



Enhancing Professional Competencies through LIS Internships: A Quantitative Analysis of Post-Internship Experiences

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Abstract

This study explores the post-internship experiences of Library and Information Science (LIS) students at IIT Delhi, focusing on professional development and skill enhancement. Using a descriptive research design and a 66.66% response rate from trainees, the study evaluates the practical learning outcomes of students in various library operations, including reader services, collection development, and technical processing. Internships were found to significantly bridge the gap between academic theory and practice, enhancing skills such as problem-solving, time management, and technical expertise. Most trainees expressed high satisfaction with the program, reporting increased confidence and career readiness. However, challenges such as repetitive tasks, health-related issues, and difficulties understanding institutional guidelines were noted. Recommendations for improving the program include diversifying the tasks assigned to trainees and providing stronger guidance and support from supervisors. Overall, the study concludes that the internship program at IIT Delhi is an effective tool for preparing LIS students for professional roles in a dynamic and evolving field. The findings offer insights into institutions to develop more impactful internship programs that align with the academic and practical needs of LIS students.

Keywords: Internship Experience, Library and Information Science, Professional Skills Development, Career Readiness, Practical Training, Experiential Learning.

1. Introduction

The internship concept is a highly effective educational method that provides individuals, particularly students, with the opportunity to gain real-world experience in their chosen field or



industry. Internships serve as employment opportunities offered by organizations to students and individuals seeking practical training and exposure to real-world workplaces, allowing them to apply academic knowledge in professional settings. Initially, internships were primarily available in professional fields such as medicine, law, pharmacy, and engineering, offering medical graduates, for example, brief yet impactful exposure to hospital and health organization environments (Mia et al., 2020). However, with the implementation of the National Education Policy 2020, internships have also become mandatory in non-professional courses, broadening their scope across various disciplines. Today, participation in an internship program is a required component of undergraduate studies across numerous universities and institutions, including those in the library and information science field. Internships are now recognized as essential and integral parts of the educational curriculum, providing students with hands-on learning that bridges the gap between academic theory and professional practice.

The field of library and information science encompasses a wide range of activities, including managing, organizing, and providing access to information resources. Internship experiences are vital in preparing aspiring library professionals for the various challenges and opportunities they will encounter in their careers. These internships offer students immersive, hands-on learning opportunities that enable them to apply theoretical knowledge in real-world library operations, develop essential skills, and gain valuable insights into the everyday functioning of libraries. Through internships, students work alongside experienced library staff, interact with users, and build confidence in their abilities. Practical experiences, such as those offered by the internship program at IIT Delhi, have been shown to significantly enhance students' technical and professional skills. These programs introduce students to an excellent educational environment, greatly contributing to their overall professional development.

According to the NIRF 2024 rankings, IIT Delhi is ranked second in India for engineering, third for research, fourth for management, and fourth overall, underscoring its prestigious standing. The IIT Delhi Central Library further extends this reputation by providing students with valuable opportunities to gain hands-on experience in a renowned academic library setting. The internship program allows students to work on various projects, assist library staff with daily operations, engage with library users, and gain insights into advanced library management practices. Through this program, students develop critical skills in cataloging, information retrieval, user services, and library management, while also gaining exposure to innovative technologies and research support services. This direct experience not only deepens students' understanding of library practices but also empowers them to make meaningful contributions to the library's mission of supporting research, teaching, and innovation within the academic community.

This article presents a case study exploring the post-internship perspectives of library and information science students at the prestigious Indian Institute of Technology Delhi. The post-internship phase represents a crucial period for students to evaluate their learning outcomes, reflect on their experiences, and plan their future career paths in librarianship. This case study aims to provide valuable insights into how practical training influences students' skill



development and professional growth. Understanding students' post-internship experiences can help educators, institutions, and industry professionals design effective internship programs that meet the evolving needs of library and information science students and align with current industry demands. Through a survey and quantitative analysis, this research investigates the diverse approaches, challenges, and opportunities faced by trainees during their internships. By examining these nuanced experiences, the study contributes to the broader dialogue on experiential learning and professional development within library and information science education.

2. Literature Review

Internships are widely recognized as a pivotal component of experiential learning, providing students with hands-on experience that bridges the gap between academic knowledge and the practical demands of the workforce. According to Ruhanen, Robinson, and Breakey (2013), internship programs and training courses aim to equip students with essential skills in a work-related environment, fostering their professional development and enhancing their employability. Similarly, Idrus, MohamedNoor, Salleh, and MohdHashim (2010) emphasize that internships allow students to apply classroom knowledge in real-world settings, effectively integrating theory with practice. This exposure enables students to understand how theoretical concepts translate into professional tasks, helping them establish valuable connections with industry professionals (Karunaratne, 2019).

The impact of internships on students' professional growth is further underscored by Hughes (1998), who observed that participation in internships significantly enhances students' professional skills, thereby improving their employability and providing insights into workplace expectations. Knouse and Fontenot (2008) noted that internships not only enhance students' practical skills but also set realistic expectations, ensuring a more satisfying and successful internship experience. As such, internship programs offer students a critical opportunity to familiarize themselves with their future professional roles and responsibilities.

In the context of Library and Information Science (LIS), internships hold particular significance for students pursuing advanced degrees. Chambers (2015) highlighted that LIS internships provide master's and specialist degree students with practical, supervised work experience in real-world environments. These internships not only help students explore their career options but also offer potential employers a deeper understanding of students' professional interests and competencies. However, Okello-Obura and Kigongo-Bukenya (2011) pointed out that many LIS graduates lack exposure to practical skills essential for immediate performance in their roles, highlighting the critical role of internships in bridging this gap.

Research also indicates that professional internships are integral to the development of high-quality LIS graduates. Cherry, Duff, Singh, and Freund (2011) emphasized that internships contribute to the professional preparedness of LIS students by providing essential workplace experiences. However, Sargent et al. (2011) found that while LIS interns benefit significantly



from internships, there is often a need for more comprehensive guidance and feedback. Lacy and Copeland (2013) similarly reported that mentorship during internships helps LIS students understand workplace dynamics, the nature of librarianship, and job-seeking processes, underscoring the importance of structured guidance.

At the University of New South Wales, LIS interns are treated as equal members of the library's client services team, performing the same tasks and receiving the same opportunities for professional growth as regular employees (O'Dwyer, 2016). This inclusive approach benefits both interns and the institution, as interns contribute innovative ideas and enthusiasm. Ameen et al. (2017) examined the practicum for MLIS students at the University of Punjab, Pakistan, finding it effective in developing specific professional skills such as cataloging and classification. However, the study also identified a need for more effective supervision by experienced mentors rather than delegating responsibilities to less experienced peers.

The literature consistently emphasizes that internships should prioritize the educational needs of students over fulfilling staffing shortages (Asher and Alexander, 2006). Structured and well-supervised internships can significantly enhance learning outcomes, providing students with comprehensive exposure to all areas of their chosen field. However, the research also identifies various challenges, such as inadequate supervision, insufficient support, limited funding, and compressed timeframes for completing internship-related tasks (Gashaw, 2019). Addressing these challenges is crucial for maximizing the educational value of internships and enhancing professional development.

In the Indian context, there is a noticeable scarcity of research on the impact of internships within the LIS profession. Pandey and Kumar (2021) examined the effects of internship programs on MLIS students at Banaras Hindu University and found that internships significantly improve employability by enhancing core, professional, and personal competencies. Despite these findings, the literature remains limited, particularly regarding the specific experiences and challenges faced by LIS interns in India. This gap underscores the need for further research to explore the nuanced experiences of LIS students during their internships, identify the challenges they face, and develop strategies to optimize the internship process.

3. Research gap and objectives

The existing literature highlights the value of internships in professional education, including LIS, but also points to several challenges that can undermine the effectiveness of these programs. While studies have explored various aspects of internships globally, there is a lack of in-depth research focusing on the experiences of LIS students, particularly within the Indian context. This gap is significant, given the unique challenges and opportunities presented by the rapidly evolving field of LIS.

4. Objective

To explore and analyze the personal insights of Library and Information Science (LIS) students to identify key experiences and their impact on professional development during internship programs.

5. Research questions

RQ1: What specific tasks have LIS trainees learned through their internship programs?

RQ2: What skills have LIS trainees acquired from their internship experiences?

RQ3: What are the perceived benefits and challenges faced by trainees during their internship programs?

RQ4: How satisfied are trainees with their internship experience?

RQ5: What improvements do trainees suggest for enhancing the effectiveness of internship programs provided by training institutions?

6. Research Methods

The study adopted a quantitative research approach to investigate the post-internship experiences of Library and Information Science (LIS) students at IIT Delhi, with a focus on skills acquired, perceived benefits, challenges faced, and recommended improvement strategies. Participants were selected through purposive sampling, targeting LIS students who had completed their internships at IIT Delhi. Data were collected using structured questionnaires designed to gather comprehensive insights into the students' experiences, including Likert scale items, multiple-choice questions, and open-ended prompts for additional comments.

The questionnaires were distributed electronically via Google Forms to ensure efficient data collection and maintain respondent confidentiality. Participants were provided with clear instructions and informed consent prior to survey completion. Data were collected using publicly available contact information from the IIT Delhi website. The collected data were analyzed using descriptive statistics, such as frequency and percentage, through Microsoft Excel, providing a detailed understanding of the internship outcomes.

The study covered internships conducted between 2014 and 2024. The data uploaded on the clan network of IIT Delhi website total number of trainees was 96 however, the target population for this study includes trainees who have participated in the internship program over the past ten years. 21 trainees' data were not properly visible on the site. That's why, out of the target population of 75 library trainees, 50 completed the questionnaire, resulting in a response rate of 66.66%. This approach enabled a robust assessment of the LIS students' internship experiences, highlighting key insights into their professional development and areas for improvement.

7. Results

The findings present the percentage of students' responses related to skills, benefits, challenges, satisfaction, and suggested improvements from their internship experiences. The data were analyzed using Excel and represented through charts, tables, pie, and bar graphs to highlight the key experiences of the students.

7.1. Demographic Information:

The demographic data revealed that 56% of the respondents were male (28 trainees), and 44% were female (22 trainees). This gender distribution reflects a moderate male predominance among the LIS trainees at IIT Delhi, suggesting the need to ensure equitable opportunities and gender-sensitive approaches in future training programs.

Table 1
Frequency of Gender-Wise Distribution of Respondents

Gender	Count	% of Total	Cumulative %
Male	28	56.00%	56.00%
Female	22	44.00%	100.00%

7.2. Comparative Analysis of Gender and Job Designation

The analysis of respondents' designations revealed that males were more frequently represented in key roles such as Librarian and Assistant Librarian, indicating a gender imbalance in certain professional positions. Specifically, 25 males and 13 females occupied these roles, highlighting the need for targeted efforts to promote gender balance in various professional capacities within the LIS field.

Table 2
Cross-Tabulation of Respondents by Gender and Job Designation

Designation	Male	Female	Total
Librarian	6	1	7
Junior Librarian	1		1
Assistant Librarian	4	3	7
Senior Professional assistant	1		1
Professional assistant		1	1
Semi-professional assistant	3	1	4
Young professional	1	1	2
Senior Library information assistant	1		1
Library information assistant		1	1
Library assistant	2	3	5
Senior Executive	1		1
Consultant		1	1
Cataloguer		1	1
Library restorer	1		1
Scientist	1		1
Research Scholar	3		3
Total	25	13	38

7.3. Section-Wise Work Distribution

The data indicate significant involvement of trainees in the Reader Services Division (96%), Collection Development Division (70%), and Technical Processing Division (66%). This involvement is crucial as it exposes trainees to core library functions such as user interaction, resource management, and technical processing. However, the Human Resource Development Division had the lowest trainee involvement (20%), suggesting an opportunity to enhance exposure in areas related to training and competent development, which are vital for career growth and skills enhancement.

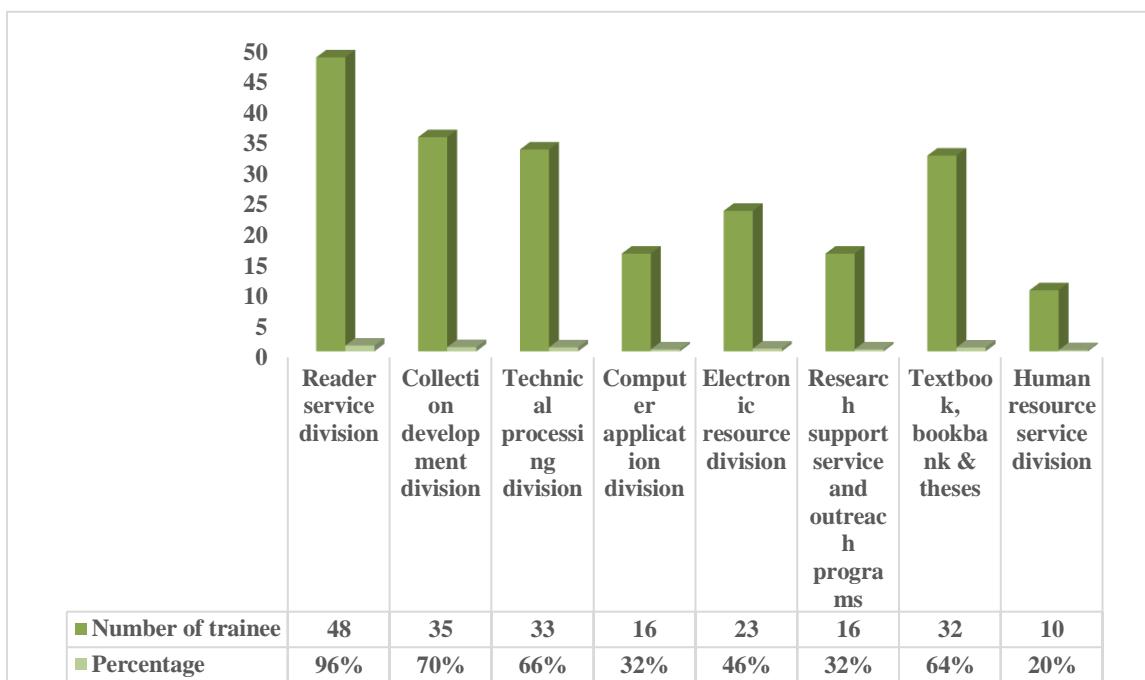


Fig. 1

Frequency of Section-wise work distribution

7.4. Reader Service Division

In the Reader Services Division, most trainees were engaged in tasks such as issue/return work (98%), assisting readers in locating materials (98%), and managing memberships and document renewals (93.9%). These tasks emphasize the importance of direct user interaction and efficient library operations. However, specialized tasks such as interlibrary loans (73.5%) and new user orientation (79.6%) had lower trainee participation, highlighting a need for further training in these areas to improve service quality and user satisfaction.

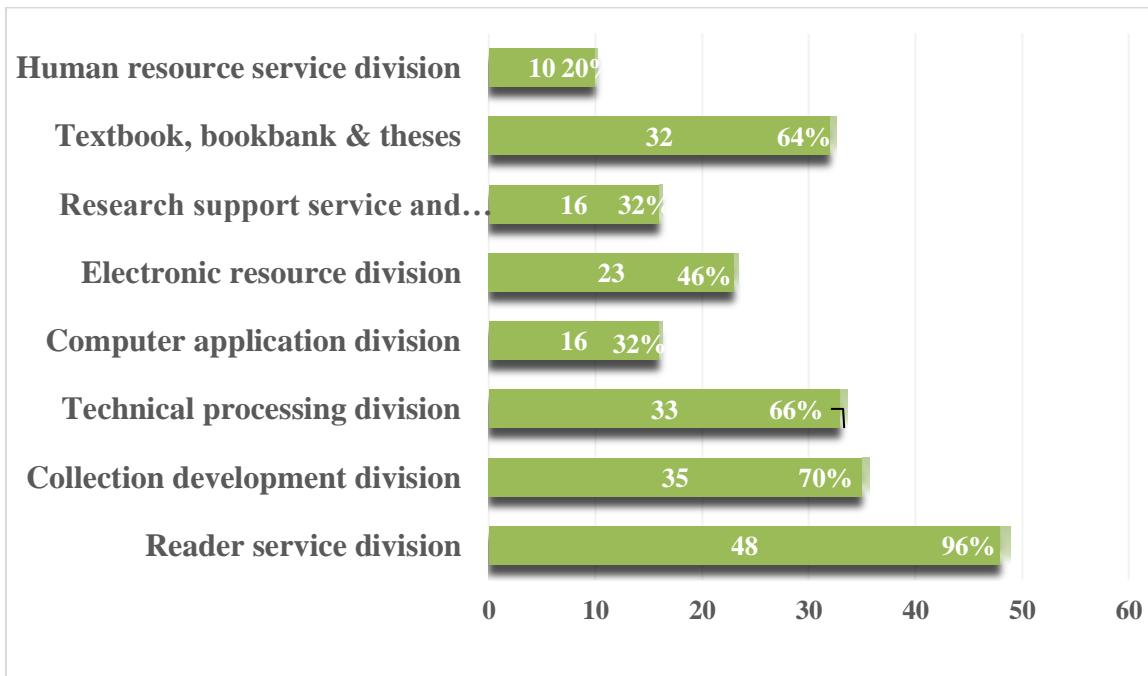
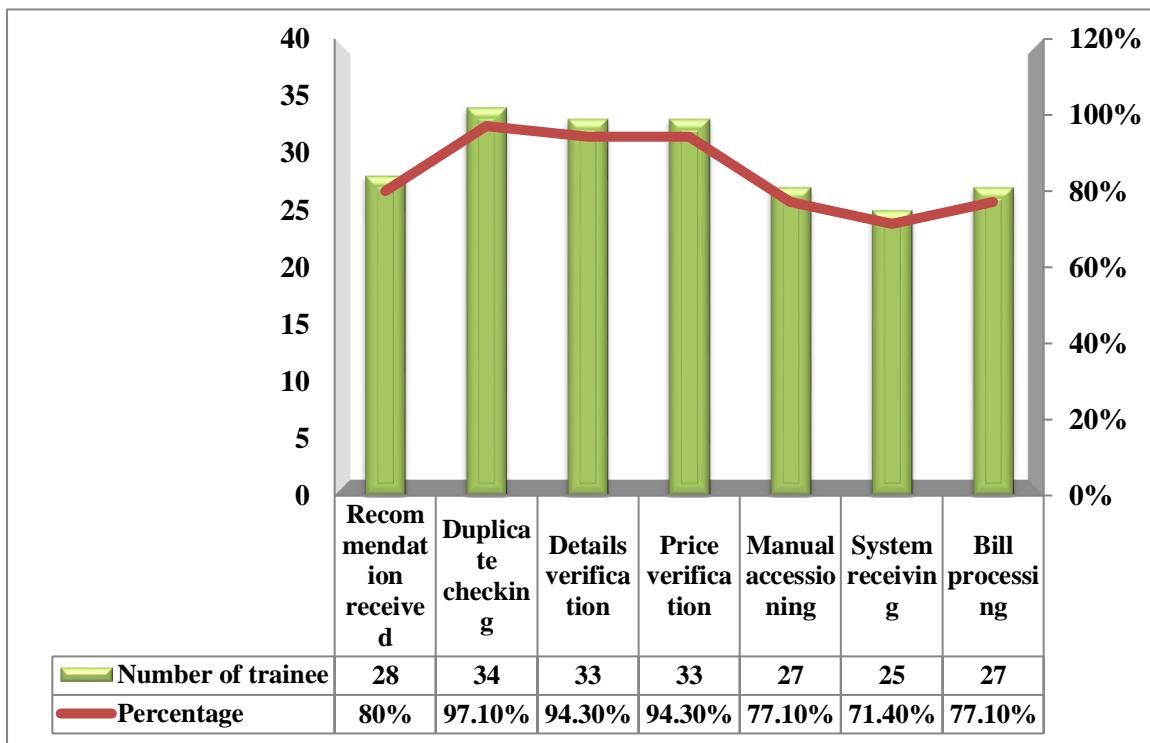


Fig. 2

Frequency of reader service division work distribution

7.5. *Collection Development Division*

Most trainees in this division were involved in critical tasks such as duplicate checking (97.1%), detail verification (94.3%), and price verification (94.3%). These activities are essential for maintaining a well-organized and accessible library collection. However, fewer trainees were involved in system receiving tasks (71.4%), pointing to a need for increased training in the acquisition and processing of new materials to ensure comprehensive skill development.



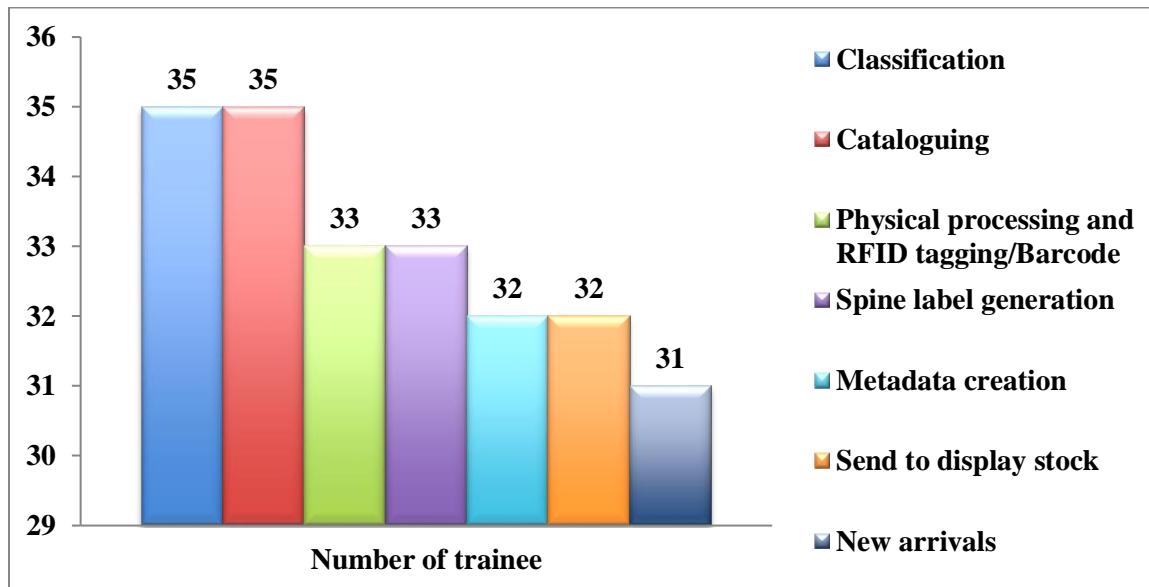
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Fig. 3

Frequency of collection development division work distribution

7.6. Technical Processing Division

All trainees in the Technical Processing Division were engaged in tasks such as classification and cataloguing (100%), with a slightly lower involvement in physical processing and RFID tagging/barcoding (94.3%). This involvement supports the efficient management of library collections, but further training in less frequently performed tasks, such as managing new arrivals (88.6%), could enhance trainees' readiness for more specialized roles in library operations.



Source(s): Figure by authors

Fig. 4
Frequency of technical processing division work distribution

7.7. Computer Application Division

Trainees were most frequently engaged in managing the DSpace institutional repository system (88.2%), followed by RFID management (64.7%) and the Koha integrated library management system (52.9%). However, there was a lower participation in managing library websites (35.3%) and providing e-newspaper clipping services (47.1%), suggesting that further training in these technologically demanding areas could be beneficial for developing advanced digital skills essential for modern library management.

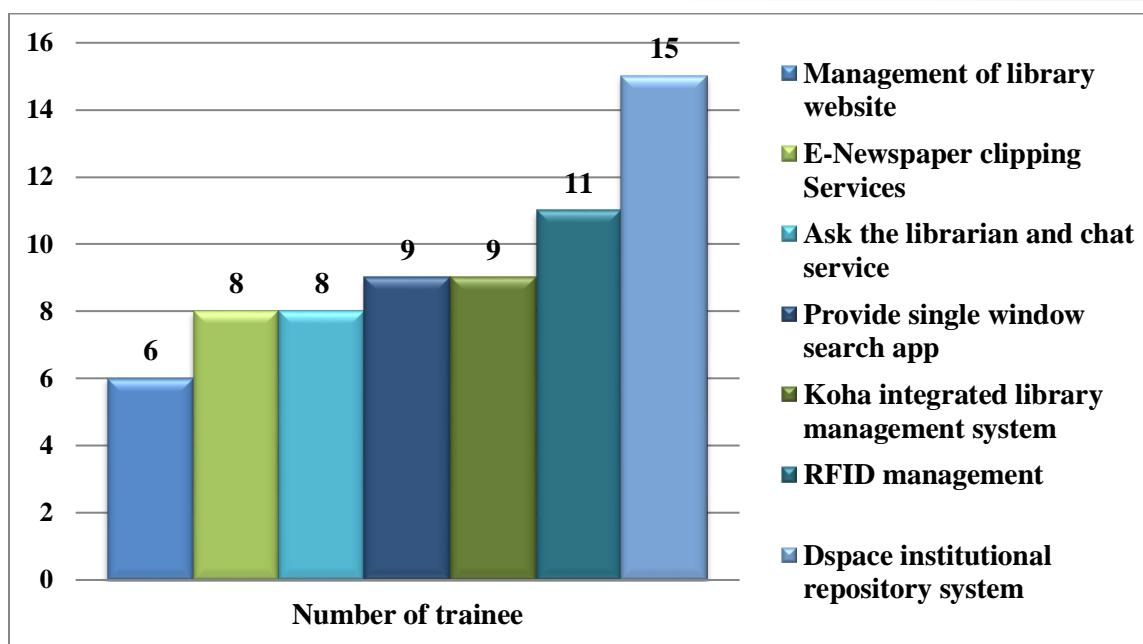


Fig. 5

Frequency of computer application division work distribution

7.8. Electronic Resource Division

In the Electronic Resource Division, tasks such as managing subscribed databases and journals (82.6%) and electronic resources (82.6%) were highly represented, reflecting the importance of digital resource management. However, fewer trainees were involved in providing IP-based access to users within (65.2%) and outside the campus (69.6%), indicating a need for training in technical skills related to managing electronic access to information.

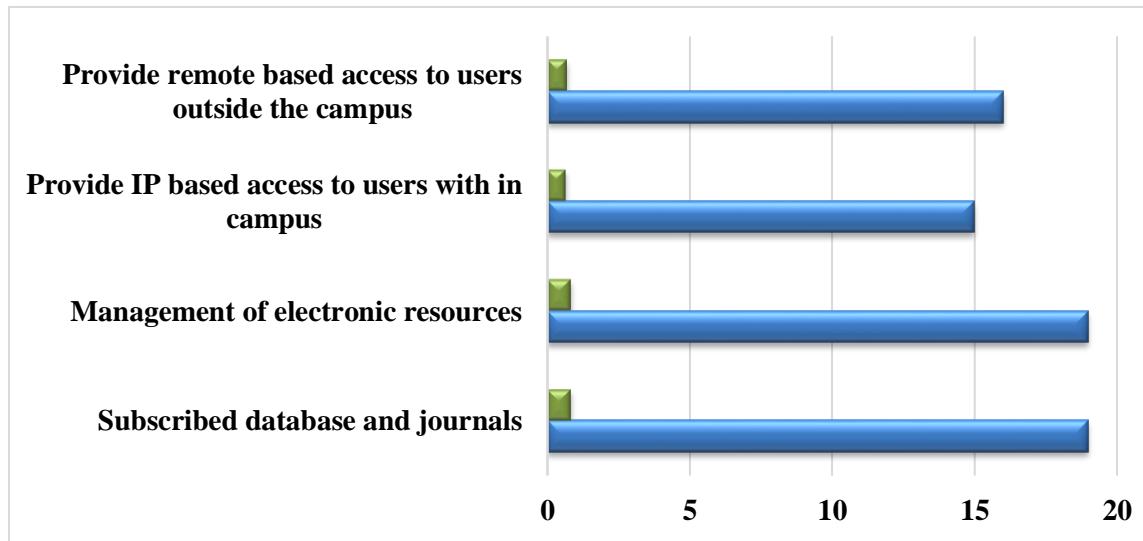


Fig. 6

Frequency of electronic resource division work distribution

The tasks most frequently performed included stock verification and rectification (32.4%), with lower involvement in shelving (2.6%) and thesis submission management (17.9%). Enhancing familiarity with classification schemes and the organizational aspects of book and thesis management could significantly improve trainees' operational skills in these critical areas.

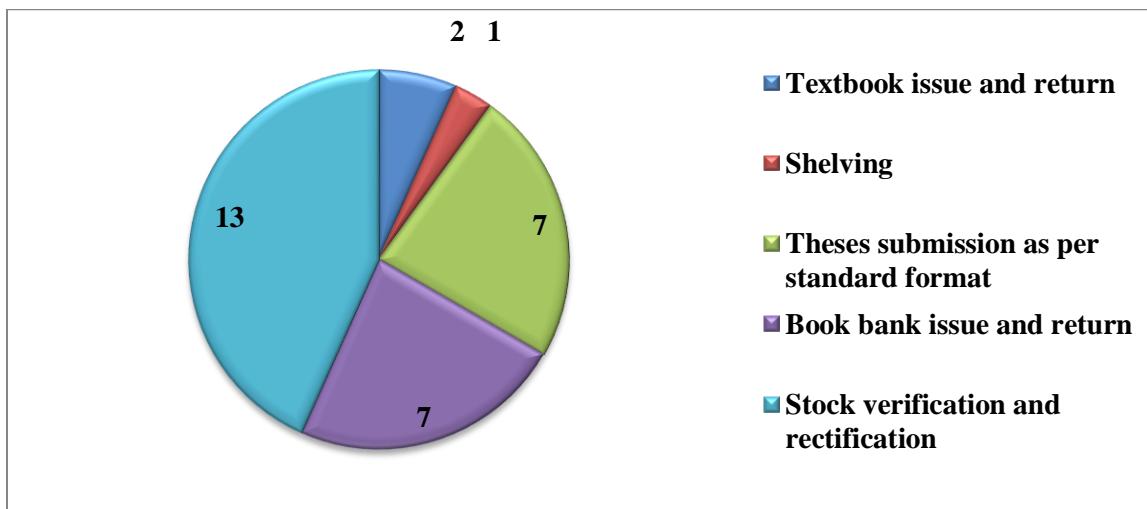


Fig. 7

Frequency of textbook book bank and theses work distribution

7.9. Research Support Service and Outreach Program

Trainees were primarily involved in electronic document delivery (77.8%), writing tools, and plagiarism software (61.1%). However, areas such as research impacts & metrics (44.4%) and user-centric tutorials (33.3%) had lower participation, highlighting the need for more comprehensive training to better support researchers and enhance academic services.

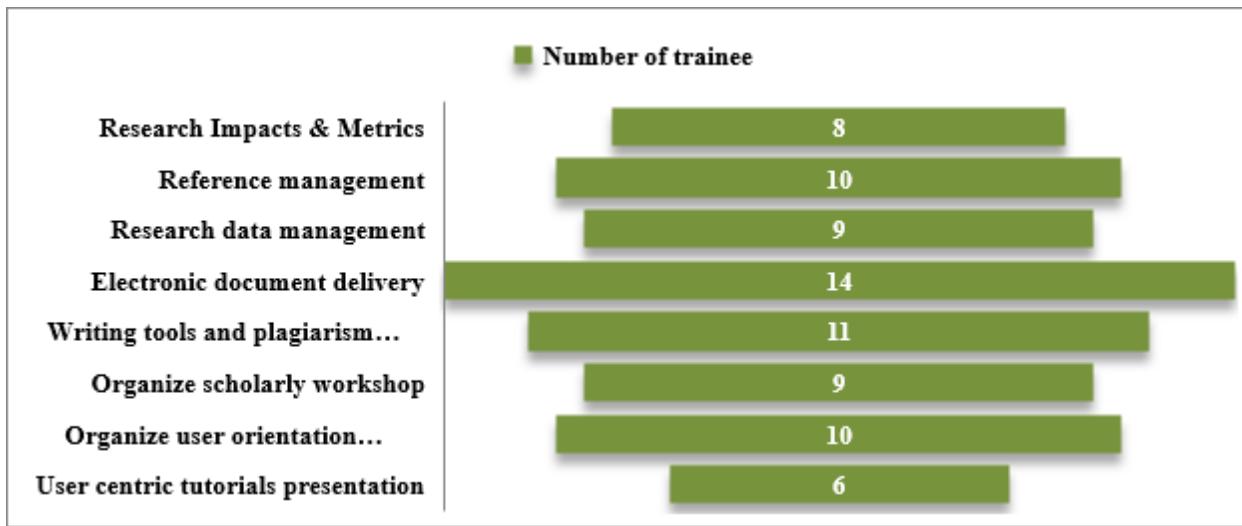


Fig. 8

Frequency of research support service and outreach program work distribution

7.10. Human Resource Development Division

Most trainees participated in workshops focused on enhancing library services (73.3%) and ICT skills (73.3%), while workshops on specialized topics like network management (26.7%) and big data analytics (23.3%) had lower attendance. Increasing the availability and frequency of specialized training workshops could help trainees build advanced competencies essential for future professional growth.

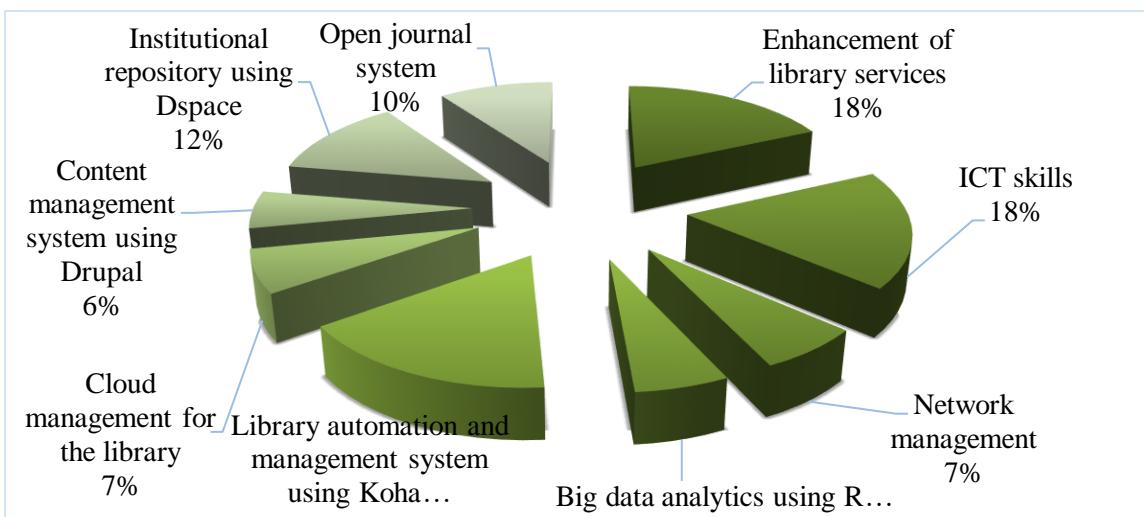


Fig. 9

Frequency of training workshops related to different types of topics

7.11. Skills Enhancement

The internship program was effective in enhancing essential skills, with problem-solving skills (82%) and time management skills (80%) receiving the highest ratings. However, human relation skills had comparatively lower positive responses (68%), suggesting an area for further improvement in interpersonal skill development.

Table 3
Percentage of skill enhancement after the internship program

Skill Enhancement	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total Agree
Presentation/Oral communication skills	8%	0	14%	30%	48%	78%
Human relation skills	8%	0	16%	28%	48%	68%
Problem Solving skills	6%	2%	10%	30%	52%	82%
Critical Thinking skills	6%	2%	18%	30%	44%	74%
Technical Skills	6%	4%	14%	36%	40%	76%
Team Building	8%	4%	16%	22%	50%	72%
Time Management	8%	0	12%	28%	52%	80%

7.12. Benefits

The trainees perceived numerous benefits from their internships, including improved work habits (96%), increased self-confidence (96%), and a better understanding of managing work in real environments (96%). These benefits underscore the value of internships in bridging the gap between academic learning and practical application.

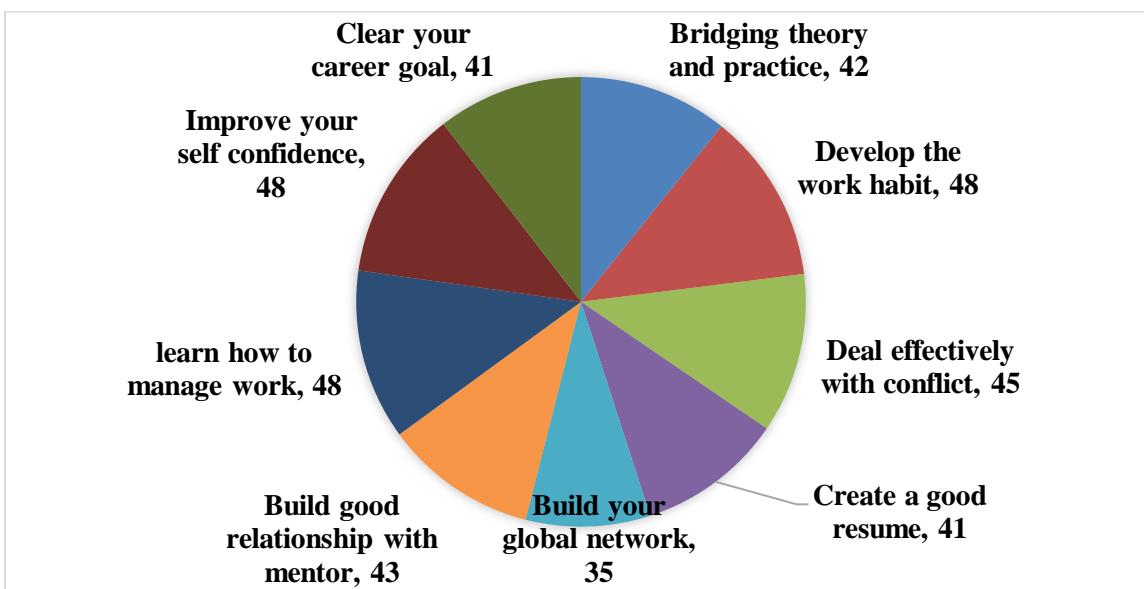


Fig. 10

Represent the frequency of benefits perceived by trainees

7.13. Challenges

The main challenges identified included difficulties in understanding rules and procedures (42%), health-related issues (38%), and repetitive tasks (38%). These challenges point to the need for more dynamic and supportive internship environments that address these concerns to enhance trainee satisfaction and performance.

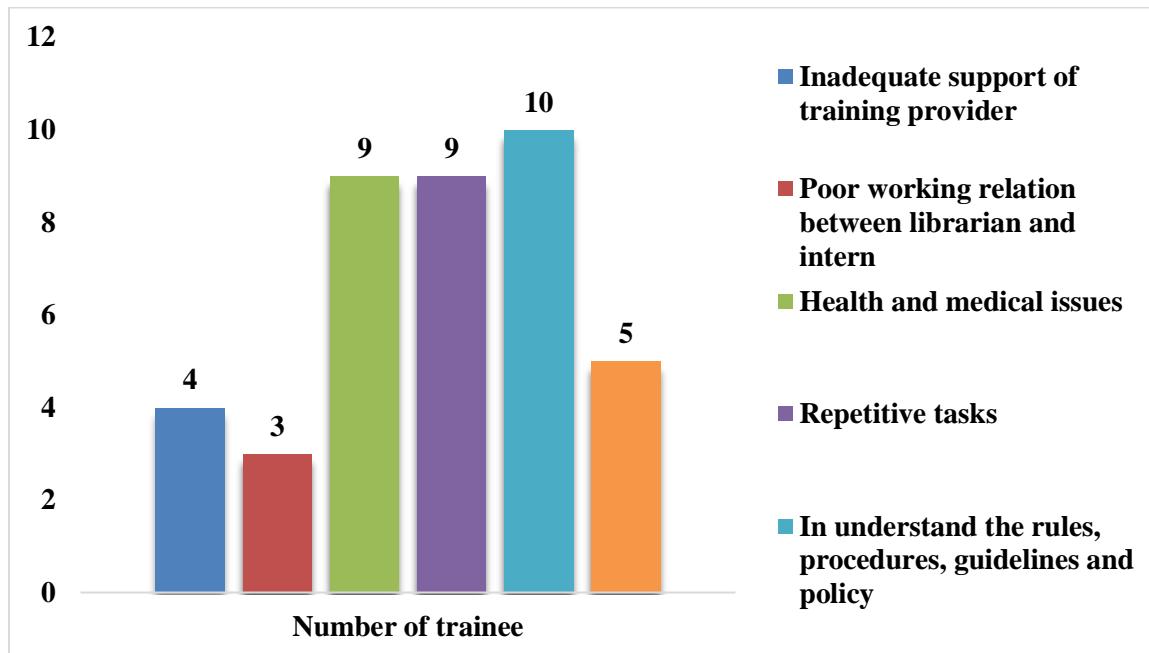


Fig. 11

Represent the frequency of challenges encountered by trainees

7.14. Satisfaction

Satisfaction levels were generally high, with 46% of trainees reporting being very satisfied and 34% satisfied with their internship experiences. However, the small percentage of unsatisfied respondents (16%) suggests there is still room for improvement in certain aspects of the internship program.



Source(s): Figure by authors

Fig. 12
Representing the satisfaction of the trainees

7.15. *Improvements*

The trainees suggested several improvements, including better opportunities to work across all library sections (76%) and clearer distinctions between trainee and employee roles (38%). Providing proper guidance (36%) and ensuring trainees interact more frequently with librarians (28%) were also highlighted as key areas for enhancing the internship experience.

8. Findings

The findings revealed that the internship program offered a well-rounded experience, with most trainees engaging in key library sections such as the Reader Services Division, Collection Development Division, and Technical Processing Division. These areas are pivotal as they emphasize patron interaction, user satisfaction, and efficient library administration. Trainees reported that the Collection Development Division was particularly impactful, highlighting the value of hands-on experience in developing essential skills. Through their internship, trainees engaged in diverse activities that allowed them to cultivate critical skills, including problem-solving, time management, presentation/oral communication, and technical skills.

The program's most significant benefits included learning how to manage work, developing strong work habits, boosting self-confidence, and effectively handling conflicts, which collectively enhanced the trainees' professional competencies. Despite these benefits, trainees also faced challenges, such as health and medical issues, repetitive tasks, difficulties in



understanding rules and procedures, and managing complex tasks. These challenges, while highlighting areas for improvement, also present opportunities for further growth and refinement of the internship experience.

Satisfaction levels among trainees were notably high, with many feeling that the program adequately prepared them for future career opportunities and helped clarify their career goals. This positive impact was evident in the professional roles that many trainees secured post-internship, with 76% of respondents gaining employment in well-established institutions and universities. Examples include trainees working as assistant librarians at prestigious institutions such as Jamia Millia Islamia and Delhi University, showcasing the program's success in supporting career advancement.

However, the study also identified areas for improvement based on feedback from trainees. Suggestions included implementing best practices, treating interns on par with regular employees, and providing proper guidance from training providers. Such measures are crucial for creating a positive, productive, and educational internship environment that benefits both the trainees and the hosting institutions. Addressing these areas is essential not only for the personal and professional development of trainees but also for enhancing the overall effectiveness and reputation of the internship program.

The overall trainee experience was overwhelmingly positive, with 90% of respondents rating their experience as "excellent" or "good." Additionally, 85% of trainees indicated that they would recommend the internship program to their peers, reflecting a strong endorsement of the program's value. These findings offer an in-depth evaluation of internship experience and underscore the importance of continuous improvement to provide effective, impactful internships. The insights gained from this study are not only valuable for IIT Delhi but also serve as a guide for other institutions seeking to establish or refine their internship programs, ultimately contributing to the professional growth of future LIS students.

9. Recommendations

Based on the findings of the study, the following recommendations are proposed to enhance the internship experience for Library and Information Science (LIS) students:

- a) **Enhance Involvement in Underrepresented Tasks:** Efforts should be made to increase trainee involvement in the less engaged tasks across various library sections. Expanding training opportunities in these areas will ensure a more balanced skill distribution and foster comprehensive professional development, preparing trainees for diverse career pathways in LIS.
- b) **Improve Human Relation and Team Building Skills:** The study identified a need for improvement in human relation and team-building skills among trainees. Strengthening these skills is crucial for effective communication with library patrons and colleagues, fostering a positive work environment, and enhancing the overall quality of service delivery.

- c) **Expand Networking Opportunities:** A relatively low number of trainees perceived the benefit of building a global network, likely due to limited interaction with broader professional groups. To address this, organizing events such as workshops, seminars, and networking sessions with industry experts can provide trainees with valuable opportunities to connect, collaborate, and expand their professional networks.
- d) **Diversify Task Assignments to Mitigate Repetitive Tasks:** Many trainees reported challenges with repetitive tasks, limiting their exposure to diverse library operations and skill development. Providing trainees with opportunities to rotate through different library sections will enable them to gain a holistic understanding of library functions and develop essential competencies required for their future professional roles.
- e) **Strengthen Guidance and Mentorship:** Effective guidance from training providers is crucial for the success and professional growth of trainees. Structured mentorship and clear instructions during the internship program can significantly enhance the learning experience, making the internship more effective and fulfilling for trainees.
- f) **Foster a Positive Working Environment:** Trainees highlighted the need for an improved working environment that promotes learning and development. A supportive and encouraging workplace culture is essential for trainees to focus on skill enhancement and to fully engage in their training.
- g) **Encourage Interaction with Librarians and Address Health Considerations:** Increased interaction between trainees and librarians, coupled with attention to interns' health and well-being, is important for boosting satisfaction and achieving institutional goals. A focus on health and well-being
- h) contributes to a higher quality of life for trainees and supports their ability to perform effectively during their internships.

These suggestions aim to improve the internship experience, better prepare LIS students for their professional careers and ensure that internship programs meet both educational and institutional objectives.

10. Conclusion

The internship program examined in this study has proven to be an effective approach for enhancing the knowledge base and skill set of Library and Information Science (LIS) students, significantly contributing to their early career success. In the Indian context, limited research has been conducted within the LIS profession, highlighting the unique contribution of this study, which utilized survey methods to explore the post-internship experiences of trainees. The post-internship phase is a critical period for reflecting on the learning journey, skill development, and overall impact of the internship program. During this phase, trainees often acquire substantial knowledge through hands-on tasks that provide practical applications of academic concepts and expose them to real-world industry practices. These experiences are essential for building confidence and preparing trainees for future professional roles. This study contributes to the field by providing a quantitative analysis of trainees' experiences and perceptions of the internship program.

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