

Identifying essential soft skills for Library and Information Science students: a crucial component of the LIS curriculum

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Abstract

Purpose – This study aims to identify the most critical soft skills for success in both academic and professional pursuits within the field of Library and Information Science.

Design/methodology/approach – This study employed a mixed-methods design to identify the various components of a Library and Information Science curriculum. Data collection involved reviewing websites of Library and Information Science programs at top universities worldwide, analyzing YouTube videos, examining published research and conducting interviews with Library and Information Science students and professionals. Additionally, the study utilized Web of Science to gather relevant data. This comprehensive approach enabled the study to delineate the various components that comprise the typical curriculum.

Findings – The Library and Information Science curricula can be categorized into three primary skill sets: soft skills, hard skills and research skills. This passage specifically addresses soft skills, which encompass the interpersonal abilities and personal qualities essential for success in the field. The study identified 18 key soft skills crucial for the professionals. These include adaptability, effective public speaking, persistence, open-mindedness and a positive attitude. Notably, these skills hold significant value regardless of the specific information role or work environment.

Practical implications – The curriculum should no longer solely prioritize textbook knowledge. Curriculum developers must ensure students are equipped with the real-world skills necessary for success, particularly soft skills such as communication and teamwork.

Originality/value – This study is the first attempt in the country that tries to identify the most essential soft skills needed for Library and Information Science students.

Keywords Science studies, LIS education, Curriculum development, Competency, Soft skills

Paper type Research paper

Introduction

Library and Information Science (LIS), also referred to as Librarianship, Information Studies, Knowledge and Information Science or variants thereof, emerged as an academic discipline in 1887 under the pioneering efforts of Melville Dewey at Columbia University. The first doctoral program in LIS was established at the University of Chicago in 1920, marking a significant milestone in the formal recognition and advancement of this field (Åström, 2006; Buckland, 1996). Just to note, Chicago's degree was technically interdisciplinary; the University of Illinois offered the first LIS-specific Ph.D. Nevertheless, numerous individuals worldwide, such as Ranganathan, Williamson and Gaude have contributed to the development and expansion of this field. Throughout its history, LIS has undergone a series of significant progresses and transformations, driven by evolving societal needs, technological advancements and shifts in academic perspectives. These transformations have encompassed changes in the discipline's nomenclature, the nature of library and



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information center services, societal attitudes towards information professionals, student demands for specialized education, and the creation of new master's and doctoral programs.

Scientific inquiry and academic disciplines have continuously evolved to encompass a deeper understanding of the world and effectively address human challenges. Consequently, academic disciplines have adapted in tandem with the transformative shifts in society and the natural world (Butler, 1933). Moreover, scientific disciplines, with their multifaceted nature, are particularly susceptible to the evolving landscape of knowledge (Holley, 2009). Owing to its multifaceted and interdisciplinary character (De Beer, 2015; Huang and Chang, 2011; Prebor, 2010; Saracevic, 1995), LIS is more susceptible to the world's evolving trends and advancements. Consequently, it typically necessitates more frequent revisions than other academic disciplines. The changes include social, political, intellectual and technological development. A critical examination of academic literature on employment in the field of LIS in Iran (Nowkarizi, 2019) reveals a concerning trend of relatively high (about 50%) unemployment among LIS graduates. This is particularly striking given that sociologists have identified our current society as an "information society" (Castells, 2020). In addition, Yew *et al.* (2022) underscore the limited scope and geographical focus of existing research on LIS curricula, particularly in non-North American and non-European contexts. This shortage hinders curriculum designers' efforts to comprehensively understand the scientific underpinnings of the discipline and effectively translate this knowledge into curriculum development. The development of soft skills is a crucial component of the curriculum that merits consideration. These skills, as opposed to acquired knowledge, refer to desirable personal attributes necessary for success in various employment settings. Common sense, interpersonal skills and a positive, adaptable attitude are all examples of soft skills (Decker, 2020). Saunders (2019) demonstrated that soft skills hold greater importance than hard skills. However, despite their growing significance, LIS programs prioritize the development of hard skills over soft skills (Cobb *et al.*, 2015; Lowry, 2022). Furthermore, research on the integration of soft skills into the LIS curriculum within the country remains absent. To address this identified gap in the current LIS curriculum, this study employs a mixed-methods design to investigate which soft skills are essential for inclusion and the rationale behind their importance. This investigation is vital to develop a well-defined and comprehensive framework for LIS education. A heightened awareness among the academic community – faculty members, students, graduates, employers and curriculum developers – is instrumental in fostering the advancement of the field and ensuring successful employment outcomes for graduates.

Literature review

There are various perspectives on how to approach soft skills. Nevertheless, soft skills remain essential for the effective performance of daily tasks and user satisfaction. These skills are crucial for professional success across diverse information environments and job roles (Saunders and Bajjal, 2021). In this context, several theoretical frameworks examine the role of soft skills in graduate employability. For example, Bisschoff and Massyn (2025) have proposed a comprehensive framework that explains the interrelationship among skills, personal attributes and graduate employability. Furthermore, Marin-Zapata *et al.* (2022) proposed a general model linking soft skills to job performance. In this model, the development of competencies – comprising knowledge, motivation, and skills – is considered essential for the improvement of job performance. Within the outlined frameworks, skills are classified into two distinct categories: soft skills and hard skills. Unlike hard skills, which represent technical abilities acquired through training, education, or experience, soft skills encompass a set of non-technical competencies that influence how individuals perform their tasks and contribute to their professional success. Simply say, soft skills are those which involve a person's interaction with the social environment and are typically developed through personal experience and reflection (Junrat *et al.*, 2014).

Several established frameworks merit consideration when examining the dimensions and components of soft skills. One such model is the SPOCC framework, which delineates five core dimensions: social skills, personal attributes, organizational capabilities, cooperative abilities and creative thinking skills (RIC Novo Mesto, 2018). Social skills refer to the competencies utilized in communicating and interacting effectively with others. These elements can be categorized into five key components: conflict management, communication skills, accountability, intercultural competence and public presentation. Personal skills refer to the characteristics that shape an individual's behavior and mode of expression. These include competencies such as stress management, self-awareness, personal development and emotional intelligence. Organizational skills are intended to develop core competencies that are vital across both commercial and non-commercial sectors, encompassing customer service orientation, time management, strategic planning and leadership. Cooperative skills play a vital role in shaping interpersonal relations and are crucial for effective communication. These skills include the management of teamwork, facilitation of team building, adaptability and flexibility, comprehension of diverse working styles and the promotion of collaboration and networking. Creative thinking skill refers to the capacity to approach concepts or problems from novel perspectives. It covers innovativeness, continuous improvement, analytical reasoning and the effective implementation of changes. Qizi (2020) referred to a three-dimensional framework of soft skills comprising the personal, social and methodological domains. The personal dimension includes attributes such as learning agility, professional ethics, self-awareness and resilience to stress. The social dimension encompasses abilities like communication, teamwork, negotiation and cultural adaptability. Finally, the methodological dimension comprises proficiencies in continuous improvement, analytical reasoning, decision-making and information management. In the model advanced by Marin-Zapata *et al.* (2022), soft skills are delineated into two primary domains: intrapersonal and interpersonal skills. Intrapersonal skills refer to an individual's internal characteristics and capacities for self-regulation, while interpersonal skills involve the competencies necessary for effective interaction and communication with others. However, the significance of soft skills has been acknowledged across a wide range of disciplines and industries, including engineering (Barhouni, 2023), management (Gunaratne *et al.*, 2021) and nursing (Liebrecht and Montenery, 2016); LIS is no different (Saunders and Bajjaly, 2021). In recent years, researchers have increasingly focused on the significance and methods for integrating soft skills education into LIS curriculums. The paper reviews the most important soft skills studies in some relevant disciplines, categorized by their methodological approaches.

Quantitative approach

The quantitative approach to research rests on the principle that a complex phenomenon can be decomposed into its constituent parts (Connaway and Radford, 2016). This approach, also known as structuralism, views a phenomenon as a process comprised of various components (Pickard, 2013). Following this logic, the structure of soft skills can be dissected into its components, such as communication skills and personality traits. In doing so, researchers can then formulate pertinent questions for each component and present them in a questionnaire format. In this field of study, there is frequent discussion regarding the significance of soft skills, the popularity of methods for their instruction and the correlation between these factors and other variables, such as success in the workplace. The findings of these studies are typically presented using statistical analysis. For example, Hendarman and Tjakraatmadja (2012) examined the relationships between soft skills (self-efficacy, information seeking and conceptual thinking), hard skills and both technical and non-technical innovativeness among knowledge workers in the knowledge economy era. The researchers utilized a combined sampling approach, employing both judgment sampling and stratified random sampling to distribute questionnaires to 60 employees at a housewares porcelain company. The sample included staff from administration, middle-level management and high-level management.

The study's findings revealed that only information seeking, categorized as a soft skill, had a positive influence on technical innovativeness.

Concerning the relationship among soft skills and social interaction and career advancement, [Majid et al. \(2012\)](#) investigated the relationship among the mentioned factors through a survey of 188 business management students. Their findings emphasized the critical role of five specific soft skills: teamwork and collaboration, decision-making, problem-solving, time management and critical thinking.

In a 2016 study, Ashalatha utilized a questionnaire to gather the opinions of 25 LIS professionals regarding soft skills. The findings revealed that eleven soft skills were deemed essential for qualified librarians. These skills included listening, communication, interpersonal skills, public relations, customer service, leadership, teamwork, negotiation, writing, teaching, presentation, time management and conflict resolution.

[Ahmad et al. \(2017\)](#) employed a questionnaire to investigate the preferred modes of soft skills learning among 372 university information professionals, along with any variations in their opinions based on gender, job titles and experience. The study found that mentoring sessions by experts were the most preferred method to learn soft skills, followed by learning from colleagues. Additionally, the preference for mentoring sessions was greater among females than males. There were significant differences of opinion regarding the effectiveness of mentoring sessions between librarians and assistant librarians. Furthermore, statistically significant differences were observed between more and less experienced individuals in their preference for both real project/assignment-based methods and mentoring sessions. Finally, the study also found statistically significant differences in preferences for formal online courses and self-training through reading books between experience levels.

In another study, [Saunders and Bajjaly \(2021\)](#) investigated the integration of soft skills into LIS courses taught by faculty members at schools with accredited master's degree programs in the United States and Canada. Their study employed a survey. The researchers distributed the survey to 2,577 LIS faculty members via direct email in the winter of 2020, utilizing Qualtrics software. The survey yielded 176 responses. The findings revealed that communication and interpersonal skills were considered most important by the faculty members. Additionally, the study indicated that half of the faculty members provided direct instruction in eight out of the ten identified soft skills.

Regarding the relationship between soft skills and work productivity among library professionals, [Hamid and Younus \(2022\)](#) conducted a survey. Data were collected through an online questionnaire ($n = 287$) distributed to academic library professionals working in the central libraries of universities and higher education institutions in Punjab and Islamabad. The findings showed that soft skills had a significant impact on the work productivity of library professionals. Additionally, no statistically significant differences were found in library professionals' perceptions of the effectiveness of soft skills based on their demographic characteristics.

In her study, [Lowry \(2022\)](#) investigated the significance of soft skills for technical services professionals in academic libraries. These soft skills included the ability to interact with diverse communities, cultural competence, customer service, teamwork, writing, interpersonal communication skills and the ability to engage in reflective practice grounded in diversity and inclusion. To recruit participants, the call for participation was distributed electronically through discussion lists. A total of 220 valid responses were collected through questionnaires. The findings indicated that interpersonal communication skills and teamwork were considered the most important by the respondents. Notably, 94% of respondents rated interpersonal communication skills as very important or extremely important and 90% gave the same rating to teamwork skills.

Qualitative approach

Compared to the quantitative approach, the qualitative approach offers a more natural and holistic perspective on problem-solving. It prioritizes the mental aspects of human behavior

and experiences, focusing on the “why” behind phenomena (Connaway and Radford, 2016). The approach emphasizes description, explanation and exploration of concepts and phenomena (Creswell and Poth, 2016). Consequently, qualitative research has been instrumental in exploring the emergence of new soft skills required for information jobs and their significance in these fields. For example, Ahmad *et al.* (2021a) conducted in-depth interviews with 21 information professionals employed by public sector universities in Pakistan. The interviews included participants from both Islamabad and the provincial capital, Peshawar. A snowball sampling technique was used to identify participants, with the focus on uncovering continuous professional development (CPD) opportunities related to the information professionals’ soft skills. The research findings revealed that only three information professionals participated in CPD opportunities specifically focused on soft skills development. Despite the low participation rate, over half of the information professionals surveyed indicated that CPD programs had a generally positive (“good”) impact on their soft skills development. This positive perception is juxtaposed with the finding that over half of the participants also reported very limited availability of CPD training opportunities focused on soft skills. The study further identified communication and persuasion skills, self-management skills and interpersonal skills as the top three soft skill categories for which information professionals expressed the strongest desire for additional CPD programming.

Kolchina *et al.* (2021) conducted a qualitative study aimed at the most salient soft skills among students at the Mytischki Branch of Bauman Moscow State Technical University, as well as determining which skills could be developed through various types of activities. Data collection methods included document analysis and interviews. The study subsequently identified a cluster of soft skills comprising communication, organizational, professional, self-development and social. Furthermore, the findings revealed that participation in camp activities was associated with the development of a wider range of soft skills in comparison to other forms of engagement.

Marin-Zapata *et al.* (2022) conducted a systematic review to identify the concept, theories and methods of studies about competencies and soft skills. The results indicated that there was still a lack of consensus regarding the definitions of both terms. It also found that a large portion of the papers lacked a solid theoretical foundation and improvements had to be made about the methods to help develop an understanding of competencies and soft skills.

With respect to the development of soft skills in higher education curricula, Olagunju and Soenneker (2013) examined the integration and enhancement of soft skills within the core curriculum of the Information Technology Security (ITS) program at St. Cloud State University. Their study specifically aimed to determine which of four defined categories of soft skills were fostered through the program’s nine core courses. Data were collected from students, and the results indicated that neither oral nor written communication skills demonstrated significant improvement throughout the curriculum. Moreover, only one course was found to contribute to the enhancement of soft skills in project management, problem definition and workplace communication.

Integrated approach

Several researchers, including Teddlie and Tashakkori (2009) and Creswell and Clark (2017), have critiqued both quantitative and qualitative research approaches executed individually. They advocate for mixed methods research, which integrates both quantitative and qualitative data collection and analysis, as a more successful approach. There is a growing recognition that quantitative and qualitative approaches are not mutually exclusive. The key challenge lies in effectively integrating these methods to leverage the strengths of each. Consequently, research in this field has increasingly employed a mixed-methods approach, utilizing both quantitative tools like questionnaires and qualitative tools like interviews within the same study. In this regard, Junrat *et al.* (2014) employed a mixed-methods approach to evaluate the

soft skills of university staff in Thailand. Data were collected from 149 participants using stratified random sampling based on work experience. A questionnaire was used to survey the current state and perceived need for developing soft skills among library staff at Khon Kaen University. Additionally, qualitative data were obtained through interviews with library staff. The findings revealed that the library staff's soft skills exhibited a generally moderate level of behavioral demonstration. Innovation development was identified as the skill with the lowest behavioral level, followed by communication skills, thinking and problem-solving skills and leadership skills.

In order to ascertain the most valued skills from the perspective of information professionals, [Deng et al. \(2014\)](#) employed a dual methodology. This included a survey distributed to a select group of employers ($n = 17$), followed by semi-structured phone interviews with a subsample of willing participants ($n = 10$). The findings showed that soft skills, such as teamwork, project management and time management, were identified as particularly important by the employers.

[Ahmad et al. \(2021b\)](#) employed a sequential mixed-methods research design. They collected data through a questionnaire distributed to 560 participants across 33 universities in Pakistan. Subsequently, they conducted in-depth interviews with 21 purposefully selected library and information professionals. The research findings revealed that participants' self-reported soft skills fell along a spectrum. Approximately 8, 4 and 71% of participants believed their soft skills to be very low, low and average, respectively. Conversely, only 15 and 2% rated their skills as good and excellent, respectively. Additionally, the qualitative data identified several barriers faced by university libraries and information professionals in developing their soft skills. These included a lack of administrative support, a lack of personal commitment among some staff and a lack of financial resources provided by their parent organizations.

Employing the surveys and interviews, [Bejalwar and Kherde \(2021\)](#) collected data about the soft skills of librarians. Participants included principals, teachers and students from institutions affiliated with Sant Gadge Baba Amravati University in Amravati, Maharashtra, specifically located within Western Vidarbha. The study found that among 98 librarians, approximately 13% scored below 40% on soft skills, 60% scored between 40 and 60%, 23% scored between 60 and 80% and 4% scored above 80%.

[Mabe and Bwalya \(2022\)](#) conducted a mixed-methods study to identify the essential skills required by information and knowledge management (IKM) practitioners in South Africa. The study employed a Delphi technique alongside a systematic and targeted literature review. This combined approach allowed the researchers to utilize both deductive and inductive reasoning methods, ultimately leading to more robust conclusions. The findings indicated a shift in emphasis, with soft skills now considered to be more critical for organizational success than hard skills. While a total of 57 skills were identified as important for IKM practitioners, only 17 garnered unanimous support from all respondents. These key skills included leadership, adaptability, flexibility, emotional intelligence, honesty, integrity, collaboration skills, active learning, a willingness to learn, critical thinking, ethical awareness regarding data and big data utilization, innovation, planning skills, data collection and analysis, the ability to locate, access, evaluate and transform data into information, proficiency in using new information tools and familiarity with current industry trends in big data systems.

A review of the literature revealed a growing emphasis among LIS researchers on the importance of incorporating soft skills into the field's curriculum. Notably, quantitative methods have been the dominant research approach ([Lowry, 2022](#); [Saunders and Bajjaly, 2021](#)), likely due to their structured nature and relative ease of implementation. However, qualitative methodologies, while requiring a greater investment of time and effort, have received less attention from researchers ([Marin-Zapata et al., 2022](#)). However, employing qualitative methods is crucial in this context. These methods not only facilitate the identification of new soft skills but also enable researchers to understand the rationale behind their importance, a factor of fundamental significance for developing the curriculum in our field during this current period. Several researchers within this field such as

Bejalwar and Kherde (2021) and Mabe and Bwalya (2022) have additionally employed a mixed methods approach, primarily utilizing questionnaires and interviews for data collection. Building on the existing body of literature, the necessity of incorporating soft skills development into university curricula is clearly evident. Accordingly, the present study has been conducted within the framework outlined below.

Figure 1 illustrates that a university curriculum designed to enhance students' knowledge, motivation and skills contributes to the development of competent graduates who are well-equipped to secure appropriate employment in the labor market.

Research methodology

This article presents findings from a mixed-methods study that explores LIS curriculum. Broadly speaking, there are three distinct methodological approaches, each offering advantages in its specific context (Teddle and Tashakkori, 2009). In other words, the most effective curriculum development method hinges on the specific challenges encountered. Curriculum development in any field is inherently complex and multifaceted due to the influence of various factors (Schiro, 2012). This complexity is further amplified within the field of LIS itself (De Beer, 2015; Saracevic, 1995; Huang and Chang, 2011). Therefore, a mixed-methods approach is demonstrably more suitable for curriculum design in this field compared to solely quantitative or qualitative approaches.

The precise implementation process evolved as the research progressed, but it can be broadly characterized as an iterative interplay between inductive and deductive reasoning (Creswell and Clark, 2017). Initially, a diverse array of observations and data were gathered through inductive reasoning, allowing for an understanding of the general LIS curriculum. Next, this holistic understanding was leveraged through deductive reasoning to identify the underlying relationships between the system's components and their interactions. This recursive cycle of inductive and deductive reasoning, moving from the bottom-up to the top-down and back again, was repeated at least twice to refine the conceptual framework and ensure a comprehensive grasp of the LIS curriculum (Kuckartz and Rädiker, 2019).

Concerning mixed-method, to explore the LIS curriculum utilizing a mixed-method approach, quantitative and qualitative data sources were incorporated in a comprehensive

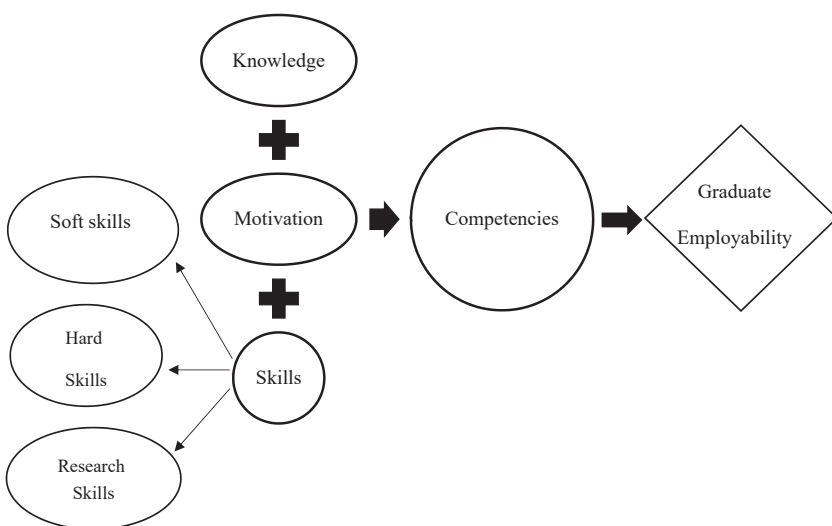


Figure 1. The importance of soft skills in university curricula. Source: Authors' own work

manner. In this respect, the study employed a diverse array of data sources, including the websites of LIS departments at renowned universities worldwide, YouTube videos, published literature, insights from students and professionals and bibliographic information retrieved from Web of Science which was provided in Table 1. Finally, the data were analyzed using MAXQDA v. 2020.

Findings

An analysis of published resources proved to be rich for identifying the soft skills required by LIS students. These documents are further detailed in Figure 2.

As depicted in Figure 2 the identified documents were grouped based on their type of publication. For each journal article, the journal’s name and, for each conference paper, the name of the conference and so on, their publishers were presented in alphabetical order. Different types of publications were identified, but the majority of the relevant literature fell into the journal article type (18 items). A comprehensive examination of the existing literature failed to identify any books specifically addressing soft skills within the Library and Information Science (LIS) discipline. This suggests that the topic of soft skills in LIS may not have been comprehensively investigated.

Demographic information for the interviewees is presented in Table 2, highlighting a high degree of diversity. The data revealed a female majority among the interviewees (22). Notably, around half possessed doctoral degrees, while only three interviewees were master’s students in Library and Information Science (LIS). The largest group (43%) comprised PhD candidates, followed by those holding PhDs (33%).

An analysis of various data sources, including literature (Figure 2) and interviews with participants (Table 2), revealed the following soft skills to be essential for all students, especially those pursuing careers in LIS.

- (1) *Adaptability or flexibility:* In all industries and professional settings, a willingness to embrace change and adapt to new circumstances would be a crucial factor for achieving career success (Peng, 2019). As the participants (including interviewee

Table 1. General information of data source

Row	Data source		Description	Number
1	Official websites of universities		An analysis of the websites of the top 200 universities worldwide, as ranked by the Webometrics ranking database	96
2	Videos on YouTube	IFLA’s channel	IFLA was selected due to its status as a non-profit international organization that represents the interests of the global library and information community. Furthermore, its consistent dissemination of information through video recordings of its activities on YouTube served as an additional contributing factor	47
		Other channels	A general search was also conducted on YouTube	111
3	Participants		Interviews were conducted with participants representing diverse gender identities and educational backgrounds	30
4	Articles		Various databases such as Springer, Emerald, Sage and Elsevier were searched	239
5	Bibliographic information on WOS		Web of Science is a leading global citation database, providing access to bibliographic information derived from reputable and authoritative sources	8,000
6	Job advertisements		Job advertisements from IFLA and several domestic databases were reviewed	110

Source(s): Authors’ own work

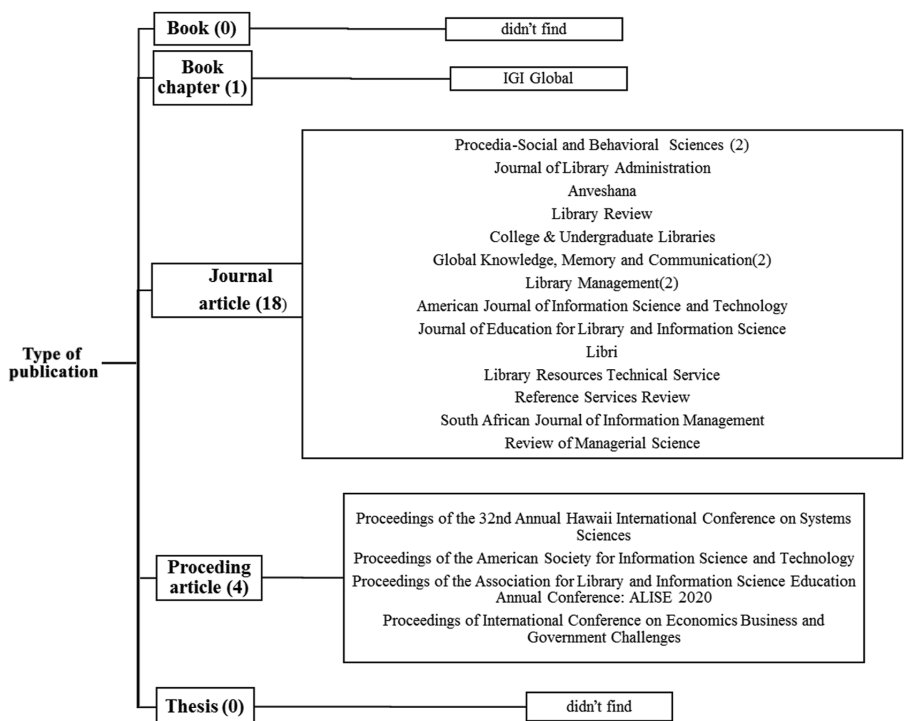


Figure 2. Type of the identified documents publication. Source: Authors' own work

Table 2. Demographic information of interviewees

Row	Gender	Degree	Number
1	Man	Ph.D	0
		Ph.D candidate	5
		Master	3
		Master student	0
2	Woman	Ph.D	10
		Ph.D candidate	8
		Master	1
		Master student	3
3	Sum	Ph.D	10
		Ph.D candidate	13
		Master	4
		Master student	3

Source(s): Authors' own work

No. 10) and existing literature (Saunders, 2015) have emphasized, the field of LIS would be particularly susceptible to the transformative effects of technological advancements. Thus, LIS professionals must cultivate a mindset that embraces continuous change and innovation. This soft skill is consistent with the theory of lifelong learning in the context of education (Thwe and Kálmán, 2024).

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- (2) *Communication*: Achieving successful collaboration without effective communication is an unattainable feat ([Ashalatha, 2016](#)). Communication is fundamentally the process of conveying information from one point to another. It may occur in various forms, including spoken (interviewee No. 2), written (utilizing printed or digital media such as books, magazines, websites or emails, as described by interviewee No. 24), visual (employing logos, maps, charts or graphs) or nonverbal (relying on body language, gestures and vocal intonation, as noted by interviewee No. 20). Librarians employ this skill during reference interviews to accurately discern user needs, while knowledge managers leverage it to effectively capture and codify tacit knowledge into explicit, structured formats.
 - (3) *Public speaking*: While company staff may not always need to deliver impromptu motivational speeches to the entire organization, possessing the ability to confidently may lead engaging presentations and articulately converse on calls may be an indispensable skill, regardless of whether one primarily interacts with clients, customers or colleagues. [Yadav \(2022a\)](#) aptly recognized effective communication in public, national and international spheres as a critical soft skill. Although this essential component may be traditionally subsumed within the broader communication domain, it merits separate consideration due to its paramount significance. This skill is crucial for librarians in the contexts of introducing library services, guiding patrons in the effective use of library resources and facilitating book review and orientation sessions.
 - (4) *Persistence/patience*: As some participants, like interviewee No. 5, pointed out, non-specialist managers may not be familiar with novel proposals and plans. Therefore, if talented employees present a plan that may be unfamiliar to the manager, it is less likely to gain immediate acceptance. Moreover, if employees lose enthusiasm for their plan, they may struggle to persuade the manager to approve it. Additionally, as interviewee No. 27 highlights, librarians must demonstrate considerable patience in advocating for adequate funding for information centers from high-ranking managers.
 - (5) *Acceptance*: It is common practice for organizations to seek input from their employees through votes or surveys. While it is clear that not everyone's opinion may align with the final decision, it is important for employees to demonstrate a willingness to accept and support the chosen course of action. That soft skill is especially significant for library managers as well as information and knowledge managers.
 - (6) *Open-mindedness*: For individuals engaged in scientific and intellectual endeavors, this holds paramount importance due to the inherently progressive nature of science. In this regard, Interviewee No. 25 emphasized the importance of open-mindedness among LIS professionals, particularly in fostering the talents and creativity of their clients, especially students. Special librarians, in particular, may be renowned for their innovative and forward-thinking approaches.
 - (7) *Joyful*: Employees in customer-facing roles should cultivate a positive and welcoming atmosphere within their workspace to foster comfortable interactions with patrons (interviewee No. 20). This is particularly important for librarians and knowledge managers in reference and acquisition sections. This skill is grounded in the theory of joyful experiences as articulated in Dalcroze Eurhythmics ([van der Merwe, 2025](#)). According to this theory, joy enhances the perception of novel opportunities, improves concentration on personally meaningful matters and fosters a sense of humanity. Given the significance of these elements for individuals

engaged in the pursuit of knowledge, it is imperative that information centers foster an environment conducive to such joyful experiences for their users.

- (8) *Lifelong learning*: As both the literature (Saunders, 2015) and the participants (interviewees No. 20 and No. 10) have highlighted, the world is constantly evolving, with new changes occurring instantaneously. As a result, potential employers recognize that graduates cannot possibly be expected to possess all the knowledge required for a job upon their education. Instead, students should engage in self-assessment and take ownership of their ongoing academic and professional development to remain adaptable to the ever-changing landscape. This soft skill corresponds with S.R. Ranganathan's fifth law of library science, which asserts that a library functions as a dynamic and evolving organism.
- (9) *Professional ethics*: A thorough grasp of the necessity for elevated ethical principles in professional conduct, encompassing the LIS professionals' obligations toward the environment, patrons and colleagues, is fundamental, as confirmed by some participants (interviewee No. 2) and literature (Mabe and Bwalya, 2022). These perception also serves as a testament to an individual's dedication to their work and their capacity to deliver high-quality outcomes. These skills are vital for information centers, as they pertain to specific behavioral standards expected of members within a particular group due to their affiliation with the group (Shapira, 2016).
- (10) *Marketing skills or customer services*: In the dynamic information age, effective marketing and promotion are essential for the survival of libraries and information centers (interviewee No. 10). Just as other professionals must adapt to and thrive amidst evolving environments, librarians must possess the necessary marketing skills to enhance the image of their institutions and serve their users effectively (Saunders, 2015). In other words, this skill is essential for attracting clients (users).
- (11) *Management skills*: Effective management skills are vital for success in all aspects of life, including daily personal endeavors (Borbély, 2022). Time, space and finances are three crucial areas that demand efficient management in today's fast-paced world. The literature (Peng, 2019; Ashalatha, 2016) and a relevant video on YouTube [1] have highlighted the significance of time and financial management in the LIS profession, respectively.
- (12) *Technology skills*: As interviewee No. 7 and literature (Saunders, 2015) aptly noted, a fundamental understanding of technology is indispensable for all individuals and professionals in today's information-driven era. Moreover, astutely identified, the ability to select the appropriate technological tools for a specific circumstance is a critical soft skill. This skill corresponds with the domains of information literacy and media literacy, which are commonly taught by librarians to library patrons and by information managers to organizational employees.
- (13) *Team work*: Due to the presence of multiple individuals in most organizations, it is typical for each person to have colleagues who collaborate frequently on various work tasks. As an instance, librarians from the organizational division often interact with librarians from the book selection and lending division. As such, they require the capability of working in teams as stated by a participant (interviewee No. 10) and literature (Yadav, 2022a).
- (14) *Ability to work independently*: As previously mentioned, the work tasks of an organization's employees involve both collaboration with colleagues and independent execution of tasks. Hence, individuals seeking this role must possess the capacity to work independently (Peng, 2019). Moreover, they should demonstrate proficiency in formulating and implementing effective work plans.

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- (15) *Networking*: As some participants (interviewee No. 26) emphasized, it is essential to break out of your comfort zone and build relationships with individuals from diverse disciplines. Specifically, one should maintain close connections with experts in computer science, management and psychology. In addition, one of the participants emphasized that librarians should engage with politicians to secure funding, collaborate with sponsors to obtain donations, host workshops and conferences with experts and negotiate with large retailers to purchase equipment (interviewee No. 2).
 - (16) *Curiosity/critical thinking*: Some participants (interviewees 16 and 26) highlighted the importance of asking “why” questions about everything, including changes in reading patterns. Given the information processing and question-answering roles of LIS professionals, the skill is essential for their success. This item pertains to the model of critical thinking and knowledge management ([Indrašienė et al., 2021](#)).
 - (17) *Interested in knowledge, culture and history*: Those who work as information professionals in any organization should be passionate about knowledge. In addition, some participants (interviewee No. 20) and videos on YouTube [2] noted that librarians should also have an interest in history and culture because library and information centers serve as the repositories where information, accompanied by its cultural context, is securely preserved. Libraries and librarians act as both custodians and facilitators, providing access to information encompassing all aspects of human civilization” ([Tendai, 2012](#)).
 - (18) *Meeting management*: In today’s organizations, meetings are a ubiquitous occurrence, making proficiency in meeting management a highly valued skill among employees. Interviewee No. 10, a participant in the discussion, pointed up the importance of meeting management skills, particularly for librarians and knowledge managers, who carry out a crucial role in facilitating effective communication and collaboration.

Discussion and conclusion

Numerous studies within the domain of library and information science have examined soft skills; however, these inquiries have generally focused on a narrow subset of such skills. The present study adopts a mixed-methods approach to identify novel and significant soft skills pertinent to the discipline, to articulate their significance and to explore their alignment with models and theoretical frameworks. This study investigated the soft skills required by LIS students using a mixed-methods approach. Specifically, relevant soft skills were identified from educational materials and job advertisement postings. Additionally, interviewing 30 LIS professionals revealed a growing emphasis on soft skills across all fields, particularly in LIS since 2020. This trend is further evidenced by the increasing prominence of soft skills in job advertisements, highlighting their growing recognition among stakeholders. As a result, curriculum planners should prioritize the integration of soft skills into the LIS program and develop effective teaching methods for their delivery. The study identified 18 critical soft skills for students, highlighting their significance and discussing them in detail. [Deng et al. \(2014\)](#) and [Junrat et al. \(2014\)](#) considered a narrower range of soft skills (six to eight) as important in this field. The present study, however, expands this consideration to include 18 soft skills. This difference can be attributed to the earlier studies being foundational works in the area of soft skills within this field. As the field has matured, the understanding of relevant soft skills has grown accordingly. [Lowry \(2022\)](#) focused solely on the significance of seven soft skills for librarians. This focus aligns with the findings of [Saunders \(2019\)](#), where over half of the participants identified these same seven skills as essential for librarianship. [Mabe and Bwalya \(2022\)](#) identified 16 soft skills as essential for information and knowledge managers. This

study overlaps with the mentioned study in several areas. Four of the soft skills identified here are identical to those found in the aforementioned study. Additionally, seven skills appear in both studies, though with different terminology. The remaining discrepancies can be attributed to differing methodological approaches. For instance, Mabe and Bwalya (2022) classify data collection as a soft skill, whereas this study considers it a research skill. It is also noteworthy that a recent study focused specifically on knowledge managers, while the present study encompasses all information professionals. Saunders and Bajjaly (2021) further explored the significance of ten specific soft skills, given their recurring emphasis as essential competencies in prior research. It is worth noting that quantitative studies, such as those by Bejalwar and Kherde (2021) and Hamid and Younus (2022), have typically focused on a narrower range of 3–10 soft skills. In contrast, qualitative and mixed-methods studies, exemplified by Mabe and Bwalya (2022), tend to identify a broader range of soft skills due to the inherent nature of their methodologies. Finally, recognizing the importance of soft skills, the authors recommend that curriculum developers and faculty members encourage student participation in field-related group activities. These activities could include working with professional associations, organizing and attending workshops, guest lectures, career advising sessions, company orientation talks, students networking coffee sessions and actively engaging in internships. In addition to the aforementioned items, educators can also consider incorporating these soft skills into their student assessments. However, a limitation of the study was that it did not explore the optimal teaching methods or the extent to which different universities integrate soft skills into their curriculum. Therefore, we recommend that future research in this field comprehensively address the importance of soft skills as well as the most effective methods for teaching them.

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Ethical approval

All procedures in this study were conducted in accordance with the “University review boards (Ref/ 58988)” approved protocols.

Data availability statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on a reasonable request.

Notes

1. University of Missouri (2017). Entrevista a John M. Budd, University of Missouri/Cáp 4 (available at <https://www.youtube.com/watch?v=00HzH-l2CRA>).

2. Yoonisdee (2022). what is library and information science_ blis program (available at https://www.youtube.com/watch?v=_CJlobcowl0)

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