

EMERGING TRENDS IN LIBRARY AND INFORMATION SCIENCE EDUCATION AND TRAINING: IMPLICATION FOR LIBRARIANSHIP IN A CHANGING WORLD

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Abstract

The paper aims to provide an overview of emerging trends in LIS education and training. The field of LIS is constantly evolving due to new technologies, societal needs, and information dissemination methods. Staying current is essential for providing optimal service to users. By analysing current trends, the paper explores how LIS programmes adapt to meet changing professional needs. It examines methods of identifying emerging trends in LIS education and training, highlights the emerging trends in LIS education and training, and their implications. The paper concludes that LIS curriculum has evolved to include technology, user-centred design, data science and analytics, interdisciplinary perspectives, and diversity and inclusion. These changes are vital in preparing the next generation of LIS professionals to meet the evolving needs of libraries and information centres. The article provides valuable insights for educators, students, and practitioners in the LIS field, highlighting the profound implications of emerging trends on the profession.

Keywords: Emerging trends, library and information science, education, training

Introduction

Library and Information Science (LIS) is an interdisciplinary field that is concerned with the management, organization, and retrieval of information. LIS education and training is designed to prepare professionals to work in a variety of settings, including public and academic libraries, government agencies, and private organizations. The field has evolved significantly in recent years, with changes in technology, societal needs, and the emergence of new modes of information dissemination.

LIS education and training programmes typically offer a range of courses that cover topics such as information organization and management, reference services, information retrieval, and information technology. Students also learn about the ethical and legal issues related to information access and use, as well as the social and cultural contexts in which information is created and used.

LIS education and training programmes are offered at the undergraduate and graduate levels, and many programmes are available online. Graduates of LIS programmes can pursue a range of careers, including librarianship, records management, knowledge management, and information architecture. The skills and

knowledge gained through LIS education and training are also applicable in many other fields, including journalism, business, and education.

One of the main goals of LIS education and training is to prepare professionals who can effectively manage the vast amounts of information that are available today. This involves developing a range of skills, including the ability to search, evaluate, and analyse information, as well as the ability to communicate effectively with diverse audiences, which would enable professionals to adapt to changes in technology and stay current with emerging trends in the field.

Emerging trends refers to new and developing patterns or shifts that are gaining prominence in a particular field or industry. Emerging trends encapsulates the evolving and forward-looking developments, practices, and ideas that are on the rise, influencing and shaping the current and future trajectory of a specific domain or discipline, in this case Library and Information Science.

An overview of the emerging trends in library and information science education and training

The investigation of emerging trends in Library and Information Science (LIS) education and training is crucial for staying updated with the ever-changing field. Adapting to new technologies and methods are essential for LIS professionals to provide excellent service. For example, emerging technologies like Artificial Intelligence, Big Data, and the Internet of Things have revolutionized information organization and management (Liu & Chao, 2021).

Osuigwe & Egbule (2018) emphasised that studying emerging trends ensures that LIS programmes meet the needs of students and the profession, and as the demand for skilled LIS professionals' increases, understanding job market requirements becomes vital. Incorporating emerging trends into LIS programmes adequately prepares graduates for professional challenges.

Keeping up with emerging trends promotes innovation and excellence in LIS and allows for the development of new approaches to information management and service provision (Rehman & Muhammad, 2020). This leads to improved quality and efficiency in library and information services.

Studying emerging trends fosters collaboration and communication within the LIS profession, and professionals from diverse backgrounds can share knowledge and expertise, resulting in new insights and approaches (Haddow, Klobas, & Jane, 2019). This strengthens the sense of community and shared purpose in LIS.

One key trend identified by Bawden & Robinson (2016) is the emphasis on digital literacy and information technology skills. As the world becomes increasingly reliant on technology, it is essential for LIS professionals to possess a strong understanding of digital tools and platforms. This includes the ability to manage and curate digital content, analyse data, and develop innovative approaches to information management and service provision

Another important trend is the focus on interdisciplinary and collaborative approaches to education and training. Wang & Dillon, (2017) opined that LIS professionals must work closely with professionals in other fields, such as computer science, data science, and social sciences, to develop solutions to complex information

problems. As a result, many LIS programmes are incorporating interdisciplinary coursework and collaborative projects into their curricula.

The growing importance of diversity and inclusion is another emerging trend in LIS education and training. As society becomes increasingly diverse, it is essential for LIS professionals to possess a deep understanding of diverse cultures and perspectives to provide effective and equitable service to their users. Many LIS programmes are incorporating coursework and initiatives focused on diversity, equity, and inclusion into their curricula (Kumbhar, 2017).

Another trend is the increasing emphasis on experiential learning and practical experience. Many LIS programmes are incorporating internships, practicums, and other forms of experiential learning into their curricula in order to provide students with hands-on experience and prepare them for the challenges of the profession (Lowry, 2017).

Another notable trend is the focus on entrepreneurship and innovation in LIS education. To succeed in the competitive information marketplace, LIS professionals need entrepreneurial skills like creativity, adaptability, and risk-taking. LIS programmes are incorporating entrepreneurship and innovation coursework to prepare graduates for the profession's challenges and opportunities (Guenther, 2017).

Additionally, there is a growing recognition of lifelong learning and professional development in the LIS field. To provide optimal service, LIS professionals must stay updated with new technologies, trends, and best practices. Many LIS programmes now offer initiatives focused on lifelong learning and professional development to equip graduates for continuous learning throughout their careers (Dewald, 2016).

These emerging trends reflect the evolving needs and demands of the LIS field. Incorporating these trends into LIS education and training programmes ensures that graduates are well-prepared for the profession's challenges and can adapt to the changing landscape.

Methods of Identifying Emerging Trends in Library and Information Science Education and Training

Identifying emerging trends in library and information science (LIS) education and training is essential for ensuring that LIS professionals possess the skills and knowledge necessary to meet the evolving needs of information users. Several methods have been used to identify emerging trends in LIS education and training, including surveys, focus groups, and analysis of job postings and other employment data.

Survey Method

The survey method is a research technique used to collect data from a targeted sample of individuals or organizations. It involves the administration of a standardized questionnaire or survey instrument, either in written, online, or oral form, to gather information on specific topics or research objectives. Surveys can be

conducted through various mediums, including face-to-face interviews, telephone interviews, mail questionnaires, or online surveys.

The survey method allows researchers to collect data on a large scale, gather information from diverse participants, and study a wide range of variables. It is a versatile research method that can be applied in various fields, including social sciences, marketing, healthcare, and education, to identify trends, measure attitudes, understand behaviours, or investigate opinions.

Focus Groups

Focus groups are a qualitative research method that can be effectively used to identify emerging trends in Library and Information Science (LIS). Focus groups involve bringing together a small group of participants, typically 6 to 10 individuals, who share relevant experiences or perspectives in the LIS field. Through guided discussions and interactions, focus groups provide a platform for participants to express their opinions, exchange ideas, and collectively identify emerging trends.

One of the key benefits of using focus groups in identifying emerging trends in LIS is the opportunity for in-depth exploration of participants' thoughts and experiences. The interactive nature of focus groups allows participants to build on each other's ideas, leading to a deeper understanding of emerging trends. Through open-ended questions and group dynamics, focus groups can uncover insights that may not be easily captured through other research methods. Yu, Ko, & Rosenbaum, (2018) used focus groups to identify emerging trends in LIS education related to data science and digital curation, as well as the need for interdisciplinary approaches and more experiential learning opportunities.

Analysis of Job Postings

Analysis of job postings and other employment data can also provide insights into emerging trends in LIS education and training. For example, a 2020 analysis of job postings for academic library positions identified several emerging trends, including the growing importance of digital scholarship and open access publishing, the need for expertise in emerging technologies such as virtual reality and artificial intelligence, and the importance of diversity, equity, and inclusion (Bertot & Wu, 2020).

Identifying emerging trends in LIS education and training is essential for ensuring that LIS professionals possess the skills and knowledge necessary to meet the evolving needs of information users. Surveys, focus groups, and analysis of employment data are just a few of the methods that can be used to identify these trends and help guide the development of LIS education and training programmes.

Emerging Trends in LIS Education and Training

The following have been identified by the authors as emerging trends in LIS education and training in the 21st century: technology, technology skills development, diversity, equity, and inclusion, professional trends, changes in the curriculum, data and analytics trends.

Technology trends

Technology is rapidly changing the landscape of library and information science (LIS) education and training, and there are several emerging trends in this area. One of the most significant technology trends is the increasing use of virtual and augmented reality in LIS education. These technologies allow students to explore virtual library environments and practice interacting with patrons in a safe, controlled setting (Cummings, 2020). Another emerging technology trend is the use of machine learning and artificial intelligence in information retrieval and management. Students are being taught how to use these technologies to analyse data, identify patterns, and make informed decisions (Sturges & Tonta, 2018).

One way in which technology is being integrated into LIS education is through the use of online courses and programmes. Online courses and programmes offer flexibility and convenience, allowing students to access course materials and lectures at their own pace and from any location with an internet connection (Crawford, 2020). Many LIS programmes now offer online courses and programmes, and this trend is likely to continue.

Another way in which technology is being integrated into LIS education is using social media and other online tools. Social media can be used to connect students with professionals in the field, providing valuable networking opportunities and access to industry news and trends (Ovadia, 2016). Online tools like blogs and wikis can be used to facilitate collaboration and knowledge sharing among students and instructors.

In addition to online courses and social media, technology is also being integrated into LIS education with specialized software and tools. For example, students may be taught how to use content management systems (CMS) and digital asset management (DAM) systems, which are essential tools for managing digital collections (Chawner, 2018). They may also be taught how to use data visualization tools and other software for data analysis and visualization.

Overall, the integration of technology into LIS education and training is essential for preparing students for the evolving demands of the field. By leveraging online courses, social media, and specialized software and tools, educators can ensure that their programmes are equipping students with the skills and knowledge they need to succeed in the digital age.

Technology skills development trends

The increasing importance of technology in the library and information science (LIS) field has led to an emphasis on technology skills development in LIS education and training. Employers are seeking professionals with a strong understanding of technology and its applications in libraries, archives, and other information settings. As a result, LIS programmes are placing greater emphasis on technology skills development.

One way in which technology skills are being developed in LIS education is through the integration of technology into traditional courses. For example, a course on cataloguing and classification may now include instruction on metadata standards and digital indexing (Matarazzo & Pearlstein, 2018). Similarly, a course on reference

services may include instruction on the use of chat reference and virtual reference services.

Another way in which technology skills are being developed in LIS education is through the creation of specialized courses and programmes. For example, some LIS programmes now offer courses in data management and data analytics, which teach students how to manage and analyse large data sets (Koltay, 2019). Other programmes offer courses in web design and development, which provide students with the skills to create and manage websites.

In addition to courses, technology skills are also being developed through hands-on experience and practical training. Many LIS programmes now offer internships and practicum opportunities, which allow students to work in real-world settings and apply their knowledge in a practical context (Chowdhury, 2020). These opportunities provide valuable experience and help students develop the technology skills needed to succeed in the field.

Diversity and inclusion trends

Diversity and inclusion (DEI) have become increasingly important in LIS education and training in recent years. Emerging trends in this area include the development of DEI-focused courses and workshops, as well as the integration of DEI principles into existing courses and programmes (Garcia-Febo, 2019). Another emerging trend is the use of community-based projects and service-learning opportunities to promote DEI in LIS education. These experiences allow students to work directly with diverse populations and gain a deeper understanding of the challenges faced by marginalized communities (Kumbier & Lannon, 2018).

Inclusiveness is becoming an increasingly important issue in library and information science (LIS) education and training. As libraries serve diverse communities, it is important that LIS professionals have the knowledge, skills, and attitudes to provide equitable and inclusive services to all users. To achieve this goal, LIS programmes are taking steps to increase their focus on inclusivity in their curriculum.

One way LIS programmes are addressing inclusiveness is by incorporating courses that focus on diversity, equity, and inclusion (DEI). For example, LIS programmes are offering courses that address topics such as cultural competence, social justice, and access to information. These courses provide students with the skills and knowledge necessary to work with diverse populations and to promote inclusivity in their work (Latham & Gross, 2020).

Another approach to promoting inclusiveness in LIS education and training is through the use of experiential learning. Experiential learning allows students to gain hands-on experience working with diverse populations in real-world settings. For example, LIS programmes are partnering with libraries and other community organizations to provide students with opportunities to work with underserved communities and to develop the skills and attitudes necessary to provide inclusive services (Arnold, 2019).

In addition, LIS programmes are taking steps to ensure that their curriculum is inclusive in terms of the materials and resources used in courses. This includes

incorporating diverse authors and perspectives into course readings and using a variety of teaching methods and materials to accommodate different learning styles and abilities (Rafferty, 2021).

Largely, the focus on inclusiveness in LIS education and training is essential for preparing future LIS professionals to work with diverse populations and to provide equitable and inclusive services. By incorporating DEI courses, experiential learning opportunities, and inclusive teaching methods and materials, LIS programmes can ensure that their graduates are well-equipped to meet the needs of all library users. In recent years, there has been a growing emphasis on diversity in library and information science (LIS) education and training. This is driven by the need for LIS professionals to have a deep understanding of diverse perspectives, cultures, and experiences to provide equitable and inclusive services to library users from all backgrounds. To address this need, LIS programmes are taking steps to increase their focus on diversity in their curriculum.

One way LIS programmes are addressing diversity is by incorporating courses that focus on the perspectives and experiences of marginalized communities. These courses aim to help students understand the challenges and barriers faced by these communities in accessing information and using library services. They also provide students with the skills and knowledge necessary to work with these communities and to promote diversity in their work (Makri & Blandford, 2012).

Another approach to promoting diversity in LIS education and training is through the use of diverse faculty and guest speakers. Having a diverse faculty can provide students with role models and mentors from diverse backgrounds, which can help them feel more included and valued in the field. Additionally, inviting guest speakers from diverse backgrounds can expose students to different perspectives and experiences, which can broaden their understanding of the field (St. Jean, 2019). In addition, LIS programmes are taking steps to ensure that their curriculum is diverse in terms of the materials and resources used in courses. This includes incorporating diverse authors and perspectives into course readings and using a variety of teaching methods and materials to accommodate different learning styles and abilities (Scheeder & Brannon, 2020).

Overall, the emphasis on diversity in LIS education and training is essential for preparing future LIS professionals to work with diverse populations and to provide equitable and inclusive services. By incorporating courses that focus on marginalized communities, promoting diversity among faculty and guest speakers, and using diverse teaching materials, LIS programmes can ensure that their graduates are well-equipped to meet the needs of all library users.

Professional trends

In addition to the technology and diversity trends, there are also emerging professional trends in library and information science (LIS) education and training. These trends reflect changes in the profession and in the skills and competencies required of LIS professionals.

One trend is the increasing importance of project management skills in LIS. As libraries and information centres take on more complex and technology-driven

projects, it is important for LIS professionals to have the skills to manage these projects effectively. Pomerantz, (2019) identifies these to include skills in project planning, budgeting, and team management

Another trend is the growing focus on data and information literacy. With the proliferation of digital information and the increasing importance of data in decision-making, LIS professionals need to have the skills to work with and analyse data. This includes understanding data sources, data management, and data analysis tools and techniques (Carlson & Kneale, 2019).

A third trend is the increasing importance of entrepreneurship and innovation in LIS. Libraries and information centres are facing new challenges and opportunities, such as the rise of open access publishing and the need to develop new services and programmes to meet the changing needs of library users. LIS professionals need to be innovative and entrepreneurial to develop new solutions and approaches to these challenges (Cawthorne, 2020).

Overall, these professional trends reflect the changing nature of the LIS profession and the need for LIS professionals to adapt to new challenges and opportunities. By developing skills in project management, data and information literacy, and entrepreneurship and innovation, LIS professionals can stay ahead of these trends and provide valuable services to library users.

Changes in the curriculum of library and information science education and training

In recent years, the curriculum of library and information science (LIS) education and training has undergone significant changes to keep pace with the evolving information landscape and changing roles of LIS professionals (Emanuel, 2019). One major change has been the emphasis on technology, with a focus on training students on digital preservation, metadata, data management, and information retrieval techniques (Abbas & Bhatti, 2020). Another shift has been towards user-centred design, with many LIS programmes now offering courses on understanding the needs and preferences of library users (Choi & Rasmussen Pennington, 2021).

The growth of big data and analytics has also led to a greater demand for LIS professionals skilled in data management and analysis, resulting in many LIS programmes now offering courses on data science (Bawden, 2019). Additionally, interdisciplinary perspectives are increasingly emphasized, as LIS professionals are expected to have a broad understanding of different fields and their information needs (Gadepalli & Vinayagamoorthy, 2020). This is reflected in many LIS programmes now offering courses on interdisciplinary perspectives.

Diversity and inclusion have also become important in LIS education, with many programmes offering courses on cultural competency, diversity, and inclusion to prepare professionals to serve diverse populations (Kumbier & Lannon, 2018). These changes reflect the evolving nature of the LIS profession and the need for professionals to adapt to new technologies, user needs, and interdisciplinary perspectives.

In addition to changes in curriculum, instructional methods and pedagogy in LIS education and training have also shifted in recent years. Mills & Mobley (2020) reiterated that active learning methods, such as group work, problem-based learning, and hands-on activities, are now emphasized to encourage students to engage with the material and apply their knowledge in practical situations. Flipped classrooms, online and hybrid learning, and experiential learning are also becoming more common in LIS education and training (Kolowich, 2019).

The rapid evolution of emerging technologies is transforming the information landscape, and LIS programmes are incorporating these technologies into their curriculum to keep up with the changing demands of the field. Incorporation of emerging technologies into the curriculum not only prepares LIS students to work with new technologies but also enables them to become innovators and leaders in the field.

One emerging technology that is being incorporated into LIS curriculum is artificial intelligence (AI). AI has the potential to revolutionize the way information is organized, searched, and analysed, and LIS programmes are teaching students how to work with AI tools and applications (Oberhauser, 2020). Another emerging technology being incorporated into LIS curriculum is blockchain, which has the potential to transform the way information is stored and shared. LIS programmes are teaching students about blockchain technology and its potential applications in the field (Sinha & Sengupta, 2021).

Virtual reality (VR) and augmented reality (AR) are also emerging technologies that are being incorporated into LIS curriculum. These technologies offer new opportunities for engaging with and presenting information, and LIS programmes are teaching students how to create and use VR and AR applications (Kahveci, 2021). Similarly, the Internet of Things (IoT) is an emerging technology that is transforming the way we interact with and access information. LIS programmes are incorporating IoT technologies into their curriculum to teach students how to work with smart devices and other IoT technologies (Chen & Yang, 2019).

Finally, community engagement is becoming more integrated into LIS education and training, with service-learning projects, community-based research, and other forms of engagement connecting students with community organizations and allowing them to apply their knowledge to real-world problems (Garcia-Febo, 2019). These shifts reflect a growing recognition of the importance of active, experiential, and community-based learning in LIS education and training, preparing the next generation of professionals to meet the needs of libraries and information centres in the 21st century.

Data and analytics trends

Data management and analysis have become critical skills for LIS professionals, and there are several emerging trends in this area. One trend is the development of data-focused courses and programmes that teach students how to manage, analyze, and visualize data (Miltentoff & Hauptman, 2018). Another emerging trend is the use of data-driven decision-making in library management and

administration. Libraries are increasingly using data to inform decisions about everything from collection development to staffing (Johnson, 2018).

Implications of Emerging Trends in Library and Information Science Education and Training

The emerging trends in library and information science (LIS) education and training have several implications for educators, students, and employers in the field, viz:

Increased demand for professionals with strong technology skills: As libraries adopt digital systems, data-driven decision-making processes, and innovative technologies, there is a growing need for LIS professionals who can effectively navigate and leverage these tools. LIS programs must respond to this demand by offering specialized courses and practical training in areas such as data management, digital libraries, information retrieval, and emerging technologies like artificial intelligence and machine learning.

Diversity and Inclusiveness in LIS Education: Encouraging diversity and inclusiveness in LIS education cultivates cultural competence and equips professionals to effectively cater to diverse populations. By actively involving themselves with a range of perspectives and experiences, students gain insights into the information requirements and cultural intricacies of different communities. This understanding empowers them to curate inclusive collections, devise user-centric services, and establish inclusive library spaces that cater to the diverse needs of users.

Lifelong Learning and Professional Development: LIS education and training recognize the importance of lifelong learning and professional development, which are crucial for keeping up with the dynamic nature of the field. Encouraging a mindset of continuous learning, LIS programs emphasize the need for graduates to stay updated with the latest trends and advancements in the industry. Lifelong learning ensures that LIS professionals can adapt to changing information landscapes and effectively meet the evolving needs of library users. Professional development complements lifelong learning by providing opportunities for professionals to enhance their skills and knowledge beyond formal education. Engaging in activities such as attending workshops, conferences, and pursuing certifications allows LIS professionals to acquire new expertise, expand their professional networks, and contribute to the overall advancement and innovation of the LIS field.

Collaboration and communication within the profession: This become increasingly important as professionals from diverse backgrounds and specialties work together to address the challenges of the field. LIS programmes can facilitate this collaboration by fostering a sense of community among students and promoting interdisciplinary approaches to problem-solving. (Kim, 2018; Choi & Rasmussen, 2019; Koltay, 2019; Liu & Zhang, 2021).

Conclusion

Library and Information Science (LIS) is an interdisciplinary field that manages, organizes, and retrieves information. LIS education has adapted to societal needs and technological advancements. Courses cover topics such as information organization, retrieval, and technology, as well as ethical and legal issues. LIS graduates find employment in libraries, government agencies, and private organizations, with transferable skills to journalism, business, and education.

LIS education aims to train professionals in effective information management. Skills include information searching, evaluation, analysis, and communication. Adaptability to technology and awareness of emerging trends are crucial for providing quality service. Identifying emerging trends in LIS education involves integrating new technologies like artificial intelligence and big data, digital literacy, interdisciplinary collaboration, diversity and inclusion, experiential learning, entrepreneurship, and lifelong learning. Methods to identify trends include surveys, focus groups, and analysing job postings and employment data. These methods inform the development of LIS programs to meet user demands effectively.

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