

A Study on the Library & Information Science Education and Research Development in Korea

한국 문헌정보학 교육 및 연구의 발전 동향에 대한 연구

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ABSTRACT

This study examines the history and issues of the LIS field in Korea in order to identify problems of the current librarian education & research areas and provide a new direction for development in this field. As the result of the research, the issues in the department of LIS are found as follows : 1) the LIS departments are restructuring their curriculums 2) the departments are strengthening IT education 3) the foundation for producing professional librarians with area expertise is established by double major programs 4) most popular research areas are library management, organization of information, information sciences etc. 5) the research areas have been diversified as well including information search, record management and publishing.

초 록

본 논문은 우리나라에서 문헌정보학 교육과 연구 분야에서의 활동과 실적을 조사 및 정리해 보고, 이 분야 발전을 위하여 앞으로의 방향을 모색해보는데 연구 의의가 있다. 연구결과 문헌정보학 분야에서의 주요 이슈는 다음과 같이 나타났다. 1) 국내 문헌정보학과들은 교과과정을 꾸준히 재구성 중에 있다 2) IT 교육을 강화해나가고 있다 3) (주제) 전문직 사서를 배출하기 위하여 학부과정에서 복수전공 과정을 도입하고 있다 4) 연구영역에서 활발한 분야는 도서관경영, 정보조직, 정보학 등으로 나타났다 5) 최근 들어 연구 분야가 다양화되고 있는데 정보검색, 기록관리, 출판 분야로 영역이 확장되고 있다.

Keywords : LIS education, LIS research, LIS curriculum, LIS program, Korea
문헌정보학 교육, 문헌정보학 연구, 문헌정보학 교과과정, 한국

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1. Introduction

With the rapidly changing information environment, the field of library and information science (LIS) throughout the world has been trying to find new directions of research to identify characteristics of specialized programs or curriculums to support the 21st century librarianship. As the field of library and information science in Korea celebrates its 50th anniversary in 2007, it tries to expand its boundaries to global library networks, for example, by hosting the 72nd annual IFLA (International Federation of Library Association) conference in summer 2006. At this new juncture, it is crucial to assess the research directions and educational programs in the field.

Now is the time for the Korean LIS field to move from a system dependent on foreign countries, especially the US, to an independent system. This requires active discussions on overall characteristics of the field and research areas between academia and practice. This study thoroughly examines the history of the LIS field in Korea in order to identify problems of the current librarian education, explore critical issues of the directions and characteristics of the field and provide a new direction for curriculum development in the era of digital library.

2. The Historical Background of LIS Education in Korea

The modern Korea established its first library, Reading Club in Pusan in 1901, followed by Hankuk Library in Seoul and Taedong Library in Pyongyang in 1906. During the Japanese occupation period between 1910 and August 1945, library practice education was carried out in the form of short courses by the Association for Chosun Libraries (established in 1939, consisting of 15 libraries) with Chosun Governing Body Library at its center. With the emancipation in August 1945, Chosun National Library School was established under the National Headquarters Library and started offering a one-year education program. This school was closed in 1950 due to the Korean War(1950~1953). In 1955, the Korean Library Association (KLA) was reorganized and started offering 50-hour library practice education programs which centered on cataloging and classifications.

In 1957 Yonsei University opened the door for library science education, which would be the first formal college level library education in Korea. Since then, for nearly 50 years, the LIS education in Korea has continued to develop various programs at different levels. The most significant development in library education occurred between the late 1970s and 1980s when many universities and two-year technical colleges started library science programs at the undergraduate level. As of June 2006, there are 32 four-year universities and 6 two-year technical

〈Table 1〉 Korean LIS education programs by regions

| | university name | LIS education in : |
|----------------------------|--|---|
| Seoul · Kyonggi (18) | Chung-Ang University | College of liberal arts |
| | Daejin University | College of humanities |
| | Daelim College* | Division of humanities and social science |
| | Dongduk Women's University | College of social science |
| | Duksung Women's University | College of social science |
| | Ewha Womans University | College of social science |
| | Hansung University | College of humanities |
| | Incheon City College* | School of humanities and social studies |
| | Kangnam University | College of social science |
| | Kyonggi University | College of Humanities |
| | Myongji University | College of Humanities |
| | Sangmyung University | College of Humanities and Social Science |
| | Seoul Women's University | College of social science |
| | Sookmyung Women's University | College of liberal arts |
| | Soongeui Women's College* | Division of social practice |
| Sungkyunkwan University | College of liberal arts | |
| Tongwon College* | Division of social practice | |
| Yonsei University | College of liberal arts | |
| Chungchung (6) | Cheongju University | College of humanities |
| | Chungnam National University | College of social science |
| | Hannam University | College of liberal arts |
| | Joongbu University | College of social science |
| | Kongju University | College of education |
| | Konkuk University | College of humanities science |
| Youngnam (10) | Catholic University of Daegu | College of social science |
| | Changwon College* | Division of social practice |
| | Daegu University | College of social science |
| | Dong-eui University | College of humanities |
| | Keimyung University | College of social science |
| | Kyungpook National University | College of social science |
| | Kyungsung University | College of liberal arts |
| | Pusan National University | College of social science |
| | Pusan Women's College* | Division of child education |
| Silla University | College of humanities and social science | |
| Honam (4) | Chonnam National University | College of social science |
| | Chonbuk National University | College of humanities science |
| | Gwangju University | College of humanities Social Science |
| | Jeonju University | College of social science |

* 2-year college

colleges in Korea with departments or divisions specializing in LIS. Yonsei

University began a library science master's program (LIS education) in the graduate

school in 1957 and a librarianship education program (specialty graduate program) in the graduate school of education in 1971. After the conception of LIS Ph.D. programs at Sungkyunkwan University in 1971, 23 master's programs, 10 Ph.D. programs and 16 specialty graduate programs had been developed in Korea by August 2003 (Sohn 2003). <Table 1> shows where the LIS program is placed in undergraduate universities/colleges by regions. There are 38 undergraduate LIS programs in Korea, mostly under the college of liberal arts, humanities or social science. Buckland (1996) pointed out that "a liberal arts education is focused on the subject matter itself, in contrast to professional or technical education which focussed on acquiring useful skills." He suggested that a liberal arts conception of LIS could have some significant intellectual and political advantages of LIS schools in research universities. However advancing the liberal arts conception of LIS would be one of the conscious strategic objectives of the school.

2.1 Undergraduate LIS Curriculum in Three Sample Universities

This section discusses the LIS curriculum in three sample universities, i.e., Yonsei University, Sungkyunkwan University, and Kyungpook National University, in the order of the year the LIS program was established.

Yonsei University (Est. Dec. 1956)

The LIS undergraduate program at Yonsei University requires a total of 48 credit hours including basic, major search, and advanced courses. When a student wants to acquire a double major degree, he/she needs to take a total of 36 credit hours of LIS education. The following is the list of "basic," "major search," and "advanced" courses at Yonsei University LIS undergraduate program.

Basic courses

- Introduction to Library and Information Science
- Information Technology

Major search courses

- Publishing and Bookselling
- Introduction to Bibliography
- Users of Library and Information
- New Information Media
- Collection Development
- Basics of Information Networks
- Web Interface Design

Advanced courses

- Management of Libraries and Information Centers
- Information Resources in Science and Technology
- Organization of Nonbook Materials
- Management of Special Libraries
- Materials and Services for Youth
- Information Standards
- Materials and Services for Children
- Information Services

- Indexing and Thesaurus
- Information Resources in Social Science
- Knowledge Structure
- Database System
- Statistics in Library and Information Science
- Management of Academic Libraries
- Materials and Services for Adults
- Organization of Information : Cataloging
- Information Resources in Humanities
- Management of Community Information Centers
- Special Problems in Library and Information Services
- Special Problems in Organization of Information
- Government Information Resources
- Thesis
- Management of School Library Media Centers
- Organization of Information : Classification
- Practice on Internet Service
- Information Retrieval
- Special Problems in Computing
- Information Systems
- Management of Public Libraries
- Online Information Retrieval Practicum

Sungkyunkwan University (Est. 1964)

The LIS undergraduate program at Sungkyunkwan University requires a total of 57 credit hours for an LIS bachelor's degree, including 27 credit hours in "basic" courses and 30 credit hours in "advanced"

courses. When a student wants to acquire a double major degree, he/she only needs to take a total of 39 credit hours of LIS education including 18 credit hours in "basic" courses and 21 credit hours in "advanced" courses. The following is the list of "basics" and "advanced" courses at Sungkyunkwan University LIS undergraduate program.

Basic courses

- Introduction to Library and Information Science
- Introduction to Bibliography
- Library and Information Center Management
- Organization of Information I
- Organization of Information II
- Introduction to Information Science
- Information Retrieval
- Information Behavior
- Information Education
- Scientific Information Network
- Designing Database Systems
- Internet Programming
- Classical Materials Organization I

Advanced courses

- Special Library and Information Center Management
- Public Library Management
- University Library Management
- School Library Media Center Management
- History of Books and Libraries
- Guide of Readings
- Information Analysis and Evaluation
- Information Society

- Information Marketing
- Information Users
- Subject Information Resources
- Reference and Information Service
- Publishing and Copyright
- Collection Development
- Practicum in Information Organization
- Organization of Nonbook Materials
- Classical Materials Organization
- Understanding Classical Materials II
- Chinese bibliography
- Korean Bibliography
- Collection Management
- Preservation of Resources
- Indexing/Abstracting
- New Media
- Database Development
- Building Web-Based Database Systems
- Building Internet Services
- Building Digital Libraries
- Digital Library
- Systems Analysis

Kyungpook National University (Est. 1973)

The LIS undergraduate program at Kyungpook National University requires a total of 48 credit hours of LIS courses to acquire a undergraduate bachelor's degree. Difference from Yonsei or Sungkyunkwan University, Kyungpook National University LIS program is the requirement for students to take courses according to the guided course structure. The following is the list of the course structure divided into grade levels.

Freshman courses

- Introduction to Library and Information Science

Sophomore courses

- History of Publishing and Libraries
- Classification Systems
- Library Management
- Information Systems
- Library and Internet Skills
- Classical Materials Organization
- Organization of Information Resources
- Public Library Management
- Digital Library
- Understanding Korean Bibliography
- Multi-media Study
- Collection Development

Junior courses

- Media Center Management
- Organization of Information Practicum
- Indexing and Abstracting
- Information Services
- Organization of Archives
- Database Use
- Organization of Periodicals
- Reading Guidance
- Academic and Special Library Management
- Searching Information and Knowledge
- Subject Information Resources
- Archives Management

Senior courses

- Organization of Nonbook Materials
- User Interface
- Building Digital Contents
- Online Retrieval

2.1.1 Management and Direction of LIS Undergraduate Programs

The undergraduate students with library and information science (LIS) major are given a certificate of the second rank librarianship upon the graduation with 36-credit courses fulfilled. Those with LIS minor get a certificate of assistant librarianship once 21-credit courses are fulfilled in the LIS field. Those who complete education courses and at least 3-credit course in LIS receive a certificate of junior high school teacher librarianship. Different from the 1990s, the job market since 2000 has been quite saturated. Since students from different disciplines can apply for jobs such as information journalist in the media, information specialist in research firms, DB and information network system designer and analyst, information technology specialist in software development and new media application, etc. in addition to professional librarian in public, university and other special libraries and information centers, the reality is rather harsh for LIS graduating students to get jobs (Park 2000).

Therefore, in order to overcome this difficulty, it is necessary to educate and train LIS students with diverse and enriched courses so that they can be attractive in the competitive job market. However, the limited course offerings and credit hour requirements in the current program system make it difficult to reflect various needs in practices. Moreover, the diversified program offerings often cause the debate as to the identity of the library

and information science field. The following presents the debate issues on curriculum revision based on social environment changes by examining previous research.

In the U.S., the undergraduate programs in the LIS field has not been popular for many years. However, after the Florida State University undergraduate program has grown dramatically from 91 students in its start year of 1996 to approximately 600 in 2002 (McInerney et al. 2002), there has been growing interests of training undergraduates in the LIS field for information and technology positions.

2.1.2 Training Information Specialists in LIS Education

The recent library environment is changing in a complicated and diverse fashion with fragmented and specific needs of information users, diversified information media, and enlarged service boundaries by the advent of virtual space through the Internet. Thus in order to enhance the library services, it is inevitable to overcome the physical library space and raise and nurture professional librarians who can provide effective and systematic information in work places. Especially librarians need to acquire capabilities on area expertise so that they can understand diverse contents and directions of rapidly changing sciences and key research materials and information, reflect the needs and demands of information users precisely in their work, and provide information and services effectively and efficiently (Nam & Heo,

2005).

Since the late 1990s, domestic universities has been actively recommending LIS students to have double majors as the Ministry of Education started operating independent college systems. Although there are some differences in ratios of double majors, students in a majority of universities with independent college systems are majoring in more than one subject area. For example, those LIS students who also major in other areas such as language, biology and law can become professional librarians with area expertise in respective disciplines. As such, some universities are offering bibliography courses in such areas as science technology information resources, social science information resources and liberal arts information resources, and courses for archives preservation librarians and system librarians.

2.1.3 Introduction of Archives Preservation Study

Universities are offering courses related to archives preservation in order to improve job opportunities for graduating students in accordance with a new archives preservation policy by the government. In the past, since there was no provision of the relevant law for the systematic collection, preservation and public usage of the nation's documents except for administrative work regulations, many important documents of public institutions were often destroyed and discarded. As the Law of the Public Institutions' Document

Management was enacted and proclaimed in 1999 and became effective in 2000, a formal system of managing the nation's documents was institutionalized and systematic education of experts was carried out.

2.2 Course Offerings of Major Master's Programs

As social changes partly due to the astonishing advances in science and information technology influence libraries and their users, the changing LIS field has experienced a shared feeling of both hopes and concerns about librarians, information specialists and LIS educators. Not even several years ago, library education and research in the LIS field was confined to library history, basic library services, library organization structure, cataloging, and so on. Now, however, the library has become a key information center in the society which emphasizes the production, organization and provision of information and knowledge in the dynamic and complex society. Accordingly, the field of LIS has been not only recognizing the advances in basic information structure and needs of stakeholder groups, but also continuously revising and enhancing its education programs and research boundaries that better reflect changes in surrounding library environments.

Budd (1999) suggests in his paper that the LIS curriculum needs to establish a curricular framework which includes both technical set of competencies and

educational set of components that would be aimed at critical examination of the needs of future professionals. Another trend of LIS graduate programs has been merging of LIS schools into larger units. Koenig and Hildreth (2002) pointed out that "by the end of 2001, 17 of the 56 American Library association (ALA) accredited LIS programs experienced a similar fate." This increasing trend of mergers in LIS programs indicates not only the thriving of the LIS program but also the needs for diverse programs.

As fore-mentioned, there are 22 universities with LIS master's programs and 13 with Ph.D. programs in Korea. In addition, about 15 universities are offering librarian education major programs for continuing librarian education and teacher librarian nurturing under a special master's program along with undergraduate programs. About four universities have information science master's programs. 11 universities offer document management master's programs, although there are no undergraduate programs currently. The following summarizes the courses offered by three major universities.

Yonsei University (Graduate Program)

Master's/Ph.D. Program

- Research Methods in Library and Information Science
- Studies in Management of Libraries and Information Centers
- Measurement and Evaluation of Library and Information Services

- Information Policy
- International Library & Information Services
- Library Building & Equipment
- Management of Serials
- Record Management
- Record Management System
- Measurement & Evaluation of Library and Information Services
- Studies in Information Services
- Studies in Communication
- Studies in Information User
- Advanced Subject Bibliography
- User Education
- Reading Guidance
- User Interface Design
- Individual Study : 1, 2, 3
- Comparative Classification
- Theory of Cataloging
- Bibliographic Control
- Thesaurus Construction
- Metadata
- Information Theory
- Library & Information Networks
- Information Engineering
- Multimedia Systems in Libraries and Information Centers
- Management of Automated Systems in Libraries
- Digital Libraries
- Studies in Management Techniques of Libraries and Information Centers
- Seminar in Management of Academic Libraries (or Special Libraries or Public Libraries)
- Education for Library and Information Science
- Comparative Library and Information

- Services
- Current Trends and Issues in Information Profession
- Conservation and Preservation
- Seminar in Information Services in the Humanities (or Social Science, or Science & Technology)
- Communication Theory
- Preservation of Archival Materials
- History of the Library Catalogs and Cataloging
- Special Classification
- Seminar in Cataloging
- Intelligent Information Retrieval
- Seminar in Abstracting and Indexing
- Informatics
- Seminar in Information Retrieval Theory
- Information System Design
- Seminar in Information Engineering
- Telecommunication and Computer Networks in Libraries
- Directed Research

Sungkyunkwan University (Graduate Program)

Master's Program

- Seminar in Archiving
- History of Cataloging
- History of Classification
- Seminar in Collection Building
- Advanced Management of College and University Library
- Seminar in Management of Libraries
- Seminar in Reference and Information Services
- Advanced Information Networking

- Advanced Information Media
- Information Sociology
- Seminar in Information Policies
- Seminar in Information Behavior
- Knowledge Organization
- Seminar on Building and Managing Internet Services
- Information Engineering
- Seminar in Computer Graphic
- Chinese Systematic Bibliography
- Korean Systematic Bibliography
- Seminar in Physical Bibliography of Korean Materials

Master's/Ph.D. Program

- Seminar in Standard of Information and Documentation
- Advanced Research Methodologies of Library and Information Science
- Seminar on Library Instruction
- Advanced Information Retrieval
- Advanced Analysis of Information Society
- Seminar in Information Market
- Information Resource Management
- Advanced Information Education
- Seminar on Designing Database Systems
- Seminar in Database
- Advanced Web Based System
- Seminar on Designing Web-Based Database Systems
- Seminar on Interface Design
- Advanced Knowledge Management System
- Seminar on Statistical Analysis and Interpretation
- Abstracting and Indexing of Classic

Materials

- Styles of Penmanship in Classic Materials
- Seminar in Paleography
- Advanced Cataloging in Classic Materials
- Epigraphy
- Seminar in Manuscript
- Seminar in Bibliography
- Seminar in History of Book Trade

Ph.D. Program

- Library Sociology
- Digital Archiving
- Book Conservation
- Comparative Classification
- Advanced Collection Building
- Seminar in Management of Public Library
- Seminar on Management Techniques of Libraries and Information Centers
- Seminar in Library Policies
- Seminar in Library Evaluation
- Studies of Information User
- Seminar in Information Retrieval
- Teaching Methods in Library and Information Science
- Seminar in Information Culture
- Information Systems Analysis
- Advanced Information Systems
- Seminar in Communication
- Advanced Abstracting and Indexing
- Seminar on Data Modeling
- Seminar in Internet Management
- Seminar in Connoisseurship of Old Books
- Seminar in Emendation
- Seminar in Physical Bibliography of

Chinese Materials

Kyungpook National University (Graduate Program)

Master's Program

- Advanced Classification
- Advanced Cataloging
- Organizing Special Materials
- Advanced Continuing Resources Management
- Library Building
- Seminar in Management of National & Public Libraries
- Seminar in Management of University & Specialized Libraries
- Research Methods of Library & Information Science
- Information Engineering
- Seminar in Information Science
- Seminar in Information Retrieval
- Seminar in Database Construction
- Advanced Collection Development
- Advanced Information Services
- Advanced User Interface
- Comparative Library and Information Science
- Organization of Old Books & Archives
- Studies on Old Korea Bibliography
- Seminar in Old Oriental Bibliography
- History of Libraries and Archives
- Thesis : Library and Information Science

Ph.D. Program

- Studies on Comparative Classification
- Studies on Comparative Cataloging

- Studies on Automatic Cataloging
- Advanced Electronic Resources Management
- Planning of Libraries and Information Centers
- Seminar in Laws Related to Libraries
- Evaluation of Library and Information Center Management
- Seminar in Strategic Marketing for Libraries
- Seminar in Library System Analysis
- Seminar in Library and Information Networking
- Seminar in Multimedia
- Seminar in Digital Library
- Intelligent Information Retrieval
- Seminar in Information Behavior
- Seminar in Information Policy
- Advanced Information Literacy Instruction
- Seminar in Internet Resources
- Seminar in Epigraphy
- Seminar in Paleography
- Seminar in Physical Bibliography of Korea Materials
- Seminar in Systematic Bibliography of Oriental Materials
- Dissertation : Library and Information Science

3. LIS Research Trends by Subject Area : Theses and Dissertations

The current research trends of master's theses and Ph.D. dissertations in domestic

universities in terms of subject area and time period are as follows. <Table 2> summarizes the analysis results of 169 Ph.D. dissertations and 1,695 master's theses, grouped into 8 subject areas with 75 main themes and 124 detailed themes, during the period of 1959–2002. In terms of publications by time period, on average 38.5 manuscripts were published a year. There has been an increasing trend of publications over the last five years (1998–2002), for example, 131 in 2002, 120 in 2001 and 116 in 2000, as shown in <Table 3> (Sohn, 2003, 26–27).

With respect to subject areas during the period of 1959–2002, most publications are found in the area of library management (29%), followed by information science (23%), user services (15.8%), organization of information (11.2%), bibliography (10.7%), collection development (6.2%), and so on <see Table 1>. This trend is different from that of journal publications in Oh (2005) which follows an order of information science, organization of materials, foundation of library and information science, library management, library systems, reference services and documentation management, as shown in the next section.

Over the last five years (1998–2002), most publications are shown in the area of library management, information science and organization of materials, along with the detailed themes listed in Appendix A and B. A similar trend is also found in another study in the area of information science, where popular topics are

〈Table 2〉 LIS Research in 1959–2002 by Subject Area :
Master's Theses and Ph.D. Dissertations

| Area \ Period | 59~64 | 65~69 | 70~74 | 75~79 | 80~84 | 85~89 | 90~94 | 95~99 | 00~02 | Total(%) |
|-------------------------------------|----------|----------|----------|-----------|-----------|------------|------------|------------|------------|---------------|
| Foundations of LIS | | | 1 | | 4 | 3 | 6 | 11 | 4 | 29(1.7) |
| Library Management | 3 | 1 | 14 | 26 | 37 | 56 | 120 | 134 | 100 | 491(29.0) |
| Organization of Materials | 4 | | 2 | 6 | 16 | 18 | 39 | 60 | 45 | 190(11.2) |
| Collection Development (Management) | | | 2 | 4 | 11 | 10 | 19 | 31 | 28 | 105(6.2) |
| User Services | 1 | 3 | 11 | 18 | 20 | 25 | 40 | 74 | 76 | 298(15.8) |
| Bibliography | 3 | 3 | 9 | 30 | 24 | 17 | 35 | 41 | 20 | 182(10.7) |
| History of Records and Libraries | 3 | 3 | 2 | 7 | 7 | 4 | 4 | 8 | 3 | 41(2.4) |
| Information Science | | | 6 | 14 | 35 | 47 | 76 | 120 | 91 | 389(23.0) |
| Total (%) | 14 (0.8) | 10 (0.6) | 47 (2.8) | 105 (6.2) | 154 (9.1) | 180 (10.6) | 339 (20.0) | 479 (28.3) | 367 (21.6) | 1,695 (100.0) |
| Avg/yr | 2.3 | 2.0 | 9.4 | 21.0 | 30.8 | 36.0 | 67.8 | 95.8 | 122.3 | 38.5 |

(Source : Sohn 2003)

〈Table 3〉 LIS Research in 1998–2002 by Subject Area :
Master's Theses and Ph.D. Dissertations

| Area \ Year | Foundation of LIS | Lib Mgt | Org of Materials | Coll. Dev. (mgt) | User Services | Biblio. | Lib. History | Info. Science | Total |
|-------------|-------------------|------------|------------------|------------------|---------------|----------|--------------|---------------|-------------|
| 1998 | 2 | 23 | 19 | 9 | 15 | 12 | 1 | 27 | 108 |
| 1999 | 4 | 33 | 14 | 3 | 13 | 10 | 2 | 26 | 105 |
| 2000 | 1 | 26 | 10 | 14 | 22 | 9 | 1 | 33 | 116 |
| 2001 | 1 | 37 | 21 | 9 | 21 | 4 | 1 | 26 | 120 |
| 2002 | 2 | 37 | 14 | 5 | 33 | 7 | 1 | 32 | 131 |
| Total (%) | 10 (1.7) | 156 (26.9) | 78 (13.4) | 40 (6.9) | 104 (17.9) | 42 (7.2) | 6 (1.0) | 144 (24.8) | 580 (100.0) |

(Source : Sohn 2003)

information search, search system evaluation, web resources, and information handling areas including the Internet (Sohn 2003 ; Chung 2001).

4. LIS Research Trends by Subject Area : Journal Publications

The library and information science (LIS) field in Korea has been developed in various areas including academic training for both researchers and practitioners, building professional associations, publishing professional journals and educating and serving citizens to foster the

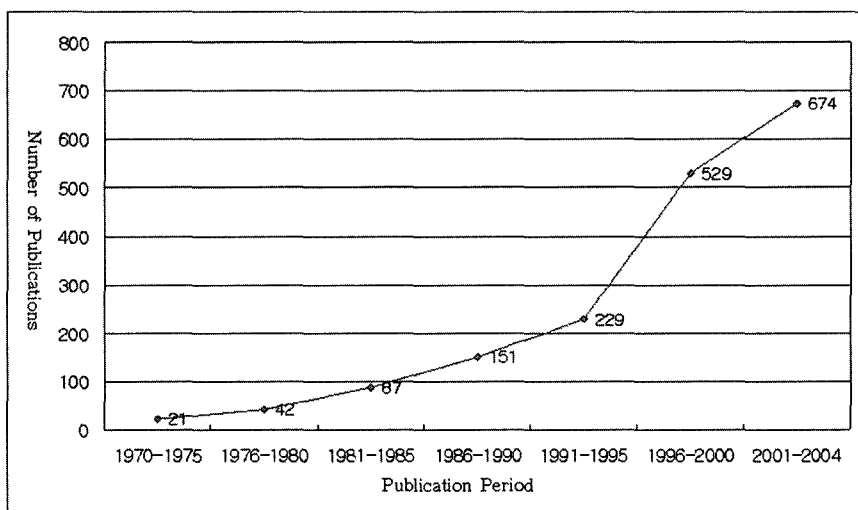
intellectual growth of the society. In Korea, the majority of professional journal articles has been published in six national level LIS journals published by professional associations.

Oh (2005) examined a total of 2,571 research articles published in these major LIS journals between 1946 and 2004 and analyzed them in nine subject areas as shown in <Table 4>. The analysis by subject areas in the order of frequency reveals that the articles were published in the areas of information science (24.9%), organization of materials (17.3%), foundation of library and information science (16.6%), library management (14.4%), library organization (12.8%), reference information services (11.2%), record management (1.1%),

<Table 4> LIS Research in 1946–2004 by Publication Period and Subject Area : Professional Journal Articles

| Subject \ Period | 1946 | 1951 | 1956 | 1961 | 1966 | 1971 | 1976 | 1981 | 1986 | 1991 | 1996 | 2001 | Total (#) | % |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|------|
| | 1950 | 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2004 | | |
| Foundation of LIS | 18 | 6 | 33 | 68 | 60 | 5 | 10 | 18 | 27 | 26 | 81 | 74 | 426 | 16.6 |
| Lib. Organization | 13 | 1 | 36 | 76 | 101 | 3 | 3 | 6 | 12 | 11 | 29 | 37 | 328 | 12.8 |
| Lib. Building & Facilities | - | - | 2 | 2 | 3 | - | - | 1 | - | - | - | 2 | 10 | 0.4 |
| Lib. Management | 3 | 4 | 12 | 31 | 66 | 4 | 6 | 9 | 20 | 33 | 80 | 113 | 381 | 14.8 |
| Reference | 11 | 1 | 21 | 12 | 38 | 2 | 8 | 12 | 12 | 28 | 53 | 90 | 288 | 11.2 |
| Org. of Materials | 3 | 2 | 44 | 52 | 83 | 2 | 9 | 12 | 20 | 41 | 77 | 101 | 446 | 17.3 |
| Info. Science | 1 | - | - | 3 | 17 | - | 6 | 28 | 59 | 89 | 199 | 237 | 639 | 24.9 |
| Publishing | 5 | - | - | 2 | 10 | 1 | - | 1 | 1 | - | 2 | 3 | 25 | 1.0 |
| Record Management | - | - | - | - | 2 | - | - | - | - | 1 | 8 | 17 | 28 | 1.1 |
| Total(#) | 54 | 14 | 148 | 246 | 380 | 17 | 42 | 87 | 151 | 229 | 529 | 674 | 2,571 | - |
| % | 2.1 | 0.5 | 5.8 | 9.6 | 14.8 | 0.7 | 1.6 | 3.4 | 5.9 | 8.9 | 20.6 | 26.2 | - | 100 |

(Source : Oh 2005)



〈Figure 1〉 Publication Trend by Time Period
(Source : Oh 2005, 384)

publishing (1.0%) and library building and facilities (0.4%). This discloses that 75.6% of article publications are in the areas of information science, organization of materials, foundation of library and information science, and library management. This research also indicates a rapidly increasing trend of the number of articles published as approaching to recent years, with 26.2% in 2001-2004. It also shows the publication productivity (55.7%) for the recent 14 years (1991-2004) exceeds that (44.3%) for the last 45 years (1946-1990). A similar trend can be found in the STM (Science, Technology and Medicine) areas overseas as well. (Meadows 1998). This increasing trend in the LIS research can be attributable to the increase of articles in the information science area and the establishment of the LIS departments in universities and the increase

in professors and research staff since the 1980s.

〈Figure 1〉 clearly shows the rapidly increasing trend of article publication productivity over time since the establishment of professional journals. This trend is particularly visible since 1995, due to an increased issuing frequency of professional journals from bi-annual to quarter, an increasing number of researchers, and an announcement of evaluation planning of journal publication productivity by universities.

In order to understand the relationship with the field of library and information science overseas, we analyzed the domestic journal articles which cited journal articles overseas. 〈Table 5〉 summarizes the number of overseas journal articles cited in domestic journal articles by subject area and cited time period (Oh, 2005). The articles cited

(Table 5) Subject Area and Cited Time Period

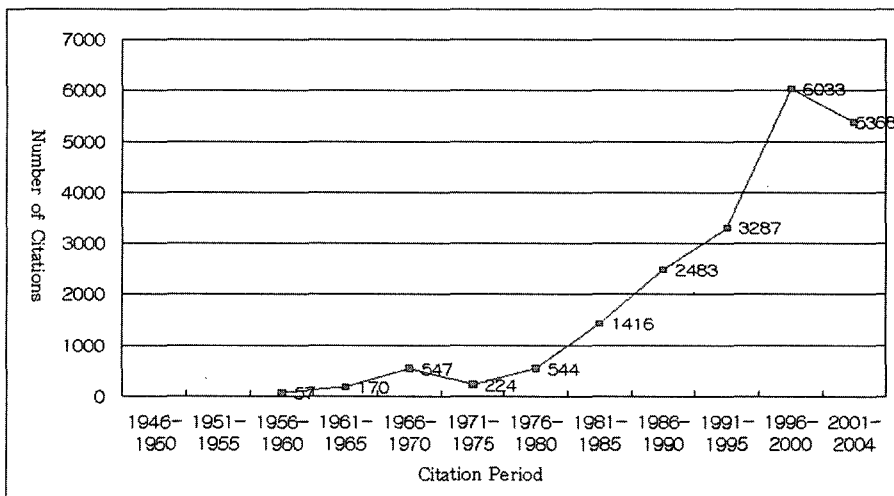
| Subject | Cited period | | | | | | | | | | | | Total | % |
|----------------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|-------|
| | 1946-1950 | 1951-1955 | 1956-1960 | 1961-1965 | 1966-1970 | 1971-1975 | 1976-1980 | 1981-1985 | 1986-1990 | 1991-1995 | 1996-2000 | 2001-2004 | | |
| Foundation of LIS | - | - | 9 | 33 | 100 | 50 | 135 | 233 | 420 | 397 | 677 | 698 | 2,752 | 13.7 |
| Lib. Organization | - | - | 3 | 18 | 66 | 23 | 66 | 68 | 176 | 200 | 353 | 270 | 1,243 | 6.2 |
| Lib. Building & Facilities | - | - | - | - | 1 | 3 | 5 | 11 | 8 | 14 | 9 | 29 | 80 | 0.4 |
| Lib. Mgt. | - | - | 11 | 33 | 87 | 44 | 80 | 178 | 294 | 426 | 933 | 902 | 2,988 | 14.8 |
| Reference | - | - | 6 | 9 | 39 | 25 | 79 | 152 | 197 | 294 | 696 | 735 | 2,232 | 11.1 |
| Org. of Materials | - | - | 23 | 58 | 182 | 29 | 86 | 241 | 399 | 563 | 1014 | 820 | 3,415 | 17.0 |
| Info. Science | - | - | 2 | 7 | 38 | 31 | 78 | 481 | 948 | 1341 | 2221 | 1627 | 6,774 | 33.7 |
| Bibliography | - | - | 3 | 8 | 19 | 15 | 5 | 35 | 12 | 30 | 9 | 28 | 164 | 0.8 |
| Publishing | - | - | - | 4 | 14 | 4 | 9 | 15 | 27 | 21 | 86 | 65 | 245 | 1.2 |
| Archive Mgt. | - | - | - | - | 1 | - | 1 | 2 | 2 | 1 | 35 | 194 | 236 | 1.2 |
| Total | - | - | 57 | 170 | 547 | 224 | 544 | 1,416 | 2,483 | 3,287 | 6,033 | 5,368 | 20,129 | - |
| % | - | - | 0.3 | 0.8 | 2.7 | 1.1 | 2.7 | 7.0 | 12.3 | 16.3 | 30.0 | 26.7 | - | 100.0 |

in the order of frequency are in the areas of information science (33.7%), organization of materials (17%), library management (14.8%), foundation of library and information science (13.8%), reference information services (11.1%), library organization (6.2%), publishing (1.2%), archives management (1.2%), and so on. Interestingly, this reveals that there is not much difference in terms of the percentage of subject areas studied between domestic articles published (Table 4) and overseas articles cited (Table 5).

With regards to citation period, those overseas articles cited in domestic journals

show an increasing trend of citation over time since the inauguration of the Korean Library and Information Science Journal (Library Journal) in 1970. Especially this trend is dramatically visible since 1991, thereby showing more reliance of domestic research on overseas articles. In contrast, there was no citation in 1946-1955, which is partly due to the lack of journal article quality, language difficulties or not being able to subscribe to and cite overseas journals in a turbulent period of the emancipation from Japan and the Korean War.

Also, it is interesting to note that



(Figure 2) Overseas Article Citation Trend by Time Period
(Source : Oh 2005, 390)

domestic researchers in the LIS field have cited 60.1% of overseas articles in the four areas of computer science (21.8%), business management (16.7%), education (11.5%) and social science (10.1%) among 40 subject areas except for LIS, although the subject areas of research are diverse.

5. Conclusion

The trends of curriculum development and research in the department of library and information science (LIS) at leading universities in Korea can be summarized as follows.

First, the LIS departments are restructuring their curriculums. Their research boundaries expand from narrow traditional library science to broad areas

including information science, publishing and record management.

Second, the departments are strengthening information technology education. The curriculums include many information technology and practices-related courses based on information environment changes and user needs.

Third, the foundation for producing professional librarians with area expertise is established by double major programs through the independent college systems.

Fourth, most popular areas of research for master theses and Ph.D. dissertations in order are management of library information center, information sciences, user services, organization of information, bibliography, and archives development.

Fifth, most popular research areas in journal publications in the order of frequency include information science,

organization of information , general library and information science, library management, library systems, reference user services, record management and publishing.

And sixth, the number of research publications have increased rapidly since the 1990s throughout the nation. The research areas have been diversified as well, including information search, record management and publishing.

The current information environment where traditional and digital libraries coexist has brought substantial changes in the administration, work and information delivery of libraries. Thus the technology and knowledge of information specialists in the digital library environment call for three crucial changes in the paradigm. The first change occurs in information storage and search from texts to electronic media. That is, previous independent media such as texts, graphics and sounds are integrated into multi-media resources. The second calls for continuing responsibility and commitment of user satisfaction, work performance and continuous improvement. The third is about a new work structure related to end-user computing, management, services by areas, outsourcing and miniaturization.

The future of libraries will continue to demand the development of professional information librarian capabilities and their applications in practices along with advances in new information technology. Further, it will continue to emphasize continuing education and technology

education due to the needs of technology literacy. Therefore, it is imperative to not only develop core curriculum programs which can advance the knowledge of professional information librarians and information technology in the digital information library environment but also perform diverse researches to support and enhance further development.

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Appendix A
Publications of Information Science Area Theses and Dissertations in 1959-2002

| Subject | | Period | | | | | | | | | | Total(%) |
|---------------------------------|-----------------------------|--------|-------|---------|----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|
| | | 59~64 | 65~69 | 70~74 | 75~79 | 80~84 | 85~89 | 90~94 | 95~99 | 00~02 | | |
| Information Theory | General theory | | | | | | | | | | | |
| | Information communication | | | | | 2 | 1 | 1 | 1 | | 5(1.3) | |
| | Information Economics | | | | | | | | | | | |
| | total | | | | | 2 | 1 | 1 | 1 | | 5 | |
| Information Retrieval | General theory | | | | | | | 5 | 10 | 3 | 18 | |
| | History | | | | | | | | | | | |
| | System | | | | 2 | 7 | 3 | 5 | 16 | 17 | 51 | |
| | Standardization | | | | | | | | 5 | 2 | 7 | |
| | Comparison · evaluation | | | | | | | 4 | 8 | 17 | 45 | |
| | total | | | | 2 | 9 | 4 | 11 | 32 | 22 | 80(30.8) | |
| Automatic Classification | | | | | | 2 | | 1 | 1 | 3 | 7(1.8) | |
| Automatic indexing | General theory · system | | | | | | | 3 | 5 | 5 | 15 | |
| | Index language | | | | 1 | 1 | | 1 | 1 | | 4 | |
| | total | | | | 0 | 2 | 3 | 6 | 6 | 5 | 22(4.9) | |
| Automatic shutoff · abstracting | | | | | | | | 1 | | 2 | 3(0.8) | |
| Automatic Thesaurus | | | | 2 | | 2 | 1 | 1 | 2 | 1 | 9(2.3) | |
| Library automation | General theory | | | | 5 | 3 | 2 | 8 | 2 | 1 | 21 | |
| | Acquisition · processing | | | | 1 | 2 | 5 | 6 | 1 | 2 | 17 | |
| | Serial publication | | | 2 | | 1 | | | | | 3 | |
| | Circulation | | | | 1 | 3 | 6 | 2 | | | 12 | |
| | total | | | 4 | 6 | 8 | 8 | 15 | 5 | 4 | 50(13.6) | |
| Information management system | General theory | | | 1 | | 1 | 2 | 3 | 6 | 6 | 19 | |
| | Expert System | | | | | | 2 | 7 | 1 | | 10 | |
| | Knowledge management system | | | | | | | | 1 | 4 | 5 | |
| | total | | | 1 | | 1 | 4 | 10 | 8 | 10 | 34(8.7) | |
| Bibliometrics | | | | | | 2 | 3 | 2 | 1 | 1 | 9(2.3) | |
| Citation analysis | | | | 1 | 2 | 4 | 1 | 3 | 3 | 5 | 19(4.9) | |
| Information technology | | | | | | | | | 2 | | 2(0.5) | |
| User interface | | | | | | | | 1 | 4 | 2 | 7(1.8) | |
| Information processing | | | | | | | | | | | | |
| Information seeking behavior | | | | | 2 | 6 | 7 | 11 | 22 | 10 | 58(14.9) | |
| Library network | General theory | | | | | | | 1 | 2 | | 3 | |
| | CD-ROM Network | | | | | | | | 2 | | 2 | |
| | total | | | | | | | 1 | 4 | | 5(1.3) | |
| Database | General theory | | | | | | | 2 | 2 | 2 | 6 | |
| | System | | | | | 4 | 3 | 1 | 4 | 1 | 13 | |
| | Contents development | | | | | | | | 2 | 4 | 6 | |
| | Evaluation | | | | | | | | 2 | 2 | 4 | |
| | total | | | | | 4 | 3 | 3 | 10 | 9 | 29(7.5) | |
| Digital libraries | | | | | | | | | 3 | 3 | 6(1.5) | |
| Reference request system | | | | | | | | 1 | | | 1(0.3) | |
| Information policy | | | | | | | | | 1 | 2 | 3(0.8) | |
| Total(%) | | | | 6 (1.6) | 14 (3.6) | 40 (10.3) | 43 (11.1) | 76 (19.5) | 119(30.6) | 91 (23.3) | 389 (100.0) | |

(Source : Sohn 2003)

Appendix B
Publications of Library Management Area Theses and Dissertations in 1959-2002

| Subject | Period | 59~ 64 | 65~ 69 | 70~ 74 | 75~ 79 | 80~ 84 | 85~ 89 | 90~ 94 | 95~ 99 | 00~ 02 | Total(%) |
|-------------------------------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Library Administration | | | | 2 | 1 | | | 1 | 2 | | 6(1.2) |
| Library Laws & Standards | | | | | | 1 | 1 | 4 | 8 | 4 | 18(3.7) |
| Library Management | | 1 | | 2 | 8 | 6 | 7 | 21 | 20 | 16 | 81(16.5) |
| Policy & Strategy | | | 1 | | | 2 | | 4 | 3 | 3 | 13(2.7) |
| Planning | | | | 1 | | 1 | 2 | 7 | | 2 | 13(2.7) |
| Organization | | | | | 1 | 2 | 2 | 9 | 10 | 6 | 30(6.1) |
| Personnel Management | | | | 2 | 4 | 2 | 2 | 7 | 12 | 2 | 31(6.3) |
| Decision-Making | | | | | | | | 1 | | | 1(0.2) |
| Communication | | | | | | | 2 | | 2 | | 4(0.8) |
| Personal Relationships | | | | 1 | 2 | 5 | 3 | 10 | 17 | 6 | 44(9.0) |
| Leadership | | | | | | 1 | | | 1 | | 2(0.4) |
| Job Management | | | | | | | | 1 | | | 1(0.2) |
| Budgeting Management | | | | 1 | 1 | | | 5 | 1 | 1 | 9(1.8) |
| General Reading Room Management | | | | 1 | 2 | 2 | 4 | 4 | 1 | | 14(2.8) |
| Collection Management | | | | | 1 | | | 1 | 2 | 3 | 7(1.4) |
| Marketing | | | | | | | | 1 | 2 | 12 | 15(3.1) |
| Interlibrary Cooperations & Network | | | | 1 | 2 | 2 | 8 | 12 | 15 | 12 | 52(10.6) |
| Resource(Division) Management | | 1 | | | 1 | 4 | 6 | 9 | 8 | 9 | 38(7.7) |
| Architectural Equipment | | | | 3 | 1 | 9 | 17 | 7 | 18 | 10 | 65(13.2) |
| Evaluation & Measure | | | | | | | 1 | 5 | 9 | 7 | 22(4.5) |
| Library Performance | | | | | 2 | 2 | 1 | 10 | 3 | 1 | 19(3.9) |
| Knowledge Management | | | | | | | | | | 6 | 6(1.2) |
| Total(%) | | 2 | 1 | 14 | 26 | 39 | 56 | 119 | 134 | 100 | 491(100.0) |

(Source : Sohn 2003)

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