Analysis of the Librarian Certification System in Korea and Measures for Improvement

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ABSTRACT

Half a century has passed since the academic field of library and information science, which was born at the end of the 19th Century in the Western world, was introduced to Korea. Despite years of quantitative growth and qualitative maturation, the field has been facing the inconvenient truths of discrepancies in education levels arising from varying education providers, and weakened public confidence in librarian certification. Based on analysis of librarian training and education programs and the certification system, this research seeks to point out the limitations of the national librarian certification system, which is losing public confidence, and present a model for improvement. Library and information science education has expanded from universities to the academy of librarian education and lifelong education centers, and the librarian certification system has emerged as a target of reform. This research presents measures to improve the librarian certification system to government bodies and the Committee on Library and Information Policy with the purpose of providing grounds for policy enforcement.

1. Introduction

Libraries have evolved upon the two axes of various resource materials for collection and preservation, and patrons who access and use the materials. Ancient recording media transformed into paperbound books, and the generalized distribution of digital information has enabled simultaneous use of paper-bound books and electronic media. The demographic of patrons expanded from privileged minorities to the general public, including vulnerable social groups. Such transformation and expansion of libraries necessitated the appearance of library science as an academic basis for the establishment of an ideological and philosophical foundation, provision of rational bases and solutions, and scientific research. Due to the rapid rise in human computing power and the new discipline that has been formed by it, academic institutions have begun to use the term "information science" in their names.

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By the 1990s, almost all library schools in Korea were integrated into libraries and information science.

Nevertheless, not only library science in the traditional sense, but also modern library and information science, which is quick to accept bibliography DB, computerized information, online searching, user behavior analysis, and digital information technology, has a high tendency toward a so-called "act first, study later" approach in the academic establishment and organization of systems and behaviors centered on libraries. This is evidenced by the fact that libraries still determine the spectrum of academic research, and training of librarians is the dominant logic of teaching and learning, despite the introduction of an American-style education system, which emphasizes practical functions of libraries, to the field of library and information science, which has focused on quantitative expansion of educational institutions and extension of academic research. Consequently, Korea's library and information science suffers from weak philosophical foundation and academic identity, and its librarian certification system has failed to escape the past. The former is apparent in the fact that library and information science is organized under humanities and social sciences programs in colleges, and under interdisciplinary science according to the classification of academic fields by the National Research Foundation of Korea. The latter is manifest in the inadequacy of the librarian certification system.

Based on analysis of librarian training and education programs and the certification system, this research seeks to point out the limitations of the national librarian certification system, which is losing public confidence, and present a model for improvement. Library and information science education has expanded from universities to the academy of librarian education and lifelong education centers, and the librarian certification system has emerged as a target of reform. This research presents measures to improve the librarian certification system to government bodies and the Presidential Committee on Library and Information Policy with the purpose of providing grounds for policy enforcement.

2. Literature Review

From the mid-1990s, academia has taken the lead in pointing out problems with the librarian certification system that are linked to library and information science education. The following is a summary of previous research focusing on improvement of the certification system.

In the 1990s, Nam (1996) first asserted that librarianship must be acknowledged as a specialized profession in today's information society, and that a national examination system must be introduced for librarian certification in order to expand its scope.

In the 2000s, Jeong (2007) focused on the librarian certification system that appeared as a result of changes in university education policy and society as a whole, and compiled the current status and issues, previous research and overseas cases, and opinions within Korean academia and the library system. Based on this information, Jeong suggested measures for improvement of the certification system that are appropriate to current conditions in Korea. He proposed four models: increased internal specialization, minimum academic credit requirements in major subjects, a certification exami-

nation system, and specialized graduate schools. Kwack et al. (2009) mentioned survey-extrapolated problems and issues with the librarian certification system, and proposed three improvement measures: maintaining the current academic credit requirements for librarian certification, increasing undergraduate academic credit requirements, requiring graduate education.

In the 2010s, Oh and Chung (2013) suggested, as the minimum conditions for solving practical library issues that are related to the librarian certification system, recertification of librarianship through continuing education, introduction of examinations to increase specialization, introduction of an accreditation system to improve and maintain the quality of education courses in library and information science, and operation of a national-level organization that protects the benefits of librarians and leads continuous innovation. The Korea Library Association's (KLA) special committee for the improvement of the qualification and personnel systems of librarianship proposed three improvement measures (① raising the academic credit requirements for Class 2 librarians and assistant librarians; ② specifying higher academic credit requirements and designating subject requirements, and KLA accreditation of library and information science programs at educational institutions; and ③ introducing a certification examination system for Class 1 and Class 2 librarians) (KLA, 2013). Nevertheless, the majority of the proposed improvement measures can hardly be considered practical

Nevertheless, the majority of the proposed improvement measures can hardly be considered practical alternatives for the improvement of the certification system. Few follow-up measures have been taken to determine and proceed with the optimal alternative based on the evaluation of the precise meaning, inherent advantages and disadvantages, juridical limitations, and the feasibility of each proposal.

3. Analysis of librarian training and education programs and the certification system

3.1 History and evolution of librarian training and education programs

The past 70 years of library and information science education in Korea can be divided broadly into librarian workshops during the Japanese colonial period, foundation of the Joseon National Library School after liberation, and the opening of regular university courses. Depending on the chronology, the history is divided into 3-9 phases (Korean Society for Library and Information Science, 2013; Nam, 2013; Korea Culture and Tourism Policy Institute, 2004). Excluding the librarian workshops, which were practical training courses, the first librarian training institution was the Joseon National Library School. The **Fig. 1** below shows the history of librarian training and education by period. Based on this analysis, the historical trajectory of library and information science education can be divided broadly into 3 phases, according to the development phase of organizations (or fields of study).

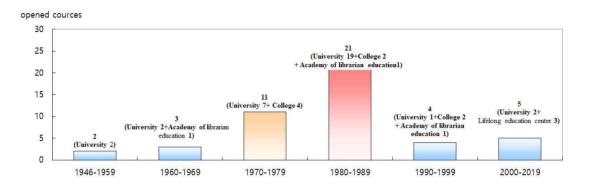


Fig. 1. History of librarian training and education by period

Phase 1 refers to the period from 1946 to 1960, which marks the genesis of library science education, when accelerated incumbent worker education courses began and a small number of undergraduate courses opened. In April of 1946, the year following Korea's liberation, the Joseon National Library School, attached to the National Library of Korea, opened, initiating library science education. The school functioned as a training institution that provided professional training in a short period, at a time when librarians were in short supply after liberation. Curriculum subjects included organization of resources and language studies (classification, cataloguing, bibliography, Korean, Classical Chinese, foreign languages, etc.). In the four years after its foundation (1946-1949), the school produced 77 graduates, but was forced to close when the Korean War broke out in 1950. In 1957, Yonsei University opened the nation's first undergraduate and graduate courses in library and information science, and the Korea Library School opened, offering accelerated training. Thus undergraduate-level education began to take hold. Additional undergraduate courses were opened at Ewha Womans University (1959), Chung-Ang University (1963), and Sungkyunkwan University (1964). In 1965, the Korean Academy of Librarian Education was founded at Sungkyunkwan University. In total, six education programs for undergraduate students and incumbent workers were established during Phase 1.

Phase 2 refers to the period from 1970 through the 1980s, when growth and expansion accelerated as university undergraduate courses spread across the country, and training and education began in junior colleges. Library science departments existed in only four universities in Seoul until the 1960s, then spread to universities throughout the country in the 1970s. After Kyungpook National University (1974) created a library science department, becoming the first national university to do so, in this period is marked by rapid qualitative growth, with the installation of library science departments in 31 universities and colleges (26 four-year universities + 5 junior colleges) and the foundation of five academic societies.

Phase 3 refers to the period from 1990 to the present. After a phase of rapid growth and expansion, library science education entered a phase of settlement and maturation as it evolved into specialized undergraduate and graduate-level education. At the same time, it was forced to embrace the Internet and the digital information distribution paradigm. In Phase 3, the field of library science is marked

by revolutionary changes in the appellation of the academic discipline, curricula, teaching and learning methods, and content of academic research. Library and information science education has entered a maturation phase, and that the supply of librarians has exceeded demand, reaching a state of oversupply. Nonetheless, the Busan Academy of Librarian Education offering accelerated certificate programs opened at Busan Women's College in 1997, and bachelor of library and information science (BLIS) and Class 2 librarian certification courses opened in lifelong education centers of three, necessitating a fundamental improvement in the method of national certification. In the meantime, traditional library science education transformed to embrace information science, the Internet, and digital information technology. In 1991, Chonnam National University took the lead in adopting the name "Department of Library and Information Science." This trend extended to academic societies, which began adding the word information to their names: the Korean Society for Library Science became the Korean Society for Library and Information Science. Taking into account the new world of digital information, new subjects were added to university programs, including information systems, information retrieval, metadata, user interface, digital libraries, digital content, digital copyrights, and Internet literacy. Moreover, teaching and learning methods and academic research subjects are diverging by age of users (i.e. children, youth, elderly), by socioeconomic status (i.e. disabled, multicultural families, residents of farming and fishing villages, etc.), and by subject (i.e. science, medicine, law, agriculture, theology).

3.2 The status and limitations of the current librarian certification system in Korea

The total number of library and information science education courses for librarian training was 43 (including 37 at undergraduate universities, 3 at academy of librarian education, and 3 at lifelong education centers) in 2020. A SWOT analysis of the actual state of affairs, education providers, and the employment conditions of these courses are shown as below.

First of all, the strength of the internal environment comes from the institutional and external scale. The legal system is concrete and education providers are diverse. Academic associations and committees function as a protective fence, and a large number of academic theses are being produced in the field. Weaknesses include uncertain academic identity and status, disparity of levels by education provider, unbalanced supply and demand, and weak public confidence in the national certification.

Next, opportunities in the external environment were set forth by the Third Comprehensive Plan for Library Development, Korea's official guiding plan, which specifies the following as objectives: continuous expansion of librarian staff in the libraries. Moreover, societal expectations and awareness of library services and librarianship are increasing, and a consensus is being formed on strengthening educational functions and improving the certification system. However, potential department closings and reduction of recruitment quotas following decreased enrollment, weakened major field education due to the loosening of higher education policy, and the adverse impact of the Internet on the library system and the academic field, are placing strains on the system.

Extending these SWOT analysis results, the status and limitations of the current librarian certification system are as follows.

First, of the 43 education courses offered by universities, 37 are regular courses based on the Higher Education Act, targeted at degrees in library and information science and librarian certification. On the other hand, 6 of the courses offered by universities (3 academy of librarian education courses based on the Libraries Act and 3 lifelong education center courses created and managed according to the Act on Recognition of Credits, etc.) are accelerated courses that place emphasis on obtaining librarian certificates. Recently, there have been attempts to introduce online courses in private online educational institutions.

Second, significant discrepancies are found among courses offered by various education providers (universities, junior colleges, academy of librarian education, lifelong education centers), which are compared in the **Table 1**. Courses for Class 2 librarian certification are compared in the **Fig. 2**.

Table 1. Library and information science credit requirements and librarian certification by education provider

Course	e		Target certification	Minimum required years	Minimum credits in major subjects	Presence of subject requirements	Legal basis of applying standardized subjects
Regul ar cours es	University	Departme nt system		4	Single major: 50-59 Double major: 24-36	Required or not required	University (junior college) regulations, etc.
		College system	n	4	36		
	Specialized school	l graduate	Assistant librarian	2	60	-	-
	Academy of librarian education		Class 1 librarian	1	30	Required (minimum 5 subjects)	MCST Announcement No. 2012-28
			Class 2 librarian	1	n	Required (minimum 6 subjects)	(Curriculum and credit requirements of academy of librarian
			Assistant librarian	1	"	"	education)
	Lifelong education center	_	University non-major	1.5	48	Required (8 subjects)	MEST announcement No. 2011-18 (Standard curriculum for the operation of an academic credit bank system)
			Junior college non-major	2	60		
			Junior college major	1.5	60 (Incl. junior college credits)		

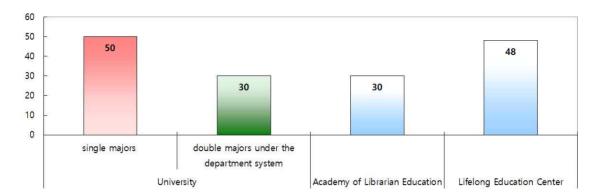


Fig. 2. Credit requirements for Class 2 librarian certification by education provider

The minimum number of major subject credits required is 50 credits for single majors and 24 credits for double majors under the department system, and around 36 credits under the college system. On the other hand, the academy of librarian education require a minimum of 30 major subject credits, while lifelong education centers require a minimum of 48 credits. Qualifications for enrollment at the academy of librarian education can be met in three ways: a master's degree with a major outside of library and information science or library science; an assistant librarian certificate + minimum 3 years of work experience at a library or other institution; or a diploma from a 4-year university (incl. air and correspondence univ.) + an assistant librarian certificate + minimum 1 year of work experience at a library or other institution. The eligibility criterion to take a course at a lifelong education center is a non-major degree from a 4-year university, or the equivalent. To summarize, the minimum major subject credit requirement fluctuates severely, with the requirement being 50 credits for university single-majors (around 36 for double majors and the college system), 30 credits at the academy of librarian education (four-year university graduates who hold an assistant librarian certificate and have a minimum 1 year of work experience), and 48 credits at lifelong education centers (university non-majors). Disregarding the variables of instructor quality and educational content levels, the requirement for university single-majors (50 credits) is greater than those for attendees of the academy of librarian education (30 credits) and lifelong education centers (48 credits), and the requirements for university double-majors (24 credits) and students under the college system (36 credits) are less than those for attendees of the academy of librarian education and lifelong education centers. University non-majors are required to earn 30 credits at the academy of librarian education, in addition to holding an assistant librarian certificate and having 1 year of work experience. By contrast, they are required to earn 48 credits at lifelong education centers. Eligibility criteria for taking a course at the academy of librarian education (assistant librarian certificate+1 year of experience) are in no way equivalent to 18 credits (48 credits-30 credits) at a lifelong education center. Thus, the discrepancy in requirements has little persuasive

In summary, discrepancies in education levels due to uncontrolled establishment of librarian training providers, and the subsequent weakening of public confidence in the national certification are out-

standing issues that must urgently be addressed. The unfair practice of equal recognition of qualifications despite differing education levels must be abolished by improving the certification system.

4. Legal basis of the librarian certification system and improvement measures

4.1 Legal basis of the librarian certification system

Unlike the certification systems in the USA and UK, Korea has a national qualification system, whereby a librarian certificate is issued to anyone who completes a prescribed education course. The system originated from the Enforcement Decree of the Libraries Act, enacted on March 26, 1965. Article 4, Clause 2-3 of the legislation classified librarians into "librarians and assistant librarians." and stipulated their respective qualifications. After an overall revision on August 16, 1988, Table 3 attached to Article 5, Clause 1 of the Enforcement Decree of the Libraries Act classified librarians into Class 1 librarians, Class 2 librarians, and assistant librarians, and stipulated their respective qualifications. Table 3 attached to Article 4, clause 2 of the most recent revision of the Enforcement Decree of the Libraries Act, published on May 6, 2015, stipulates the classification and qualifications of librarians, shown in the Table 2.

Table 2. Librarian classification and qualifications

Classification Qualifications

1. Class 1 librarian

- A. A holder of a Ph. D. in library and information science or library science from a graduate school governed by the Higher Education Act
- B. A holder of a Class 2 librarian certificate, and a Ph. D. in a field outside of library and information science or library science from a graduate school governed by the Higher Education Act, or an information processing engineer license.
- C. A holder of a Class 2 librarian certificate with a minimum of 6 years of experience at a library or other institution specified by ordinance of the Ministry of Culture, Sports, and Tourism, researching in the field of library and information science or library science (Hereafter "work experience at a library or other institution"), and a master's degree from a graduate school governed by the Higher Education Act.
- D. A holder of a Class 2 librarian certificate with a minimum of 9 years of work experience at a library or other institution who has completed an education course prescribed by the Minister of Culture, Sports, and Tourism from an education provider designated by the Minister of Culture, Sports, and Tourism.

Class 2 librarian

- A. A graduate of a university governed by the Higher Education Act (universities of education, distant learning universities, industrial universities, and various types of schools as specified in Article 2, clause 5 of the Higher Education Act) who majored in library and information science or library science, or a person with an equivalent level of education, as recognized by statute, with a major in library and information science.
- B. A holder of a master's degree in library and information science or library science from a graduate school governed by the Higher Education Act.
- C. A holder of a master's degree in library education or librarian education from a graduate school of education governed by the Higher Education Act.
- D. A holder of a master's degree in a major outside of library and information science or library science from a graduate school governed by the Higher Education Act who has completed a prescribed education course at a designated educational institution.

- E. A holder of an assistant librarian certificate and a master's degree from a graduate school governed by the Higher Education Act.
- F. A holder of an assistant librarian certificate with a minimum of 3 years of work experience at a library or other institution who has completed a prescribed education course from a designated educational institution.
- G. A graduate of a university governed by the Higher Education Act who holds an assistant librarian certificate, has a minimum of 1 year of work experience at a library or other institution, and has completed a prescribed education course from a designated educational institution.

3. Assistant librarian

- A. A graduate of a department of library and information science or a department of library science at a junior college governed by the Higher Education Act (including cyber colleges conferring associate's degrees), or a person with an equivalent or higher education level who majored in library and information science or library science.
- B. A graduate of a junior college governed by the Higher Education Act (including cyber colleges conferring associate's degrees), or a person with an equivalent or higher education level who completed a prescribed education course from a designated educational institution.
- C. A graduate of a university governed by the Higher Education Act with a minor in library and information science or library science.

The types of institutions offering courses for librarian certification expanded from universities (including graduate schools) and junior colleges, as defined under Article 2 of the Higher Education Act, to educational institutions designated under Article 4, Clause 2 of the Enforcement Decree of the Libraries Act, and lifelong education centers, according to Article 3, Clause 2 of the Enforcement Decree of the Act on Credit Recognition. Certification courses are being offered by various types of education providers. Recently, the academy of librarian education and lifelong education centers have been increasing in the distribution of librarian certificates by education subjects. The same Class 2 librarian certificate is issued by universities and the two types of training centers, despite substantial discrepancies in credit requirements and education levels. These factors contribute to plunging public confidence in the national certification, and encourage discrimination.

4.2 Measures for improvement of the librarian certification system

Key improvement measures for the librarian certification system proposed by academia and expert organizations to date include specifying minimum credit requirements, increasing minimum credit requirements, designating subject requirements, introducing a specialized graduate school system, introducing an accreditation system for education courses, administering certification examinations, and designating required subjects by field and qualification level. (Jeong, 2007; Kwack et al., 2009; KLA, 2013) The **Fig. 3** shows a comparison of survey results included in each research report. While introduction of a certification examination is the preferred measure, opinions on introducing a specialized graduate school system, specifying minimum credit requirements, adopting an accreditation system for education courses, and designating required subjects by field and librarian classification differed by conductor of research. The **Table 3** reorganizes these proposed improvement measures, after evaluation and comparison with consideration to conceptual implications; juridical, epistemic, and practical grounds and limitations; and their suitability and applicability.

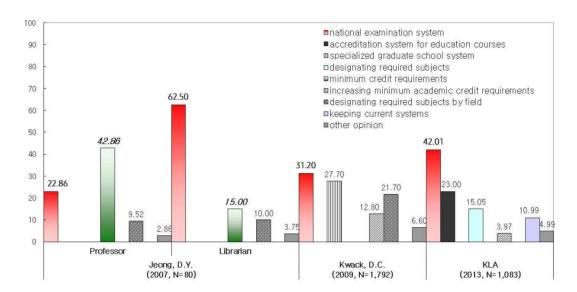


Fig. 3. Comparison of survey results included in each research report

Table 3. Comparison and evaluation of improvement measures for the librarian certification system

Measure	Classification	Juridical, epistemic, and practical grounds and limitations	Suitability and ap- plicability
minimum academic	ject requirements (Measure to designate required subjects in education	Because curricula are determined by the rules of respective universities, legal enforcement of designated subject requirements for all library and information science departments is unrealistic. While many universities have no designated subject requirements, the academy of librarian education and lifelong education centers have designated and utilized subject requirements based on their respective announcements, but the number and specific subjects designated differ from center to center. Even in cases where required subjects are designated, institutions are forced to keep the number to a minimum. Therefore, standard subjects must be specified first. Designation of required subjects is suited only in an extremely limited capacity to the purpose of improving the librarian certification system, so as to close the gap in education levels, strengthen public confidence in the national certification, and increase professionalism in librarianship.	
	ing minimum aca- demic credit re- quirements (Measure to set minimum credits necessary to qual- ify for certification and increase com- mon credit require- ments to strengthen	Minimum credit requirements are under the jurisdiction of respective university regulations. In order to establish common credit requirements, each university must revise their credit requirement standards. However, considering fairness to other majors, universities have little room to accept common credit requirements. Even if universities introduced a minimum credit requirement system, its application to lifelong education centers would invariably conflict with their legal basis, the Act on Credit Recognition. It would be difficult for library and information science departments to raise minimum credit requirements while maintaining fairness to other departments (majors) in terms of credit requirements. Increasing minimum credit requirements is counter to the aim of higher education, increasing employment opportunities through multiple majors, and would inevitably face criticism for stripping the option to pursue multiple majors.	Ŷ

by specialization fication

Designation of re- There is no room in current standards of credit requirements for universities to accommodate additional subjects by specialization (theology, law, science, medicine, art, etc.) or by classification (librarian, assistant librarian).

and librarian classi- If required subjects were diversified by academic field and librarian classification, the number of credits earned would exceed minimum credit requirements or limit completion of other major subjects. The argument could arise that new subjects courage students to should be added to accommodate each demographic classification of the users study subjects des- of public libraries (children, senior citizens, disabled persons, multicultural families, ignated by special- etc.) to represent all types of libraries.

ization and librarian classification)

Moreover, requirement of additional subjects by specialization would necessitate an increase in the number of standardized subjects and minimum credit requirements at the academy of librarian education and lifelong education centers, and the entire credit recognition system would come into question and require reexamination.

A more fundamental problem is that the purpose of undergraduate education is for students to acquire basic knowledge and application skills necessary for the job of librarian, and to certify the quality of education through a national certification. Therefore, shifting the emphasis of the system to training specialized librarians is mistaking means for ends.

specialized graduate schools so societal and national level.

Installation and operation of Installing specialized graduate schools is feasible only if a consensus is formed specialized graduate schools on the exclusive professionalism inherent in the field, as is the case for law, (Measure to designate or install medicine and dentistry, and business administration, and it is recognized at a

from the undergraduate to alized librarians)

as to upgrade librarian training In order to adopt a specialized graduate school system, many practical obstacles must first be overcome (development of assessment standards and indices for graduate level, and train speci- selection of universities, determination of evaluators and evaluatees, consideration of honors and certifications issued to graduates, employment in the library system, etc.).

If the purpose of introducing specialized graduate schools in library and information science education is upgrading education from the undergraduate to graduate level, the measure lacks persuasion, because many universities already offer graduate and doctorate courses. If the purpose is training specialized librarians, the argument is hollow, because the likelihood of a university graduate of another major entering a specialized graduate school for library and information science is slim considering the occupational status and prestige.

accreditation)

Accrediting education courses Adopting an education course accreditation system is only worth reviewing as (Measure to evaluate under- an improvement measure with a plan to apply the system to a specific education graduate and graduate courses level (undergraduate or graduate).

and issue certificates based on If applied to undergraduate courses, accreditation of courses offered at the academy of librarian education and lifelong education centers must be considered in conjunction. Introduction of accreditation is difficult without application of standardized subjects and minimum credit requirements.

> Accreditation systems such as ALA and CILIP are rather inadequate as examples of accreditation of graduate courses in discussing measures to improve the librarian certification system. Lamentably, those who cite these systems overlook the fact that they are irrelevant to a national certification system, or are built on the premise of the abolishment of the system.

> In brief, accreditation of an education course, as is established for architecture programs, would reflect the approval of a government or expert organization (i.e. Korea Library Association). Though it involves a comprehensive evaluation of a library and information science education course, it does not validate a course with a national certification.

amination system

Administering a national ex- A sweeping upgrade of the librarian certificate system would serve to relieve educational disparity caused by the extension of certification from education courses (Measure to administer a na- provided by universities (including junior colleges) to non-degree courses, at the tional examination to issue cer- same time securing public confidence in the national certification.

tificates to those who have stitutions)

Of all proposed measures, introduction of a national examination system is the institutional improvement measure worthy of the most attention. Recent research from various educational in- by academia and associations has revealed this measure to be the preferred alternative, and the Second Comprehensive Plan for Library Development specifies this as an objective.

> Nevertheless, in order to introduce a national examination system, lessons must be taken from the harmful consequences of its application to the similar job series of social workers (application to Class 1 social workers, failure to honor successful candidates at workplaces, lack of efficacy due to indiscriminate establishment of certifications bearing similar names, etc.), so as to prevent adverse effects and side effects. Consent among various institutions is also necessary.

> More importantly, the measure must be backed by the competent Ministry's forward-looking attitude and determination to put policy into action, and be preceded by the development of various models, including specification of standardized subjects, revision of librarian classifications and qualifications, determination of classifications to which the national examination system is applied, subjects included in the examination, an extra point system for successful candidates, mandatory refresher courses, introduction of a librarian certification renewal system, and revision of relevant legislation.

In brief, transitioning to a national examination system is desirable, since the current librarian certification system is facing such issues as identical certifications being issued despite differences in the number of earned credits, educational content, and instructor qualifications; complaints of discriminatory practices; weakened public confidence in the national certification; and invalidation of Class 1-2 librarian certificates resulting from assistant librarian certificates being the minimum requirement of service examinations. To this end, the preconditions of public announcement of standardized subjects, development of an application model for a national examination system, revision of relevant legislation, and composition of examination management organization, among others, must be met. The following are models and proposals for the introduction of a national examination

First, in order to introduce a national examination to the librarian certification system, disparities in undergraduate-level education must be relieved. To this end, the model presented in the Table 4 can serve as a base, to which subjects can be added or subtracted after eliciting opinions and agreement from interested parties, before standardized subjects are finalized and announced.

Table 4. Model of standardized subjects in library and information science

- 1) Subjects related to the acquisition of basic knowledge necessary for understanding and studying library and information science
- Subjects connected to the philosophical foundation and academic identity of library and information science
- Subjects related to service exams for the library system, including civil service examination for public librarianship
- 2) Basic subjects of library and information science that are also key to acquiring librarian certification and preparation for civil service examinations
- 3) Additional subjects desirable for those who wish to serve as library experts or advance to graduate schools

Second, a special committee of the KLA has presented an application model for a national examination system, and proposed to improve the librarian certification system in four parts through the introduction of a national examination system (The first proposal suggests administering the national examination to every graduate + allowing only successful candidates to enter the job family; the second proposal suggests issuing certification upon graduation + applying the national examination to Class 1; the third proposal suggests administering the national examination to every graduate + issuing certificates to successful candidates + administering certification examinations by specialization; and the fourth proposal suggests administering the national examination to every graduate + issuing certificates of specialization from accredited institutions) (KLA, 2013). While the second proposal is the most desirable, the term every graduate is unclear, and additional supportive measures have not been presented. Supplementing KLA's model, the **Table 5** below shows an application model of a national examination system, proposing issuance of Class 2 librarian certificates and granting eligibility for the national examination upon completion of an undergraduate or higher-level education course, and proposing issuance of Class 1 certificates to successful candidates.

Table 5. Application model of a national examination system for librarian certification

Education provider		Certification	National examination		Notes	
		upon graduation	Eligibility criteria	Certification		
•	University major in library and information science (including double majors) Master's and doctorate courses in library and information science at graduate schools (general, education) Academy of librarian education (Class 2 Librarian courses) Bachelor's courses in library and information science at lifelong education centers Graduates of overseas universities and graduate schools with a concentration in library and information science.	librarian		Class 1 librarian	 Divide librarian certificates into Classes 1-3. Introduce standardized subjects of study in Class 2 librarian courses. Rescind the current Class 1 librarian classification and qualifications. Discontinue Class 1 librarian courses at the acameny of librarian education. Issue Class 1 librarian certificates, followed by a certificate of specialization (by subject and target user) issued by reeducation facilities designated 	
•	Junior college library and in- formation science department University minor in library and information science department Academy of librarian education (Assistant librarian course)	librarian	-	-	by the Ministry of Education (or Ministry of Culture, Sports, and Tourism), which offer education courses ac- credited by the Korea Library Association.	

Third, in order to introduce a national examination system, clauses must be added to the Libraries Act to provide a legal basis. First, an Article stipulating the administration of the national examination must be added, as shown in the **Table 6**.

Table 6. Amendment model for the Libraries Act to provide legal basis for a national examination system

Classification Article	New provisions

The	Article 7
Libraries	(Issuance
Act	of
	Librarian
	Certificate
	s, etc.)

- The Minister of Culture, Sports, and Tourism may issue a librarian certificate to an individual who possesses professional knowledge and technical skills related to libraries.
- The librarian under Clause 1 will be certified Class 1, 2, or 3, and their respective qualifications and process of certification will be stipulated by Presidential decree.
- 3 Anyone who wishes to attain a Class 1 librarian certificate must successfully complete the national examination.
- 4 The Minister of Culture, Sports, and Tourism may charge a fee specified by ordinance of the Ministry to an individual who seeks to be issued or reissued a librarian certificate under Article 2.

(National Examinati on)

- Article 8 ① The national examination under Article 7, Clause 3 will be administered by the Minister of Culture, Sports, and Tourism. Management of the examination can be outsourced to a professional organization with examination management capabilities, as specified by Presidential decree
 - 2 The Minister of Culture, Sports, and Tourism may, in the case of outsourcing management of the national examination under Article 1, subsidize any costs incurred within the allocated budget.
 - 3 The organization commissioned for examination management according to Clause 1 of this Article may accept an application fee of an amount approved by the Minister of Culture, Sports, and Tourism.
 - 4 Test subjects, eligibility criteria, and other details necessary for administration of the national examination shall be determined by Presidential decree.

(Enforcem ent of the National

Examinati

on, etc.)

- Article 5 ① The Minister of Culture, Sports, and Tourism must administer annually a minimum of one national Class 1 librarian examination (hereafter "the examination"), as stipulated in Article 7 of the Libraries Act.
 - Under Article 8, Clause 1 of the Libraries Act, the Minister of Culture, Sports, and Tourism shall designate a relevant professional organization meeting one of the following criteria as the examination management organization and delegate examination management tasks.
 - 1. A non-profit corporation with professional capabilities, including research and development, relevant to the examination.
 - 2. A non-profit corporation that possesses expert library-related knowledge and technology
 - 3 Before administering the examination according to Clause 1, the head of the examination management organization must seek approval on the test date and location, test subjects, period of submission of application forms, criteria for refund of examination fees, and other necessary details from the Minister of Culture, Sports, and Tourism, and publicly announce the details no fewer than 90 days before the examination.
 - ① The examination will take the form of a written test, and the test subjects will be as shown in Table 4 attached to this Article.
 - ⑤ Candidates who score no less than 40% of the possible points in each subject, and no less than 60% of the total possible points will be considered successful.

The Enforcement (Eligibilit y Criteria ② Decree of the Libraries and Act Managem ent of Examinati

on)

- Article 6 ① The details of eligibility criteria for the examination, mentioned in Article 8, Clause 4 of the Act, will be as shown in the attached Table 5.
 - Would-be candidates for the examination must submit to the head of the examination management organization an application form ordained by the head of the examination management organization (including electronic submission).
 - 3 After administering the examination, the head of the examination management organization must select and announce successful candidates, and report the following information on the successful candidates to the Minister of Culture, Sports, and Tourism and the Korea Library Association (hereafter "the association"), established according to Article 17 of the Libraries Act.
 - 1. Name and address
 - 2. Candidate identification number and date of successful completion

(Examiner s)

- Article 7 ① Ahead of the examination, the head of the examination management organization will appoint examiners from among experts in each test subject.
 - The examiners under Clause 1 may be provided with expenses and benefits, within the allocated budget.

Second, the current librarian classifications, specified in Article 4, Clause 2 of the Enforcement Decree of the Libraries Act, must be revised, as shown in the **Table 7**, creating Classes 1 to 3 (Class 1 denotes specialized librarians, Class 2 denotes librarians, and Class 3 denotes assistant librarians), and the qualifications of each class must be redefined. Additionally, test subjects on the national examination must be specified in a table attached to the Enforcement Decree of the Libraries Act. Because librarian classifications and qualifications and test subjects are important and sensitive matters for academia and other interested parties, it is necessary to reach common ground through public hearings, expert consultations, and the like.

Table 7. Amendment model for the Enforcement Decree of the Libraries Act, with revisions to librarian classifications and qualifications

Classificati	on Qualifications
Class 1 librarian	A successful candidate of the national examination, as stipulated under Article 7, Clause 3 of the Libraries Act
Class 2 librarian	 A. A person who majored in library and information science or library science at a graduate school governed by the Higher Education Act and holds a Master's degree or higher. B. A holder of a master's degree in library education or librarian education from a graduate school of education governed by the Higher Education Act. C. A holder of a master's degree in a major outside of library and information science or library science from a graduate school governed by the Higher Education Act, who has completed a prescribed education and training course from an education and training institution specified by the Minister of Culture, Sports, and Tourism. D. A person who graduated from a university governed by the Higher Education Act with a major in library and information science or library science, or a person with an equivalent level of education, as recognized by statute, with a major in library and information science. E. A holder of a Class 3 librarian certificate and a master's degree from a graduate school governed by the Higher Education Act. F. A holder of a Class 3 librarian certificate and a minimum of three years of experience working in a library or other institution, who has completed a prescribed education and training course from an education and training institution specified by the Minister of Culture, Sports, and Tourism. G. A graduate of a university governed by the Higher Education Act, who holds a Class 3 librarian certificate and a minimum of one year of experience working in a library or other institution, who has completed a prescribed education and training course from an education and training in a library or other institution, who has completed a prescribed education and training course from an education
Class 3 librarian	and training institution specified by the Minister of Culture, Sports, and Tourism. A. A person who graduated from a library and information science department at a junior college governed by the Higher Education Act (including cyber colleges conferring associate's degrees) or a person with an equivalent education level with a major in library and information
	science. B. A graduate of a junior college governed by the Higher Education Act, or a person with an equivalent education level, who has completed a prescribed education and training course from an education and training institution specified by the Minister of Culture, Sports, and
	Tourism.C. A graduate of a university governed by the Higher Education Act, with a minor in library and information science or library science.

Note: A librarian certificate of any level may be issued to a holder of a bachelor's degree or higher from an overseas university or graduate school, with a major in library and information science or library science, whose education level is recognized by the Minister of Culture, Sports, and Tourism to be equivalent to the specified qualification for the corresponding classification.

Fourth, in order for a national examination system to be successful, a device must be put in place that gives real-life prestige to Class 1 librarian certificates issued to successful candidates. To this end, extra points for librarian certificates should be added to Article 31, Clause 2 of the Decree on Civil Service Examination; and Act 14, Clause 11 (Table of special job benefits) of Regulations on Civil Service Benefits, etc. should be amended, changing the recipient from "a public librarian" to "a civil servant in charge of library duties," and changing total compensation to "base salary + advanced salary by certification," so as to apply a graduated pay scale.

Fifth, in order to introduce a national examination system, the Presidential Committee on Library and Information Policy, the Ministry of Culture, Sports, and Tourism, or the representative professional organization, the Korea Library Association, must take the lead in forming a hypothetically-named "Committee on National Librarian Examination," composed of competent ministry representatives, academic organizations, and employees of various types of libraries, among others, to discuss and decide on measures such as preparing the aforementioned Articles and Clauses to serve as the legal basis, revising librarian classifications and qualifications, determining eligibility criteria and exam subjects, applying an extra point system to civil service examinations for successful candidates of the national examination, renewing librarian certification and reeducation, and reissuing librarian certificates. In addition, standards must be prepared for such details as designation of supervisory organizations for the national examination, composition of the exam board and content of examinations, and criteria for success and proportions.

5. Summary and Conclusion

Half a century has passed since the academic field of library and information science, which was born at the end of the 19th Century in the Western world, was introduced to Korea. Despite years of quantitative growth and qualitative maturation, the field has been facing the inconvenient truths of discrepancies in education levels arising from varying education providers, and weakened public confidence in librarian certification. This research proposes models and resolutions to relieve these issues, which can be summarized as follows.

First, in order to resolve discrepancies in education levels and the imbalance arising from varying education providers, systemized curricula and standardized subjects must be introduced. To this end, after eliciting opinions and agreement from education providers and other interested parties, a comprehensive application model of standardized subjects must be developed, considering subjects that strengthen the academic identity of library and information science and increase basic understanding, subjects that reflect key functions of libraries and practical duties, and test subjects specified under the Decree on Regional Civil Service Examination.

Second, transitioning to a national examination system is desirable, since the librarian certification system is facing such issues as identical certifications being issued despite differences in the number of earned credits, educational content, and instructor qualifications; complaints of discriminatory practices; qualitative decline of librarian certification, weakened public confidence in the national certification; and invalidation of Class 1-2 librarian certificates resulting from assistant librarian

certificates being the minimum requirement of service examinations. To this end, an application model for a national examination system must be developed, relevant legislation must be revised, and an examination management organization must be formed.

Third, a desirable model for a national examination system is to issue Class 2 librarian certificates and grant eligibility for the national examination upon completion of an undergraduate or higher-level education course, and issue Class 1 certificates to successful candidates. In order to introduce this model, a legal basis must be prepared in the Libraries Act, and the Enforcement Decree of the Libraries Act must be amended to specify the revised librarian classifications, Classes 1-3, and the qualifications of each classification. In addition, the subjects included in the written test of the national examination must be specified in a table attached to the Enforcement Decree of the Libraries Act.

Fourth, in order for a national examination system to be successful, a device must be put in place that gives real-life prestige to Class 1 librarian certificates issued to successful candidates. Extra points for librarian certificates should be added to the Decree on Civil Service Examination, and the Regulations on Civil Service Benefits, etc. should be amended to specify "a civil servant in charge of library duties" as the recipient, and the total compensation should also be specified so as to apply a graduated pay scale.

Finally, in order to administer a national examination system, the competent Ministry or the Korea Library Association must take the lead in forming a hypothetically-named "Committee on National Librarian Examination," composed of competent ministry representatives, academic organizations, and employees of various types of libraries, among others, to discuss and decide on issues such as preparing Articles and Clauses to serve as the legal basis, revising librarian classifications and qualifications, determining eligibility criteria and exam subjects, applying an extra point system to civil service examinations for successful candidates of the national examination, renewal of librarian certification and reeducation, reissuance of librarian certificates, designation of supervisory organizations for the national examination, composition of the exam board and management of exam preparation, and the criteria for successful completion.

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