every institute has its own background and path of development in recent years. In Asia, most LIS Education Institutes grant BA degree according to the needs of the society, graduate programs for MA degree were established until the 90's. LIS degree levels major remain in BA degree. Korea's 32 LIS institutes grant Bachelor Degree, 25

out of 32 (78%) grant Master's Degree, and 14 out of 32 (44%) have doctoral programs, shown as Table 2.

Table 2. Korea LIS Degree Levels n=32

Degree Levels	Bachelor	Master	Doctoral
Number of Institutes	32	25	14
Percentage	100%	78%	44%

In Taiwan area, 8 out of 11(72%) institutes grant Bachelor Degree, 9 out of 11 (82%) grant Master's Degree, and only 1 (9%) institute grant Doctoral Degree. Shown as Table 3. (Lin, 2004)

Table 3. Taiwan LIS Degree Levels n=11

Degree Levels	Bachelor	Master	Doctoral
Number of Institutes	8	9	1
Percentage	72%	82%	9%

In Japan, there are five official institutes provide LIS Education and grant various levels of degree. 4 out of 5 (80%) grant Bachelor's degree, 2 out of 5 (20%) grant Master's degree, and 2 out of 5 (20%) grant Doctoral degree. 3 out of 5 (60%) cover Library/Museum/Archive, as Cultural Information Sciences. Each institute is individual college and has different divisions of specialty. Japan's LIS Education situation is more complicated among Asian countries. In addition to these official institutes, some professional organizations grant certificates for entering the library jobs (Pan & Cheng 2004). There is an overall investigation of LIS Education project undergoing in Japan, *The Library and Information Professions and Education Renewal (LIPER)* in recent years. The outcome may restructure the education and training system in the country (Miwa, 2006).

II. LIS profession endeavors steps

Breaking "INFORMATION" into forms, format, formation, and inform that one can understand these words represent endeavors steps of Library and Information Services Education. The end purpose is to "Transform" information into intelligence and wisdom.

1. Acquisition of various forms of information resources

Library and Information Service professionals have been educated to be acquainted with information of various forms. It was not long ago that shelves of libraries are filled with printed books of different subjects and periodicals. Different portions of audio-visual materials were introduced into the libraries, followed by electronic forms of collections. The knowledge and skills of material acquisition advanced into Collection Development. In search of the coordination among libraries, librarians, users, administrators, publishers,

information providers become a key requirement for LIS professionals, thus so as the curriculum development of LIS Education.

2. Utilization of information technologies for *formation* of resources

The computers as a revolution agent and powerful source for the integration of information process. The convergence of information technology and organizational information processing that putting graphic, oral, numeric, and print into integrated information technology: The technology enabled freehand drawing into mechanical drawing, computer-aided designing and digital facsimile and video display; The technology also enhanced talking through telephone, voice recognition, and then tele-video conferencing; Technology also enabled manual accounting became adding machines calculators, computers and peripherals, and then distributed networks; The print process also developed from write, electronic typewriters then to word processors, and facsimile transmission and electronic mail (Evans, 2000).

The multiple formats and interactive function of Internet have made digitalizing of library a must. Each and every step of formation, as utilizing information technologies for communicating among resources becomes necessary step of education and training as domain knowledge/skill for librarianship.

3. To create and/or utilize interfaces to *inform* users

To inform users what information is and how to find the information they need via Internet urges librarians to be capable of creating and/or utilizing interfaces for information services and information delivery. The communication of B2C, B2B, C2B, and C2C, had LIS Education curriculum added more communication courses either theoretical or practical settings. An example of curriculum planning of Department of Information and Communication at Shih Hsin University which is divided into three categories. The Upper-Stream of Information, i.e. Design of Digital Contents, courses include 1) Basic capability of creativeness, and 2) Management of Digital Contents. The Middle-Stream of Information, i.e. Value-Added Information and Knowledge Management, courses include 1) Information Collection and Value-Adding Techniques and 2) Capability of Knowledge Management. As for the Lower-Stream of Information, i.e. Internet Marketing and Communications, i.e. courses include 1) Communication and Society, 2) User (Audience) Study, and 3) Information Marketing and Information Communications.

4. *Transform* Data/information into knowledge and/or intelligence

One of Major missions of librarianship is to conduct communication and education to users as to transform information into knowledge and/or intelligence. As per one of ALA 2007 Annual Conference's Program Tracks and Descriptions, "Transformation & Innovations", attendees received lectures or talks entitled "Transforming Your Services: Your Customer has Been Transformed, So Where is Your Library?", "Transforming Your Library, and Your Library's Future, with Technology", "The Ultimate Debate: Do Libraries innovate?", "Transforming Your Staff", "Transform Your Space – A Transforming Experience", "Transforming Your Community" and so on.

Being able to be a change agent, be innovative and be able to transform, and no matter it is in administrative and leadership level, serving children and young adult, working in department of collection management and technical services, involved in digital information & technologies, and or working in user services, either in reference department or outreaching activities. The words of forms, format, formation, inform, and transform all need actions to accomplish.

III. Challenges of LIS profession in East Asia

LIS Education institutes face challenges while going through each step as greater challenges occurred when comes to integration of various steps, such as parent organization and curriculum planning, changing characteristics of information management to knowledge management. Plus pressure of outside societal, technical global changes which includes the convergence of mass media, changes in education and learning, changes in methods of instructional delivery, the myth of certificate and degree, and LIS for tools or philosophy.

1. Parent organization and curriculum planning

In Korea, the Colleges that LIS Departments belong to shown as Table 4, that 16 out of 32 departments (50%) are under College of Social Sciences; 8/32 25% under College of Humanities, (3 are under College of Social Sciences & Humanities); 6 (9%) are under College of Liberal Arts; 1 (3%) is under College of Education, and 1(3%) is under College of Computer & Information Sciences. With total 27 (84%) are under either under Social Sciences, Humanities, or Liberal Arts.

Table 4. Korea LIS Department Parent Institute n=32

Parent Institute	Number of Departments	Percentage
College of Social Sciences	16	50%
College of Humanities	8	25%
(College of Social Sciences & Humanities)	(3)	(9%)
College of Liberal Arts	6	19%
College of Education.	1	3%
College of Computer & Information Sciences	1	3%

The case of Taiwan shown in Table 5 that among 11 LIS institutes, 7 out of 11 (64%) are under college of liberal arts, 1 (9%) is under College of Education, 1 (9%) is under College of Journalism and Communication, 1 (9%) is under Continuing Education Program, and 1 (9%) is under charge of university library (Lin, 2004).

Table 5. Taiwan LIS Department Parent Institute n=11

Parent Institute	Number of Departments	Percentage
College of Liberal Arts	7	64%
College of Education	1	9%
College of Journalism and Communication	1	9%
Continuing Education Program	1	9%
University Library	1	9%

Most LIS Departments belonging to social sciences, humanities, liberal arts schools, few are under school of education, school of computer and information science, and school of journalism and communication. The data indicate that 1) Sources of students are mostly favor of Liberal Arts, they are better in literature instead of mathematics or physics. 2) The contents of curriculum tend to be more Liberal Arts oriented, so as the required credit courses. However, with similar situation, most schools have changed names to library and information sciences, instead of library science. The development of information science has gradually increased the number, and presumably, the curriculum will be altered to more computer-oriented accordingly. Would foundation of students' learning base be shift smoothly from liberal arts to more logical and reason-based curriculum become a challenge for departments and so as to the faculty members.

Through three major stages of development, as case of Taiwan: 1) 1954-1979 of initiating stage, 2) 1980-1990 growing stage, and 3) 1991-2007 of renovation and updating. The overall development in this area is now more systematic and ready for further promotion (Wang, 2005). While from the title of each department in Asia, such as "Department of Library, Archives Information Studies", "Division of Knowledge and Information Science", "Major in Library and Information Science", "Major in Archives and Record Management" shows that Different names indicate different emphasis that LIS is becoming multiple and diversified. Essential parts of information services, such as the studies of archival management, records management are not strongly connected with LIS Education institutions.

The LIS Education institutes grant different degree levels, such as BA MA and Doctoral programs in this area. It will gradually, move to master's programs which will take place the undergraduate programs. To provide more qualified teaching faculty, doctoral programs need to be increased. Japan and Korea both promoted their degree levels more on doctoral programs, only Taiwan has difficulties to develop doctoral programs. A couple of LIS institutes submitted Doctoral Program proposals but were declined, owing to local competition among LIS schools.

2. Information Management v.s. Knowledge Management

The LIS professionals now are knowledge workers and prioritize knowledge management instead of information management shown as Table 6. Knowledge management focus on knowledge renewal and creation, it is more action oriented, people and customer centered,

knowledge management emphasis on utilization and sharing, and it adds value to the knowledge resource (Li, 2003).

Table 6. Differences between Information Management and Knowledge Management

Information Management	Knowledge Management
Focus on information organization	Focus on knowledge renewal and creation
Prefer static objects	Action oriented
Document and information centered	People and customer centered
Emphasis on processing and preserving	Emphasis on utilization and sharing
External orderliness	Add value to knowledge resource

Galagan indicated that the float for knowledge management including eight steps of 1) creation of knowledge, 2) knowledge collected from outside of organization, 3) presenting knowledge via documents, databases, and software, 4) utilizing knowledge in production or service performance, 5) share all knowledge within the organization, 6) utilizing all possible knowledge before decision making, 7) developing, organizational culture and positive attitude to promote knowledge growth. 8) assessment the value of knowledge as intellectual property and effectiveness of knowledge management (Galagan, 1977). It is understandable that the shifting of information management to knowledge management is a great challenge for LIS professionals and so as the LIS Education.

3. The convergence of mass media

The All-In-One concepts resulted from the convergence of mass media allowing accessing information via Internet and multi-media. The mass media has great impact on the society, the policy for the good of the public common relies on the policy of public services, ethical manner, ownership, monitoring and competition. The information consumers – the reader, the user, and the audience of information via mass media are all related. There are many issues had raised due to existing anti-societal activities, advertisement via mass media, so as the advancement of information technologies. LIS professionals facing challenges of acquiring knowledge of communication both theory and practices which most LIS Education institute do not provide (Tsai & Zhang, 2005).

4. Changes in education and learning

The integration of knowledge/skill for the current society resulted the new curricula and new majors of cross-disciplinary studies. The new emphasis on learning over teaching due to the changing of student demographics and more continuing education programs are needed to update the knowledge. It becomes more diversified on campus by age, by occupation, by race or nationality. Due to constrained funding sources, school authorities demand for productivity and accountability. Wired campus requires growing investment in technology, so as requirement of computer literacy among teachers and students. The formation of new patterns of scholarly communication is necessary due to keen competition and globalization. The schools need to provide distance education and lifelong learning due to the shortened information cycle at the current age. Most of all, the renewed emphasis on global awareness and international education force the LIS Education become more involved in international activities that causes the challenge for more language competencies and outreach.

5. Changes in methods of instructional delivery

Changes in education and learning also bring new style of teaching, shown as Table 7 that tells the difference between old teaching style and modern teaching style. LIS professionals have been challenged by the new methods of instructional delivery (Li, 2003).

Table 7. Differences between old and modern teaching style

Old teaching style	Modern teaching style
Full time	Part-time
On campus	Off campus
Continuous	Discontinuous
Sequential	Non-sequential
Incremental	Non-cumulative
Classroom	Individual
One-way	Interactive
Synchronous	Asynchronous
Provision-centered	On-demand

6. The myth of certificate and degree

Many libraries employed part-time staff who need not to have LIS education, but a certificate of assorted training programs. The job market becomes complicated and confused due to the misuse of certificate and LIS degree. It is very common in Taiwan that with LIS degree (BA or MA) does not mean the certificate for library employment. The civil examination is the key to the door of library job. This resulted the depression of LIS majors so as the educators. Training programs usually provide skills over tools of using information technology while education imparts philosophy of information services, professional ethics and networks of the expertise. The inter-use of the two will perfect the LIS Education, however the priority switched in some cases.

The misunderstanding of tools training verses theoretical education become the crisis of LIS Education. This is especially true in Asian countries, such as Korea, Japan and Taiwan where economy rapidly growing due to booming of electronic devices and computer hardware industries. Information is considered equals to computer in some senses. And the Information Technology (Computer Science) oriented v.s. traditional LIS curriculum, even the sponsorship of corporations R&D programs patronage the program. The job market of LIS Education encountered problems when the traditional and modern style of teaching co-existing on the campus (Lin, 2006).

IV. Discussion

Hwa-Wei Li stated the essentials of LIS professional including 1) Knowledge of resource management, such as news, resources, connections, 2) Knowledge of human resources management, 3) Knowledge of resources sharing and networking, 4) Knowledge of information technology development, and 5) Knowledge of user services (Li, 2003). James G. Neal invented the phrase "feral professionals" to describe individuals who work in jobs that don't require them to have a background in library education, but bringing a set of values, outlooks, styles, and expectations such as "systems", "human resources", "fund-raising", "publishing", "facilities management" (Neal, 2006). Also, about 30 years ago, Kauffman's "Teaching the Future" claimed a total contents of curriculum which stated 6 skills of adopting future life, 1) Access to information, 2) Thinking clearly, 3)

Communicating effectively, 4) Understanding man's environment, 5) Understanding man and society, 6) Personal Competence (Kauffman, 1976). Information literacy and communication skills, knowing what role to play are major subjects to learn and practice for LIS students in long term of viewpoints.

If LIS Education curriculum development starts from library skill to Information Communication Technology (ICT) skills, and the organization of information and knowledge advance to knowledge integration and application, so as the library service and management. Individual learning objectives may include "Information and communication technology", "Copyright", "Media", "Publishing", "Communication", "Information literacy", "Records management", "Digital library" plus "systems", "human resources", "fund-raising", "publishing", "facilities management" make a competent librarian and information service professionals?

A case of Wayne State University in USA announced as follow:

"The 15 graduate credit curriculum leads to a graduate certificate in information management for librarians". Students working concurrently on the master's of library and information science degree may also earn the *certificate in information management* for librarians, but are required to complete an additional six credits beyond the 36 required for the MLIS degree."

And if such a model can be applied in Asian countries?

V. Conclusion

William Sullivan stated the three apprenticeships of a profession: intellectual, practical, and ethical in the professional gathering of Association of Library and Information Science Education, ALISE. The first apprenticeship is intellectual, focused on the knowledge base of the field, and characterized by reasoning, argument, and research. The second is practical, the body of skills needed to be a competent practitioner. The third is ethical, including the skills, traits, responsibilities that characterize a professional (Sullivan, 2007).

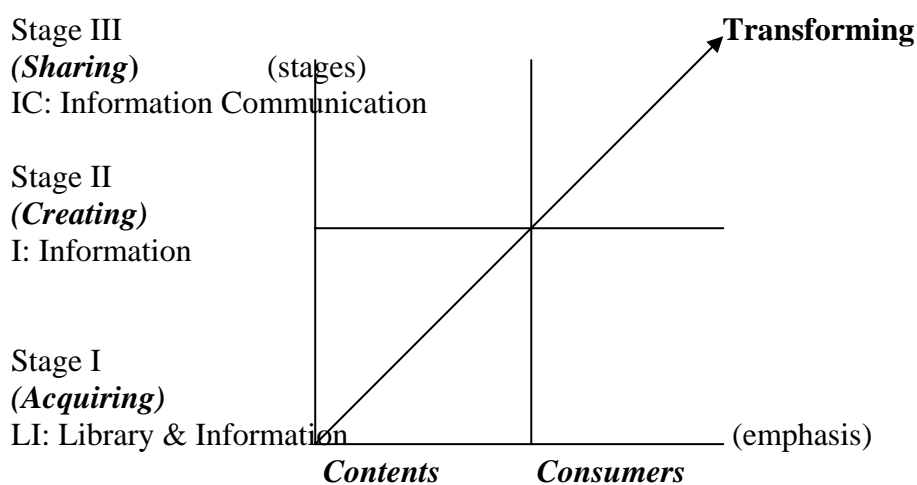
As Dr. Abdullahi mentioned that information professionals of the future still need to promote human relations effectively via information provision to diverse needs with understanding of people and cultures that co-existing in the world (Abdullahi, 2005).

While employers request their employees be equipped with vision of eagle, i.e. be creativity, being change agents, and flexibility; Be adoptive as lamb i.e. with skills of collaboration, communication skills, political skills of negotiation; And with a heart of lion, i.e. leadership skills, decision making, problem solving; risk takers. In addition, become a technology savvy, be the one with passion, commitment, social standing of the values of librarianship.

In the book *The Science of Success* by Charles G. Koch indicates that the five dimensions of success are: 1) Vision – determining where and how the organization can create the greatest long-term value. 2) Virtual and Talents – Helping ensure that people with the right values, skills and capabilities are hired, retained and developed. 3) Knowledge Processes, - Creating, acquiring, sharing and applying relevant knowledge, and measuring and tracking profitability. 4) Decision Rights – Ensuring the right people are in the right

roles with the right authority to make decisions and holding them accountable, and 5) Incentives.- Rewarding people according to the value they create for the organization (Koch, 2007). Each of the five dimensions is of equal importance, therefore, Knowledge Processes - Creating, acquiring, sharing and applying relevant knowledge, and measuring and tracking profitability is of essential element of success that LIS Education is aiming for transforming services, transforming library, transforming libraries' future with technology, transforming staff, transforming library space, and transforming community and so on shown on Table 8. LIS educators and practitioners should be placing emphasis either on contents (raw materials, data) or consumers (readers, users, and/or audience) or both, according to resources one may acquire and handle. Then, ultimate each stage and be ready for step forward to next stage.

Table 8. Stages and Emphasis of LIS Educators and Practitioners



Stage I. : Acquiring, collecting *forms* of library and information services

Stage II. : Creating and *formatting* forms via information technologies of information services

Stage III. : Sharing and *informing* Consumers of information and communication services

It is obvious that no one institute can accomplish the goal, or aim, of success by its own. The cooperation of LIS institutes is essential and necessary. In addition to Lin and Wang's suggestions in their paper of "*Regional LIS Education Cooperation in ASIA, A Continuing Effort*" (Lin & Wang, 2006). The concrete suggestions of this paper including: 1) Expanding studies of LIS Education Institutes of the region regarding curriculum planning, 2) Conducting and continuous professional meetings to exchange ideas and establish consensus among LIS Educators and practitioners, such as A-LIEP, CALISE Cross-Straight Conferences, 3) Connecting divisions of the region offices of the professional organizations, such as American Library Association (ALA), International Federation of Library Associations and Institutes (IFLA) and be involved in collaboration, policy/standards decision making. Colleagues of current LIS schools from different countries, especially East Asia region, are responsible to input their expertise to cumulate concrete ideas to benefit related or potential parties in the future.

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