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Library and Information Science (LIS) Education in Türkiye: An International Evaluation of Undergraduate Programmes

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Abstract

Introduction. This study aims to contribute to the global development of Library and Information Science (LIS) education by examining the compliance of undergraduate programmes in LIS in Türkiye, with international standards. The research has an international significance within the framework of the standards of organisations such as ALA and IFLA.

Method. Curricula of 14 LIS undergraduate programmes were examined through qualitative document analysis method. In addition, a draft model for ENT curricula was created by examining the guidelines of international organisations.

Analysis. In the analysis process, quantitative data were obtained and MAXQDA software was used to categorise the curriculum contents.

Findings. The findings show that the LIS programmes in Türkiye cover the basic topics but need updating in areas such as digital information management and technological innovations.

Conclusion. This study aims to contribute to the advancement of LIS education and ensure that graduates are equipped to respond to the demands of a changing information environment. The draft model can help to better align LIS curricula with international standards and contribute to the global LIS education literature. In conclusion, this research constitutes an important step to improve the alignment of LIS education in Türkiye with international standards and to strengthen the competitiveness of graduates in the global labour market.

Introduction

Library and Information Science (LIS) is a field that lays the foundations of today's information society and democratises access to information, enhancing the ability of individuals and institutions to make informed decisions. This discipline aims to train individuals to serve professionally in various information organisations such as libraries, information centres, archives and digital information services. The importance of LIS education is critical for the effective management and access to information, which supports individuals' lifelong learning processes and increases information literacy.

LIS education in the world is constantly being updated to enable information professionals to adapt to rapidly changing technological and social dynamics. International organisations such as the American Library Association (ALA) and the International Federation of Library Associations and Institutions (IFLA) play an important role in setting standards and competencies in LIS education. These organisations provide comprehensive guidelines that set out the core competencies that information professionals should possess. ALA's Core Competencies for Librarianship requires information and library science professionals to specialise in core areas such as information management, information access, technology use and ethics. Similarly, IFLA's professional standards provide internationally recognised competencies in access to information, delivery of information services and information literacy.

Education programmes in the field of LIS in Türkiye are carried out in an effort to comply with international standards. However, the extent to which LIS education curricula in Türkiye overlap with international competencies and standards and in which areas they need to improve is still worthy of further research. In this context, the main focus of this study is to investigate which subjects are emphasised in the curricula of Information and Document Management (IDM) undergraduate programmes in the field of LIS in Türkiye, in which areas there are deficiencies and the level of compliance with international standards.

In this study, the curricula of undergraduate programmes in the field of LIS in fourteen active universities in Türkiye are examined. The aim of the study is to determine the extent to which these undergraduate programmes in LIS are compatible with international competencies and to reveal the strengths and weaknesses of the curricula in this direction. In this context, the level of overlap of the undergraduate LIS curricula in Türkiye with the basic topics in the knowledge and competence statements published by the leading organisations in the field of LIS, were analysed. The findings of the study aim to provide important information about the future directions of education in the field of LIS and the areas that need to be developed.

Thus, this study aims to contribute to the evaluation of LIS education programmes in Türkiye within the framework of international standards and to the improvement of studies to be carried out in this field in the future.

Problem statement and research questions

The main purpose of this study is to determine the extent to which the curricula of LIS education programmes in Türkiye are in line with international standards and to identify areas that need to be improved in this direction.

In this context, answers to the following research questions (RQ) were sought:

> *RQ1.* Which subjects are emphasised in LIS education undergraduate programmes in Türkiye and to what extent do they comply with international standards?
>
> *RQ2.* Is there a difference between universities in the distribution of courses in the curricula of LIS education undergraduate programmes in Türkiye?

RQ3. Which themes emerge as prominent in LIS education in Türkiye based on the word associations of course titles in the curricula of undergraduate programmes?

Literature review

Theoretical framework

LIS education has undergone significant transformations over time. Both technological developments and social changes have necessitated radical changes in curricula. In particular, the digital transformation of libraries and the use of artificial intelligence (AI) and robots have become an area of increasing interest in recent years (Tait and Pierson, 2022).

Fernandez (2016) and Corrado (2021) argue that artificial intelligence and robots will automate routine operations, allowing library staff to focus on more complex problems. In particular, repetitive tasks such as data entry, indexing and classification are suggested to be automated with the help of robots. However, some researchers, such as Calvert (2017), express concern that AI and robots may take over a significant portion of library functions, leading to the reduction or loss of library staff jobs.

The importance of LIS education programmes and libraries in practice adapting to this change is emphasised (Cox, 2021; Hervieux and Wheatley, 2021). It is stated that LIS students should be adequately equipped in subjects such as AI, data science and digital transformation. Hu (2013) emphasised that information technologies affect library services and accordingly, course designs and curricula in LIS programmes should be restructured in a technology-oriented manner.

Bartlett and Dalkir (2020) revealed how a Knowledge Studies programme evolved over a 20-year period. The researchers note that programme revisions, course development, and faculty renewal processes were determined by technology-driven strategic plans. Bailey (2010) identified the most common topics in academic librarianship, but suggested that curricula need to be diversified. Wise et al. (2011) expressed concern about the long-term sustainability of courses in programmes.

Markey (2004), while arguing that the content of LIS curricula should be balanced by diversifying, states that new curricular trends in LIS education have largely shifted towards user-oriented areas. However, she emphasises that LIS education should not only be user-oriented, but should also cover traditional areas such as information description, organisation and content management.

In terms of content analysis of LIS programmes in school librarianship, pioneering studies such as Yi and Turner (2014) found that there are similarities between programmes and that the most preferred course is 'user services.' They also concluded that programmes need to be updated frequently.

When the studies on curriculum content in the field of LIS in Türkiye are examined, comparative analyses between programmes and content enrichment suggestions come to the fore. However, there are no quantitative studies evaluating the general situation of all information and document management programmes across the country (Bayraktar, 2021; Dişli and Yılmaz, 2020; Usta, 2017; Yılmaz, 2018). In these studies, it is stated that there are differences between programmes in the content of education on basic issues such as freedom of thought, technology and archiving. In addition, it was discussed that the programmes should be dynamically updated in parallel with the changes over time (Çakın, 2012; Tonta, 2012).

In conclusion, LIS education aims to improve the effectiveness of information services by increasing the competencies of information professionals. Studies in the literature emphasise the need to update and diversify library education programmes, especially in the context of technological developments, user-oriented approaches and international standards.

Library and information science education in terms of international education standards

Library and Information Science (LIS) education is an important discipline that aims to train qualified professionals in a rapidly changing information age. The content, objectives and learning outcomes of educational programmes in this field are based on framework competency statements developed by international professional bodies. These organisations include International Federation of Library Associations and Institutions (IFLA), American Library Association (ALA), American Association of School Librarians (AASL), Association for Information Science and Technology (ASIS&T), American Association of Law Libraries (AALL), the Association of College and Research Libraries (ACRL), Association for Library and Information Science Education (ALISE), Association for Library Service to Children (ALSC), Canadian Association of Research Libraries (CARL), Australian Libraries and Information Association (ALIA) and Medical Libraries Association (MLA).

The document "Guidelines for Library and Information Science (LIS) Education Programmes" prepared by International Federation of Library Associations and Institutions (2022) is an important reference source used to shape the content of the curricula of higher education departments that continue their education and training activities under different names such as information and document management / library science / information science. IFLA defines the main topics of the curriculum contents of the departments / programmes providing education in the field of library and information science as follows: (1) Information in society, (2) foundations of the LIS profession, (3) research and innovation, (4) information resources management, (5) management for information professionals, (6) information needs and user services, (7) literacies and learning. These guidelines are adaptable to the level of programmes and local needs.

American Library Association's (2023) "ALA's Core Competencies for Librarianship" document, which defines the core competencies of professionals working in the field of LIS, specifies the main topics of basic knowledge and competencies that all information professionals graduating from programmes in this field should have. According to this guide, the courses that should be included in the curricula of library and information science education programmes should be shaped under the following main topics: Gateway knowledge, information resources, lifelong learning and continuing education, management and administration, organisation of recorded knowledge and information, reference and user services, research and evidence-based practice, social justice, technological knowledge and skills.

Association for Information Science and Technology (2001) has also developed an educational guide for library and information science education programmes. In this guide, the topics that should be included in library and information science education programmes are discussed under six main headings: foundations of information science, information use and users, methods of inquiry, information processing, information technology, information service provision and management.

In addition to these guides for the basic subjects that should be included in the curriculum, some theme-based guides help to shape the curriculum in order to make adaptations in the information science discipline in accordance with the requirements of the age. For example, ACRL's (2018) "Information Literacy Framework for Higher Education and Standards for Libraries in Higher Education" document plays a critical role in the creation of library science and information management education programmes. It provides an important resource for library staff, faculty and other institutional collaborations in the design of information literacy courses, assignments and curricula. It also offers guidance on integrating information literacy with student success initiatives, collaborating on pedagogical research, and engaging students in that research. This ACRL guide provides a range of opportunities to strengthen and enhance the efforts of ICM departments to provide students with effective information literacy skills.

The Medical Library Association's (2017) "Competencies for Lifelong Learning and Professional Success" guide identifies seven areas of professional competencies that health sciences librarians should acquire in their careers. These competencies are intended to provide information professionals with a guide to a successful career. These seven areas of professional competence are listed as follows: Understanding the health sciences and health care environment, leadership, finance, communication and management skills, principles and practices of providing information services to meet the needs of users, ability to manage health information resources, ability to understand and use technology and systems to manage information, ability to understand instructional and educational design and to teach ways of accessing, organising and using information, understanding scientific research methods and the ability to critically analyse the research literature of the discipline under study.

Method

In this study, content analysis, one of the qualitative research methods, was used to evaluate library and information science undergraduate programmes in Türkiye. The population of the study consists of the undergraduate programmes of 14 universities (Ankara, Ankara Yıldırım Beyazıt, Atatürk, Bartın, Çankırı Karatekin, Hacettepe, İstanbul, İstanbul Medeniyet, İstanbul 29 Mayıs, İzmir Kâtip Çelebi, Kastamonu, Kırıkkale, Marmara and Osmaniye Korkut Ata) which are actively teaching in Türkiye in the 2023-2024 academic year. Document analysis, which is one of the research methods frequently used in the literature to evaluate the quality of undergraduate education programmes in the field of library and information science (Islamoğlu and Alnıaçık, 2014), was preferred in this study within the qualitative research design. This method enabled a systematic examination of the curricula, course contents and educational structures of the relevant programmes.

Data collection and analysis

The main purpose of the study is to reveal the conceptual framework of the courses in the curricula of the 14 programmes examined. For this purpose, the official websites of the relevant universities (Ankara University, 2023; Ankara Yıldırım Beyazıt University, 2023; Atatürk University, 2023; Bartın University, 2023; Çankırı Karatekin University, 2023; Hacettepe University, 2023; İstanbul University, 2023; İstanbul 29 Mayıs University, 2023;İstanbul Medeniyet University, 2023; İzmir Katip Çelebi University, 2023; Kastamonu University, 2023; Kırıkkale University, 2023; Marmara University, 2023; Osmaniye Korkut Ata University, 2023) course contents, course titles and compulsory-elective course information were collected. The collected data were analysed using content analysis, one of the qualitative data analysis methods. The findings were organised under themes in order to reveal the common and differentiating aspects of the curricula.

The MAXQDA programme was used in the analysis process and the courses in the curriculum were coded under various categories. These categories included introduction to LIS profession, research methods, scientific communication, archiving, document management, information resource management, types of information centres, information literacy, lifelong learning, information systems, technology, information society, social responsibility, counselling services, language skills, internships and practices. Under these categories, quantitative data such as the number of courses related to the relevant topic in each programme and the proportion of these courses in the total programme were calculated.

This method of analysis aims to systematically reveal the similarities and differences between the programmes and to identify current trends in librarianship and information science education. Thus, a comprehensive assessment of the current state of library and information science undergraduate programmes in Türkiye is aimed.

Draft model of library and information science curricula

The categorization of courses in Library and Information Science (LIS) curricula is crucial for establishing educational standards and enhancing professional competencies. This study presents a draft model aimed at structuring LIS education programs systematically. The model reflects guidelines from leading organisations in LIS, including IFLA, ALA, AASL, ASIS&T, AALL, ACRL, ALISE, ALSC, CARL, ALIA and MLA, ensuring a comprehensive and holistic approach. The draft model organises the LIS curriculum into twelve main categories, encompassing all core competencies specified by the referenced guidelines. Each category is aligned with international standards and professional requirements. The draft model is organised under twelve main headings and is shown in Figure 1.

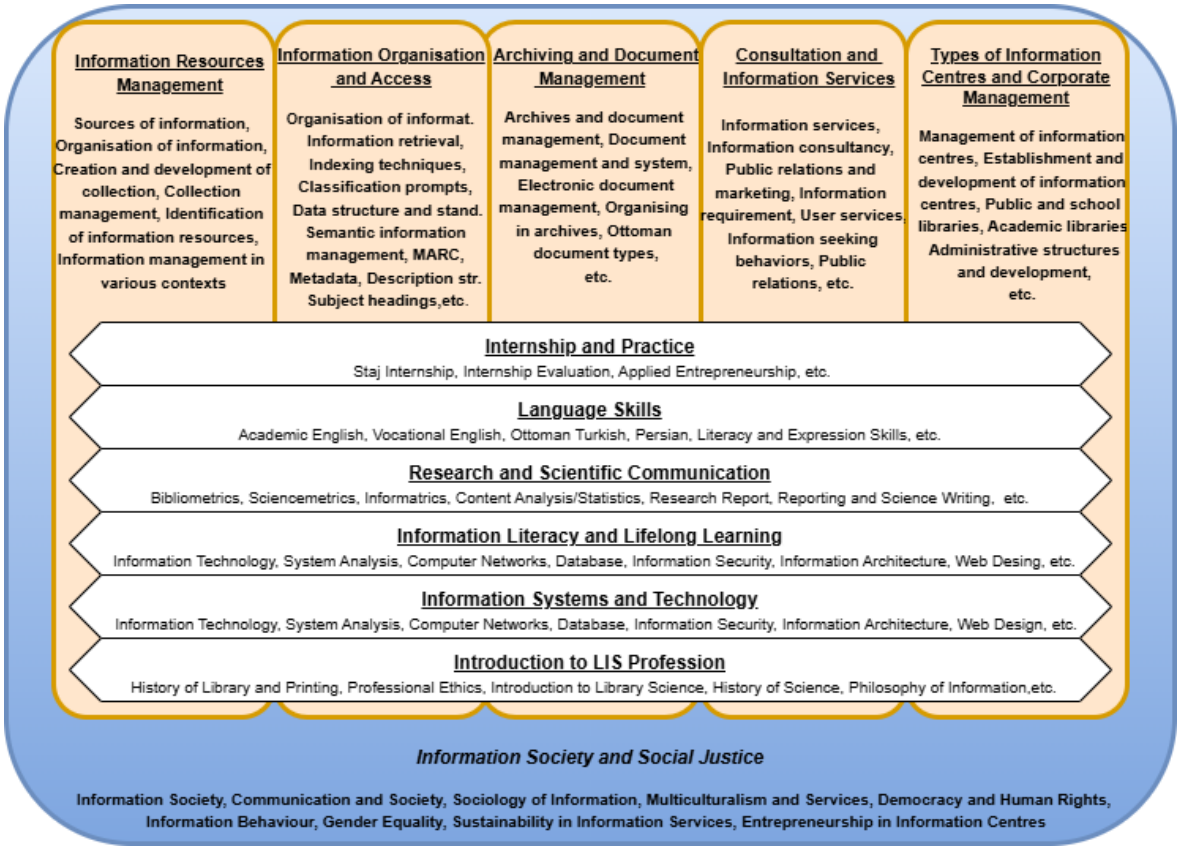

Figure 1. Outline of the main subject categories of LIS training curriculum

(1) *Introduction to LIS profession*: This category includes the history of librarianship, philosophy of science, and professional ethics. Courses like "History of Librarianship," "Philosophy of Science and Information," and "Professional Ethics" help students understand the profession's origins and ethical foundations.

(2) *Information resources (collection) management*: Focusing on the creation, collection and management of information resources, this category imparts skills for effective resource management. Courses include "Creation and Development of Information Resources", "Collection and Management of Information Resources" and "Organisation of Information Resources.".

(3) *Information organisation and access*: This area covers information organisation techniques, access technologies, data structures and classification systems. Courses such as "Information Organisation Techniques", "Information Access Technologies", "Data Structures and Knowledge Representation" and "Classification and Metadata" enhance students' skills in organising and accessing information.

(4) *Archiving and document management*: This category includes archive and document management systems, electronic document management and specific regional document management practices like Ottoman document management. Relevant courses are "Archive and Document Management Systems", "Electronic Document Management" and "Ottoman Document Management and Archiving."

(5) *Information centre types and corporate governance*: Students learn about the management, development and administrative structures of different information centres. Courses such as "Management of Information Centres", "Development of Libraries and Other Information Centres" and "Management and Administrative Structures" are included.

(6) *Research and scientific communication*: This area covers scientometrics, content analysis, statistics and scientific report writing. Courses like "Scientometrics and Information Science", "Content Analysis and Statistics" and "Scientific Report Writing and Presentation" develop research and communication skills.

(7) *Counselling and information services*: Focusing on user services, public relations and information counselling, this category prepares students to provide user-oriented information services. Courses include "Information Consultancy and User Services", "Public Relations and Public Affairs" and "User-Oriented Approaches in Information Services."

(8) *Information systems and technology*: This category covers information technologies, databases, information security, web design and information architecture. Courses such as "Information Technologies and Systems", "Databases and Information Security" and "Web Design and Information Architecture" are provided.

(9) *Language skills*: This section includes academic English; vocational English; Ottoman Turkish, Persian and Arabic literacy. Courses like "Academic English", "Vocational English" and "Ottoman Turkish, Persian, and Arabic Literacy" develop students' language proficiency.

(10) *Information literacy and lifelong learning*: This category addresses information literacy, evidence-based learning, educational techniques, reading culture, and dissemination. Courses such as "Information Literacy and Training Techniques". "Evidence-Based Learning and Training Programs" and "Reading Culture and Dissemination" are included.

(11) *Information society and social justice*: Covering topics like information society, communication, democracy, human rights, gender equality, and sustainability, this category provides a social and ethical dimension. Courses include "Information Society and Communication", "Democracy and Human Rights" and "Gender Equality and Sustainability."

(12) *Internship / Application*: This area provides opportunities for students to apply theoretical knowledge in real-world settings. Courses like "Internship and Practice Programs" and "Applied Entrepreneurship" help students gain professional experience.

This draft model ensures that LIS curricula align with international standards and professional competencies set by leading organisations. By systematically organising the curriculum, the model aims to produce professionals equipped to meet the demands of the information society. It serves as a guide for educational institutions to continually update and enhance their LIS programs, ensuring students develop the necessary skills for successful careers.

Findings

In this section, the collected data are analysed according to the research questions. Firstly, it is examined which subjects are emphasised in LIS education undergraduate programmes in Türkiye and to what extent these programmes comply with international standards. Then, differences between universities in the distribution of courses are evaluated in the curricula of LIS

undergraduate programmes. Thirdly, by analysing the word associations of the course titles in the curriculum, it is determined which themes come to the fore in education. Finally, it is revealed how the key concepts in the course titles of LIS education programmes in Türkiye come together with other terms to form the general structure of the curriculum.

In this study, the number of compulsory and elective courses of various universities in Türkiye was analysed in order to analyse the curricula of LIS (Library and Information Science) education programmes. Table 1 constitutes the basic data of the study and shows the total number of courses of each university together with the number of compulsory and elective courses.

Universities with LIS Education Programmes in Türkiye	Number of Compulsory Courses	Number of Elective Courses	Total Number of Courses
Ankara University	37	40	77
Ankara Yıldırım Beyazıt University	42	10	52
Atatürk University	37	36	73
Bartın University	28	24	52
Çankırı Karatekin University	24	50	74
Hacettepe University	17	45	62
İstanbul University	40	42	82
İstanbul 29 Mayıs University	40	27	67
İstanbul Medeniyet University	36	48	84
İzmir Kâtip Çelebi University	24	45	69
Kastamonu University	42	51	93
Kırıkkale University	32	38	70
Marmara University	30	32	62
Osmaniye Korkut Ata University	41	28	69

Table 1. Course numbers of universities with LIS education programmes in Türkiye

When the data in Table 1 are analysed, it is seen that Kastamonu University has the highest total number of courses (93 courses). The universities with the lowest total number of courses are Ankara Yıldırım Beyazıt University and Bartın University, both with 52 courses. In terms of the number of compulsory courses, Hacettepe University has the lowest number of compulsory courses with only 17 compulsory courses, whereas Kastamonu University has the highest number of compulsory courses with 42 compulsory courses. In terms of the number of elective courses, Çankırı Karatekin University has the highest number with 50 elective courses, while Ankara Yıldırım Beyazıt University has the lowest number with 10 elective courses. These findings reveal that there are significant differences in the curriculum structure of LIS education programmes in Türkiye.

Which subjects are emphasised in LIS education undergraduate programmes in Türkiye and to what extent do they comply with international standards?

Within the scope of this research question, it was examined which subjects are emphasised in the curricula of Library and Information Science (LIS) undergraduate programmes in Türkiye. The data obtained are presented in Figure 2.

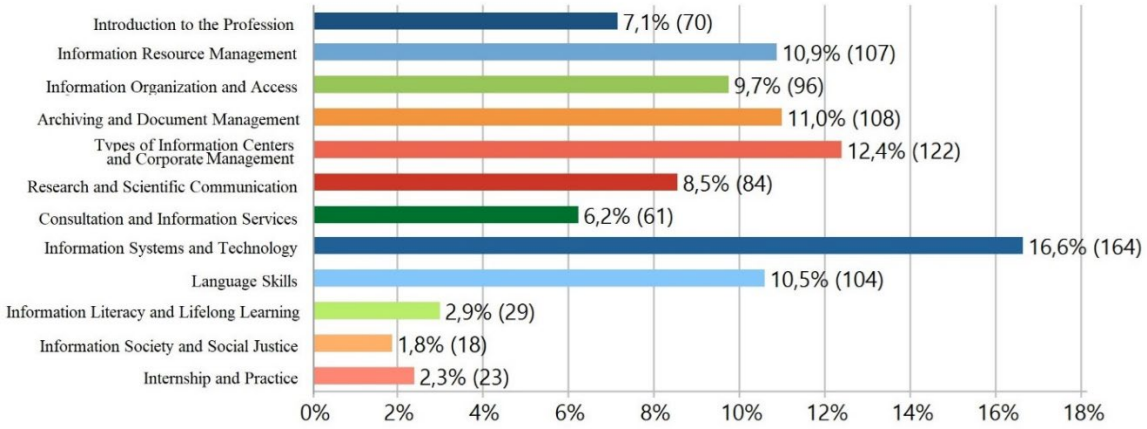

Figure 2. General distribution of courses in LIS education programmes in Türkiye

According to Figure 2, "Information Systems and Technology" (16.6%) and "Types of Information Centres and Corporate Governance" (12.4%) are the most emphasised subjects in LIS degree programmes in Türkiye. These findings demonstrate the importance of information technologies and management systems in the digital age and show that the programmes offer a strong education in these areas.

"Information Resources (Collection) Management" (10.9%) and "Language Skills" (10.5%) also have an important place. These courses make significant contributions to the development of students' skills in managing both physical and digital information resources. The high percentage of language skills shows the importance of international literature follow-up and scientific communication.

"Archiving and Document Management" (11%) and "Information Organisation and Access" (9.7%) courses also have an important place in the curriculum. These courses provide students with basic competencies in the organisation, classification and access to information.

The low proportions of courses such as "Information Literacy and Lifelong Learning" (2.9%) and "Information Society and Social Justice" (1.8%) indicate that these topics are relatively less covered in the curriculum. However, information literacy and social justice issues are of critical importance in modern information services and suggest that more emphasis should be placed on these areas.

The low rate of "Internship/Application" (2.3%) shows that practical experiences are not sufficiently included in the curriculum. Increasing the opportunities for students to put their theoretical knowledge into practice is an important requirement for the development of professional competencies.

These analyses identify the strengths and weaknesses of LIS education programmes in Türkiye, reveal the level of alignment with international standards and areas for improvement. While the programmes seem to be particularly focused on digital information management and technology, improvements are needed in areas such as information literacy, social justice and applied education. These findings provide important data for improving LIS education programmes and aligning them with international standards.

IFLA emphasises the importance of information services and technology in the digital age. The 16.6% coverage of "Information Systems and Technology" in LIS curricula in Türkiye reflects an approach consistent with this standard. However, IFLA emphasises that information literacy and lifelong learning should play an important role in library education. The 2.9% coverage of this topic in the Turkish curriculum suggests that this standard would be appropriate for further intensification of information literacy and lifelong learning courses in LIS education curricula.

ALA recommends that information resource management and access should be given extensive coverage in library education. The inclusion of "Information Resources (Collection) Management" and "Information Organisation and Access" in the curriculum in Türkiye, which account for 10.9% and 9.7% of the curriculum respectively, largely fulfils this requirement. In addition, it is important for librarianship students to develop research skills. The 8.5% coverage of this topic in the Turkish curriculum is an important result in meeting this standard.

Another umbrella organisation, ASIS&T, states that information technology should play a central role in library education. The fact that 16.6% of the curriculum in Türkiye includes this topic is consistent with ASIS&T's standards.

These analyses identify the strengths and weaknesses of LIS undergraduate programmes in Türkiye, reveal the level of alignment with international standards and areas for improvement. While the programmes seem to be particularly focused on digital information management and technology, improvements are needed in areas such as information literacy, social justice and applied education. These findings provide important data for improving LIS education programmes and aligning them with international standards.

Is there a difference between universities in the distribution of courses in the curricula of LIS education undergraduate programmes in Türkiye?

Within the scope of this research question, the distribution of courses offered in LIS undergraduate programmes of various universities in Türkiye was analysed. Table 2 below shows the number of courses offered in each university and how much weight is given to each subject area in total.

Subject Areas	Ankara University (LIS)	Ankara Yıldırım Beyazıt University (LIS)	Atatürk University (LIS)	Bartın University (LIS)	Çankırı University (LIS)	Hacettepe University (LIS)	İstanbul University (LIS)	İstanbul 29 Mayıs University	İstanbul Medeniyet University (LIS)	İzmir Kâtip Çelebi University (LIS)	Kastamonu University (LIS)	Kırıkkale University (LIS)	Marmara University (LIS)	Osmaniye Korkut Ata University (LIS)
	n	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*
Introduction to IDM Profession	8	3	4	6	2	4	7	5	5	4	12	3	0	7
Information Resources Management	13	6	8	3	5	9	6	7	13	6	9	7	7	8
Information Organisation and Access	10	10	10	7	7	5	4	3	6	6	10	5	5	8
Archiving and Document Management	5	2	8	4	7	2	21	7	19	3	5	4	15	6
Types of Information Centres and Corporate Governance	6	6	8	7	10	8	15	11	8	10	5	9	11	8
Research / Scientific Communication	5	8	3	5	5	8	5	4	6	11	6	7	4	7
Advisory and Information Services	5	2	5	3	6	7	2	3	4	5	5	6	3	5
Information Systems and Technology	12	7	10	8	15	15	6	15	13	15	16	15	12	5
Language Skills	11	5	10	3	13	0	12	6	8	4	14	6	2	10
Information Literacy / Lifelong Learning	1	1	3	3	3	2	1	2	1	1	3	6	1	1
Information Society / Social Justice	0	0	3	1	0	1	1	2	0	2	5	1	0	2
Internship / Practice	1	2	1	2	1	1	2	2	1	2	3	1	2	2
Total	77	52	73	52	74	62	82	67	84	69	93	70	62	69

Table 2. Total numbers of undergraduate LIS courses in basic competency areas

The data in the table shows that there are significant differences in the course distributions in the LIS undergraduate programmes of different universities in Türkiye. These differences vary depending on the educational priorities and curriculum design of each university.

It is seen that introductory courses to the LIS education profession are more intensive at Kastamonu University (n=12). The fact that Kastamonu University has more courses in this subject category compared to other universities suggests that Kastamonu University attaches importance to students' solid entry into the profession. This provides an important contribution in terms of gaining professional identity and awareness.

Courses in the information systems and technology subject category are highly represented in all universities in general, and are particularly concentrated in the curricula of Izmir Kâtip Çelebi (n=16), Hacettepe (n=15) and Istanbul (n=15) universities. This shows the importance given to the

development of management skills and enables students to acquire the knowledge and skills necessary to effectively manage knowledge centres.

In the topic category of information centre types and corporate governance, it is seen that Marmara (n=11), Hacettepe (n=15) and Istanbul (n=15) universities place a significant emphasis on this topic in their LIS programmes. These data show that organising and providing access to information is important and supports LIS professionals to provide fast and effective access to information.

It is seen that the courses in the subject category of information organisation and access are equally distributed in Atatürk, Ankara, Ankara Yıldırım Beyazıt and Kastamonu (n=10) universities. This indicates that organising and providing access to information is important.

Hacettepe (n=21), Istanbul Medeniyet (n=19) and Marmara (n=15) universities offer more courses in the subject category of archiving and document management than other universities. These data show that these universities place a special emphasis on archiving and document management and reflect the aim of training professionals specialised in these fields.

In the subject category of information resources management, Ankara (n=13), Istanbul civilisation (n=13), Hacettepe (n=9) and Kastamonu (n=13) universities have these courses predominantly. These data emphasise the importance of effective management of information resources and ensure that resources are used correctly and efficiently.

In the subject category of language skills, Kastamonu (n=14), Çankırı (n=13) and Istanbul (n=12) universities emphasise these courses more. The fact that there are no courses in this area in the curriculum of Hacettepe University is attributed to the fact that the programme at this university offers the option of English education as a preparation. This indicates that language skills are critical for following international literature and scientific communication.

Courses in the subject category of information literacy and lifelong learning were generally underrepresented. While Kırıkkale University (n=6) offers more courses in this area, other universities offer fewer courses in this subject. These data may indicate that information literacy is not sufficiently included in the curricula and that deficiencies in this area need to be addressed.

In the subject category of information society and social justice, Kastamonu University (n=5) emphasised the subject more. These data show that some universities place greater emphasis on social justice and reflect that the importance given to these issues in LIS education varies among universities..

LIS education programmes in Türkiye appear to be largely in line with international standards in key areas such as information technologies and systems, information organisation and access, and information resources management. This indicates that the programmes are structured in accordance with international standards and professional competencies. However, topics such as information literacy, social justice and internship/practicum need to be included more in the curriculum. Deficiencies in these areas may cause students to be unable to fully develop their professional competencies.

There are significant differences in course distribution between universities. These differences may be due to each university's own priorities and educational approaches. However, it also shows that some universities provide more in-depth training in certain subjects.

These findings reveal the extent to which LIS undergraduate programmes in Türkiye are in line with international qualifications and standards and in which areas they need to improve. The data obtained play an important role in determining the strengths of the programmes and the areas that need to be developed.

Which themes emerge as prominent in LIS education in Türkiye based on the word associations of course titles in the curricula of undergraduate programmes?

An analysis of the word associations of course titles in the curricula of LIS (Library and Information Science) undergraduate programmes in Türkiye is important for understanding the themes and topics around which these programmes are shaped. This analysis shows which concepts are prominent in LIS education and how the curricula are structured. The graph below presents the data obtained within the scope of this research question. Figure 3 shows a cloud plot of the word associations of course names in LIS education undergraduate programmes.

Figure 3. Word associations of course names in LIS education undergraduate programmes in Türkiye

Figure 3 shows how often certain words are used together with other words. Words such as "information", "management", "system(s)", "resource(s)", and "document" are among the most frequently co-occurring words, indicating that information management and document management issues occupy a central place in education.

When the prominent word associations in the figure are analysed in detail, it is seen that the words "information management" and "document management" are frequently used together. This indicates that information management occupies an important place in the curriculum and that there is a focus on these subjects. It also reflects the importance given to archiving and document management. The main reason for the prominence of these two groups of words is the fact that the names of the education programmes in the field of LIS in Türkiye are called information and document management programmes. This causes the term library to be deemphasised. It also shows that the word association "information centre", which is a more general term instead of library, is kept in the foreground. In many countries offering education in the field of LIS, it is seen that the words "library" and "information science" are more prominent, and even the word "library" is used more in the names of programmes and institutions. In Türkiye, before 2002, education

activities were carried out as the Department of Librarianship and the Department of Archiving. This historical change explains the difference in the naming and focus areas of LIS programmes in Türkiye.

It also shows that word combinations such as "information resources", "information services" and "information centres" are priority areas in education. This indicates that the topics of information services, resource management and information centres are widely covered in the curriculum. The effective management of information resources, the quality of information services and the operation of information centres are critical in modern LIS education and the wide coverage of these topics in the curriculum allows students to acquire these skills.

Words such as "research methods" and "scientific communication" emphasise the importance of research and scientific communication. This indicates that courses aimed at developing students' scientific research and communication skills are present in the curriculum. Research methods help students to develop their scientific approach in the processes of accessing and generating information, while scientific communication courses ensure that this information is conveyed in an effective and understandable way.

The combined use of the words "language skills" and "information literacy" emphasises that language skills and literacy are important educational topics. This implies that language skills, which are critical for international literature tracking and scientific communication, are included in the curriculum. While language skills facilitate students' access to global information sources, information literacy provides them with the necessary competencies to evaluate and utilise this information.

Overall, these analyses show that LIS education programmes in Türkiye offer a comprehensive education in various information and document management fields and aim to provide students with both theoretical and practical skills. The fact that the curricula cover a wide range of subjects supports graduates to be successful as information professionals in various fields.

Discussion

The findings of this study provide important data for assessing the level of alignment of Library and Information Science degree programmes in Türkiye with international standards and the competencies set by professional bodies. The analyses show that there are strengths in some areas, but improvements are needed in some other critical areas.

LIS curricula in Türkiye seem to show a strong direction in terms of focussing on digital information management and technologies. This reflects the digital age's need for information services and is considered as an important step towards developing students' competencies in this field. However, due to the rapid development and change of digital technologies, programmes need to continuously update their course content in this area and ensure that students are engaged in practical applications. It is critical for students to reinforce their theoretical knowledge with real world applications for their professional success.

Information literacy and lifelong learning are vital for individuals to respond to the ever-changing information needs of individuals in the information society. However, it is seen that these topics are not sufficiently covered in the curricula in Türkiye. This situation shows that students may not be able to develop information literacy skills and lifelong learning habits. In this context, more emphasis on information literacy education will support students' professional and personal development.

The management and access of information resources is a core component of library and information science education. LIS programmes in Türkiye offer sufficient course content in this area and provide students with comprehensive training in the organisation and access of

information resources. However, it is important to provide more hands-on training in digitising information resources and providing access to these resources. In the digital transformation process, developing skills in these areas will increase the competitiveness of graduates in the labour market.

Information society and social justice issues are of critical importance in the field of librarianship and information science and include efforts to ensure that information services are equally accessible to all. However, LIS curricula in Türkiye do not sufficiently address these issues. Including more social justice and information society topics in the curriculum will increase students' awareness of these issues and strengthen their social responsibility.

Practical training and internship programmes are of great importance for students to put their theoretical knowledge into practice and gain professional experience. The limited number of internship and practice opportunities in LIS programmes in Türkiye may lead to students not being able to develop their professional skills sufficiently. In line with the framework competencies recommended by the supreme organisations (IFLA, ALA, ASIS&T), increasing the number of practical trainings will enable students to be more prepared for business life after graduation.

Limitations

Although all LIS programmes in Türkiye were included in the study, there are some limitations at the international level. Firstly, the study only examines LIS programmes in Türkiye and therefore the findings do not provide direct comparability with LIS programmes in other countries. Educational systems, cultural and academic approaches in different countries may vary, making it difficult to conduct an overall global standardisation analysis.

In addition, in a field where international standards are constantly evolving, there is a need to update the criteria and standards used in the study over time. The criteria used in this study belong to a certain period, and different results may emerge as a result of changes and updates in the following years. This may limit the validity of the findings of the study over time.

Another limitation is the timeliness of the data used to analyse the curricula. The study is based on the websites and documents published by the universities. The timeliness of this information is not guaranteed. Updates and changes to be made by universities in their curricula may affect the validity of the findings of the study.

Finally, the fact that the study was limited to curricula makes it difficult to make a comprehensive assessment of the quality and effectiveness of education. The quality of education is affected by factors such as teaching methods, qualifications of teaching staff and students' interest in courses as well as course contents. Therefore, the exclusion of factors such as teaching quality and student satisfaction limits the scope of the study.

Conclusion

This study aimed to analyse the curricula of Library and Information Science (LIS) undergraduate programmes in Türkiye to determine the extent to which they are aligned with international standards and to identify the strengths and weaknesses of the programmes. The findings suggest that LIS programmes in Türkiye offer a strong foundation in general, but improvements are needed in specific areas.

Firstly, LIS programmes in Türkiye offer a wide range of education, focusing on core subjects such as information management, document management, librarianship and archiving. However, there is a need to strengthen the curricula in digital information management and technological innovations. It is important to develop students' practical skills in these areas through more practical courses and laboratory work.

In terms of alignment with international standards, it was found that LIS programmes in Türkiye comply with generally accepted basic principles, but some programmes need to provide more global content and perspective. In particular, topics such as information literacy, digital cataloguing and data management need to be emphasised more.

There are significant differences between the programmes in terms of course content and number of courses. This situation causes diversity in the experience and knowledge gained by students from different universities. Eliminating these differences and establishing a more standardised curriculum structure will contribute to improving the quality of education at national level.

Enriching the curriculum on topics such as access to social information, information ethics and lifelong learning will help students better understand their professional and ethical responsibilities. In addition, increasing practical experience through compulsory internship programmes and application laboratories will make graduates more competitive in the labour market.

In conclusion, LIS programmes in Türkiye provide a solid foundation in the field of information and document management and can be strengthened by making some improvements in digital transformation and compliance with international standards. Future studies can contribute to the curriculum development processes in line with these findings and move LIS education in Türkiye to a more competitive position at the international level.

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References

American Library Association (ALA). (2023). *Core competences of librarianship - Final version.* https://www.ala.org/educationcareers/careers/corecomp/corecompetences (Archived by the Internet Archive at https://web.archive.org/web/20250604050801/ https://www.ala.org/educationcareers/careers/corecomp/corecompetences)

Ankara University. (2023). *Undergraduate program course contents, information and document management 2023 - 2024 education program.* http://bilgibelge.humanity.ankara.edu.tr/lisans-programi-ders-icerikleri/ (Archived by the Internet Archive at https://web.archive.org/web/20250604051315/https://bilgibelge.humanity.ankara.edu.tr/wp-content/uploads/sites/136/2024/11/BBY-2024-2025-Egitim-Programi.pdf)

Ankara Yıldırım Beyazıt University. (2023). *Curriculum information and document management department curriculum table.* https://aybu.edu.tr/IDM/tr/sayfa/1259/M%C3%BCfredat (Archived by the Internet Archive at https://web.archive.org/web/20250604045947/https://aybu.edu.tr/IDM/tr/sayfa/1259/M%C3%BCfredat)

Association for Information Science and Technology (ASIS&T). (2001). *ASIS&T educational guidelines*. https://wordpressstorageaccount.blob.core.windows.net/wp-media/wpcontent/uploads/sites/946/2019/07/Educational-Guidelines.pdf (Archived by the Internet Archive at https://web.archive.org/web/20250604052918/https://wordpressstorageaccount.blob.core.windows.net/wp-media/wp-content/uploads/sites/946/2019/07/Educational-Guidelines.pdf)

Association of College and Research Libraries (ACRL). (2018). *Standards for libraries in higher education*. https://www.ala.org/acrl/standards/standardslibraries (Archived by the Internet Archive at https://web.archive.org/web/20250604053338/https://www.ala.org/acrl/standards/standardslibraries)

Atatürk University. (2023). *Undergraduate course list*. https://birimler.atauni.edu.tr/bilgi-ve-belge-yonetimi/lisans-ders-listesi/ (Archived by the Internet Archive at https://web.archive.org/web/20250604061820/https://birimler.atauni.edu.tr/bilgi-ve-belge-yonetimi/wp-content/uploads/sites/86/2020/07/2023-2024-Mufredat-1.pdf)

Bailey, E. C. (2010). Educating future academic librarians: An analysis of courses in academic librarianship. *Journal of Education for Library and Information Science*, 51(1), 30-42.

Bartın University. (2023). *Course schedules, 2023-2024 academic year fall semester course schedules*. https://edebiyat.bartin.edu.tr/ders-programlari.html (Archived by the Internet Archive at https://web.archive.org/web/20250604063848/https://ubys.bartin.edu.tr/AIS/Common/ExportPDF/GetPDF?FileName=coursedetail&HtmlUrl=db6c1469-485e-4a47-8c48-523e387b9cef.html&HtmlUrlType=1&p1=11)

Bartlett, J. C., & Dalkir, K. (2020). Librarianship and beyond: The twenty-year evolution of an interdisciplinary curriculum. *Education for Information*, 36(2), 139-155. https://doi.org/10.3233/EFI-190300

Bayraktar, A. (2021). Courses on computer programmes and programming languages taught in information and document management curricula in Turkey [Türkiye'de Bilgi ve Belge Yönetimi Müfredatlarında Okutulan Bilgisayar Programlarına ve Programlama Dillerine Yönelik Dersler]. *Information and Document Research*, 16, 103-131.

Çakın, İ. (2012). 40 years in the education of information professionals: Changes in the undergraduate program of Hacettepe University [Bilgi Profesyonellerinin Eğitiminde 40 Yıl: Hacettepe Üniversitesinin Lisans Programındaki Değişiklikler]. *Turkish Librarianship*, 26(2), 262-290. https://dergipark.org.tr/en/pub/tk/issue/48847/622321

Calvert, P. (2017). Robots, the quiet workers, are you ready to take over? *Public Library Quarterly*, 36(2), 167-172. https://doi.org/10.1080/01616846.2017.1316769

Çankırı Karatekin University. (2023). *Information and document management course information package*. https://bbs.karatekin.edu.tr/dersPlani.aspx?fkod=06&bkod=06 (Archived by the Internet Archive at https://web.archive.org/web/20250604085049/https://bbs.karatekin.edu.tr/dersPlani.aspx?fkod=06&bkod=06)

Corrado, E. M. (2021). Artificial intelligence: The possibilities for metadata creation. *Technical Services Quarterly*, 38(4), 395-405. https://doi.org/10.1080/07317131.2021.1928764

Cox, A. (2021). Exploring the impact of artificial intelligence and robots on higher education through literature-based design fictions. *International Journal of Educational Technology in Higher Education*, 18(1). https://doi.org/10.1186/s41239-020-00237-8

Dişli, M., & Yılmaz, B. (2020). Evaluation of the syllabi of information and records management departments in Turkey in terms of intellectual freedom education [Türkiye'deki Bilgi ve Belge Yönetimi Bölümleri Ders Programlarının Düşünce Özgürlüğü Eğitimi Açısından Değerlendirmesi]. *Turkish Librarianship*, 34(4), 638-662. https://doi.org/10.24146/tk.777559

Fernandez, P. (2016). Through the looking glass: Envisioning new library technologies' understanding artificial intelligence. *Library Hi Tech News*, 33(3), 20-23. https://doi.org/10.1108/LHTN-01-2016-0002

Hacettepe University. (2023). *Information and document management course information package.* https://bilsis.hacettepe.edu.tr/oibs/bologna/index.aspx?lang=tr&curOp=showPac&curUnit=520&curSunit=396# (Archived by the Internet Archive at https://web.archive.org/web/20250604085423/https://bilsis.hacettepe.edu.tr/oibs/bologna/index.aspx?lang=tr&curOp=showPac&curUnit=520&curSunit=396)

Hervieux, S., & Wheatley, A. (2021). Perceptions of artificial intelligence: A survey of academic librarians in Canada and the United States. *The Journal of Academic Librarianship*, 47(1). https://doi.org/10.1016/j.acalib.2020.102270

Hu, S. (2013). Technology impacts on curriculum of library and information science (LIS) - A United States (US) perspective. *LIBRES: Library and Information Science Research Electronic Journal*, 23(2), 1-9. https://doi.org/10.32655/LIBRES.2013.2.2

International Federation of Library Associations and Institutions (IFLA). (2022). *Guidelines for professional library/information educational programs*. https://repository.ifla.org/handle/20.500.14598/1987 (Archived by the Internet Archive at https://web.archive.org/web/20250604090015/https://repository.ifla.org/items/9bc27b50-842b-40c6-ad78-e487d0fad8c7)

Islamoğlu, A. H., & Alnıaçık, Ü. (2014). *Research methods in social sciences [Research methods in social sciences]*. Beta Publishing House.

İstanbul 29 Mayıs University. (2023). *Undergraduate curriculum.* https://ebs.29mayis.edu.tr/Pages/CoursePlan.aspx?lang=trTR&academicYear=2024&facultyId=1&programId=7&menuType=unit (Archived by the Internet Archive at https://web.archive.org/web/20250604090555/https://ebs.29mayis.edu.tr/Pages/CoursePlan.aspx?lang=tr-TR&academicYear=2024&facultyId=1&programId=7&menuType=unit)

İstanbul Medeniyet University. (2023). *Department of information and document management program content*. https://ebs.istanbul.edu.tr/home/dersprogram/?id=1091&yil=2017 (Archived by the Internet Archive at https://web.archive.org/web/20250604091717/https://bilgibelge.medeniyet.edu.tr/tr/egitim/egitim-plani)

İstanbul University. (2023). *Curriculum department of information and document management curriculum table*. https://ebs.istanbul.edu.tr/home/dersprogram/?id=1091&yil=2017 (Archived by the Internet Archive at https://web.archive.org/web/20250604091151/https://ebs.istanbul.edu.tr/home/program/?id=1091&yil=2024)

İzmir Katip Çelebi University. (2023). *Undergraduate curriculum.* https://bby.ikcu.edu.tr/S/21033/lisans-ogretim-programi (Archived by the Internet Archive at https://web.archive.org/web/20250604092358/https://bby.ikcu.edu.tr/S/21033/lisans-ogretim-programi)

Kastamonu University. (2023). *Information and document management course catalog*. https://itbf.kastamonu.edu.tr/index.php/boeluemler/bilgi-ve-belge-yoenetimi (Archived by the Internet Archive at https://web.archive.org/web/20250604093001/https://itbf.kastamonu.edu.tr/index.php/boeluemler/bilgi-ve-belge-yoenetimi)

Kırıkkale University. (2023). *Department of information and document management curriculum*. https://obs.kku.edu.tr/oibs/bologna/index.aspx?lang=tr&curOp=showPac&curUnit=1&curSunit=89421# (Archived by the Internet Archive at https://web.archive.org/web/20250604093225/https://obs.kku.edu.tr/oibs/bologna/index.aspx?lang=tr&curOp=showPac&curUnit=1&curSunit=89421)

Markey, K. (2004). Current educational trends in the information and library science curriculum. *Journal of Education for Library and Information Science*, 45(4), 317-339.

Marmara University. (2023). *Current undergraduate curriculum (2014 and later)*. https://bby-fef.marmara.edu.tr/mufredat/lisans (Archived by the Internet Archive at https://web.archive.org/web/20250604093449/https://bby-fef.marmara.edu.tr/mufredat/lisans)

Medical Library Association. (2017). *Competencies for lifelong learning and professional success*. https://www.mlanet.org/wp-content/uploads/2024/07/MLA-Professional-Competencies-2017-Full-Report.pdf (Archived by the Internet Archive at https://web.archive.org/web/20250604093618/https://www.mlanet.org/wp-content/uploads/2024/07/MLA-Professional-Competencies-2017-Full-Report.pdf)

Osmaniye Korkut Ata University. (2023). *Department of information and document management course list*. https://obs.osmaniye.edu.tr/oibs/bologna/index.aspx?lang=tr&curOp=showPac&curUnit=2017&curSunit=5546# (Archived by the Internet Archive at https://web.archive.org/web/20250604093957/https://obs.osmaniye.edu.tr/oibs/bologna/index.aspx?lang=tr&curOp=showPac&curUnit=2017&curSunit=5546)

Tait, E., & Pierson, C. M. (2022). Artificial intelligence and robots in libraries: Opportunities in LIS curriculum for preparing the librarians of tomorrow. *Journal of the Australian Library and Information Association*, 71(3), 256-274. https://doi.org/10.1080/24750158.2022.2092295

Tonta, Y. (2012). Updating the undergraduate curriculum of the department of information management of Hacettepe University (2009-2011) [Hacettepe Üniversitesi Bilgi ve Belge Yönetimi Bölümü Lisans Programının Güncelleştirilmesi 2009-2011]. *Turkish Librarianship*, 26(2), 291-314. https://dergipark.org.tr/en/pub/tk/issue/48847/622322

Usta, G. (2017). *Information and document management education at Universidad Complutense de Madrid and Istanbul University: A comparative analysis* [Universidad Complutense de Madrid ile İstanbul Üniversitesi'ndeki Bilgi ve Belge Yönetimi eğitimi: Karşılaştırmalı bir Analiz] [Doctoral dissertation, İstanbul University].

Wise, S., Henninger, M., & Kennan, M. A. (2011). Changing trends in LIS job advertisements. *Australian Academic & Research Libraries*, 42(4), 268-295. https://doi.org/10.1080/00048623.2011.10722241

Yi, K., & Turner, R. (2014). The current landscape of the school librarianship curricula in USA. *Journal of Education for Library and Information Science*, 55(4), 303-321. https://www.jstor.org/stable/43686994

Yılmaz, B. (2018). *Evaluation of the curriculums in information management departments inTurkey in terms of archival and record management education* [Türkiye'de Bilgi ve Belge Yönetimi Bölümleri Ders Programlarının Arşivcilik ve Belge Yönetimi Eğitimi Açısından Değerlendirilmesi]. *Knowledge Management*, 1(1), 44-62. https://doi.org/10.33721/by.403258

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