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DIGITAL LITERACY SKILLS AMONG THE STUDENTS PURSUING PG IN LIBRARY AND INFORMATION SCIENCE COURSE IN TIRUCHIRAPPALLI DISTRICT

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Abstract

In the present digital era, possessing digital literacy skills is crucial in order to attain success in education, employment and in all daily routine activities. This enables people to locate, evaluate, create and responsibly share information through online platforms simultaneously adhering to the ethical standards. Acquiring digital literacy skills aids an individual to keep pace with the technological advancements, digital materials can be critically evaluated, online privacy and security can be safeguarded and expressively engage in the digital sphere. The students of Library and Information Science (LIS) are anticipated to have a wide range of digital competencies to excel in their career path. This study focuses to investigate the digital literacy skills of the Library and Information Science (LIS) students in Tiruchirappalli District, Tamil Nadu, India. A quantitative methodology was applied with a descriptive survey pattern followed to collect data from 51 students through a structured google survey questionnaire. The questionnaire has a 4 point Likert scale along with demographic information; it also assessed the levels of digital literacy, evaluated the proficiency of the respondents in using the internet and technology tools for information retrieval and identified the various challenges and the areas that required training and enhancement.

Keywords: Digital Literacy, Digital Literacy Skills, Information Literacy, LIS, ICT

1. Introduction

In the current scenario, where technology is rapidly changing and the society is influenced in large with the advancements in information and communication technology (ICT), it is essential to learn, acquire and apply new skills to make effective use of the available opportunities and to contribute meaningfully to any field of interest. This is more apt in this 21st century students across all disciplines and the students of Library and Information Science (LIS) are not an exception to this, it is because effective education

not only defines the capability to read and write, but it is also a combination of various skills like information literacy, digital literacy and many such competencies. As the field of library and information science evolves around drastic technological changes in the information access aspects, it is essential for the students of LIS also to possess constructive knowledge about the technology in order to effectively use, evaluate the various information platforms are made accessible to them. The role of LIS professionals has become knotted with the digital technologies, thereby making it mandatory for the upcoming library professionals to be more skilled with the latest technologies and use them innovatively for information retrieval and dissemination.

The American Library Association's digital-literacy task force offers this definition: "Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills." This study was carried among the students studying Library and Information Science in academic institutions in Tiruchirappalli District. This study focused on the LIS students' views on the Digital Literacy (DL) concept, its implementation and the significance for their information needs. The study also focused on various Digital Literacy skills like computer proficiency, online competency of the students for information retrieval. Apart from exploring the different skills associated with digital literacy, the study also highlighted on the various barriers faced by the students in developing their digital skills and the areas that they think needs improvement, thereby enabling them to address the challenges to be more competent and skilful LIS professional in their career path.

2. Review of Literature

This study shows that the digital literacy level among the Library and Information Science (LIS) students differs widely, that is influenced both by the demographic and contextual elements. Esh and Ghosh (2021) identified differences in the digital skills at the University of North Bengal. The access to digital resources was impacted by aspects like gender and living conditions of the respondents. In such a similar kind of study Okechukwu et al (2024) found different levels of digital literacy in Nnamdi Azikiwe University. These gaps where closed by linking the curriculum and the pedagogical aspects. The need for unvarying competency-based strategies was stressed upon. On a different perspective Olalere and Soyemi (2022) pointed out high digital literacy levels in South-West Nigeria that signified that geographical and institutional factors are vital in evolving digital skills.

These studies highlighted majorly on the mismatch between the LIS curriculum and the fast-growing digital requirements in the current information era. Cerny (2021) in a longitudinal study at Masaryk University identified that the students excelled in information management and communication, they lacked skills like programming, technical problem solving etc. This indicates that current curriculum often does not prepare the students for the face the intricate, technology-based roles expected in the libraries. Okechukwu et al. (2024) also highlighted the advantages of participatory teaching approaches and alongside stressed the lack of practical, experiential learning prospects. These findings, echoed by Esh and Ghosh (2021), highlight the importance of integrating socio-cultural elements into curriculum development.

Almost the studies indicate that there is a lack of technical and programming skills, and it is recommended that proper structured updation in the LIS programs be made that would integrate the advanced digital competencies like critical thinking, coding etc. The institutional support and faculty development does plays a vital role in addressing the inequalities that is linked with gender, socio economic status and access to technology. The existing strengths can be leveraged to improve the end results among the lower digital literate groups, as was done in the study which was based on Southwest Nigeria.

In conclusion, even though there is regional differences in digital literacy, there is a uniform and shared agreement on the need for a more comprehensive and skill-based LIS education. The future efforts should always prioritize curriculum innovation, digital equity and the incorporation of advanced digital skills to better prepare students for the changing roles in the information sector.

3. Statement of Problem

In the current education scenario digital literacy skill is a vital aspect for achieving greater academic performance and professional efficiency. This certainly helps to mitigate the barriers that relate to the access and the utilization of electronic information resources. Especially in the developed countries this has become more mandatory for effective learning and research in academic institutions. Possessing strong digital literacy skills enables the LIS students to carry out their academic activities efficiently and communicate their outcomes easily through online file sharing, documents sharing etc. This also helps to be competent both in the job market and in their professional activities. Hence, this study focuses to evaluate the digital literacy skill competency of LIS students, identify the gaps and provide recommendations to overcome the drawbacks.

4. Objective of the Study

The main objective of this study to assess the level of digital literacy skills of post graduate students pursuing library and information science in Tiruchirappalli district, however other specific objectives are listed below:

4.1 To identify the digital tools and devices preferred by post graduate students of Library and information science for information searching and storage.

4.2 To understand the students' knowledge and the usage of ICT-based library services.

4.3 To investigate the students' understanding and awareness about digital content, such as copyright, plagiarism, etc.

4.4 To identify the perceived challenges that pose as a hindrance to enhance digital literacy abilities among Post Graduate Library and Information Science students.

4.5 To identify the areas where post graduate students of Library and information science feel they require additional training in digital literacy skills.

5. Scope and Limitations of the Study

This research concentrates on evaluating the digital literacy competencies of students enrolled in postgraduate program in Library and Information Science. The sample consists of 51 students from three colleges in the Tiruchirappalli District that provide a Library and Information Science program. This sample was exclusively selected from postgraduate students of institutions affiliated with Bharathidasan University, while students studying library and information science at the university campus have been excluded from this research.

6. Research Methodology

6.1 Research Design

A descriptive survey approach has been used to assess the digital literacy competencies, awareness levels, challenges and training requirements of the postgraduate students studying Library and Information Science. This method was selected in order to collect first-hand data from participants in a structured and quantifiable way.

6.2 Population and Sampling

The study focused and has surveyed the postgraduate students, around 51, studying Library and Information Science in colleges located in Tiruchirappalli District. To choose the participants, a purposive sampling strategy was selected to facilitate in identifying the students involved in LIS education and are anticipated to use digital resources.

6.3 Data Collection Tool

A structured questionnaire was used for data collection, created using Google Forms. Both close ended and multiple response questions were included in the questionnaire that focused on five key areas:

- Use of digital tools and storage media
- Fluency with ICT-based library services
- Understanding theories of digital content (e.g., copyright, plagiarism)
- Challenges to improving digital literacy
- Topics requiring digital literacy training

6.4 Data Collection Procedure

Online questionnaire was shared with the chosen participants through institutional contacts and email. The respondents were informed about the objective of the study and ensured confidentiality.

6.5 Data Analysis

The data collected was organized and analyzed, descriptive statistical methods that included frequencies and percentages was used to interpret the responses that was received. The findings of this study is presented in graphical format which would be easy to identify the trends and derive on the conclusions with ease.

7. Data Analysis

Table 1

Distribution of the respondents according to their awareness for using technology tools

S. No.	Awareness for using technology tools	No. of Respondents (n =51)	Percentage
1.	**Overall level of Awareness for using technology tools**		
	Low	29	56.9
	High	22	43.1

Table 2

Distribution of the respondents according to their prefer to store data/file

S. No.	Prefer to store data/file	No. of Respondents (n =51)	Percentage*
1.	CD/DVD	2	3.9
2.	PC/Laptop	20	39.2
3.	Pen Drive	35	68.6
4.	Portable Hard Disk	10	19.6
5.	Memory Card	14	27.5
6.	Google Drive	30	58.8

(*Multiple Response Percentage)

Data Interpretation:

Table 1 – Awareness of Technology Tools

Low awareness: 56.9% (29 respondents), High awareness: 43.1% (22 respondents), Majority of students demonstrate limited confidence or familiarity with technology tools, indicating a digital skills gap.

Table 2 – Preferred Data Storage Devices (Multiple responses)

Most common - Pen Drive (68.6%), Google Drive (58.8%) and PC/Laptop (39.2%); Less preferred – Memory Card (27.5%), Portable Hard Disk (19.6%) and CD/DVD (3.9%)

Summary

Students largely make use of portable storage (Pen Drives) and cloud-based solutions (Google Drive), this reflects the combination of traditional and modern methods. Yet, the major percentage of low awareness about the tech tools emphasizes the need for basic digital training.

Table 3

Distribution of the respondents based on their ICT based library services awareness

S. No.	Awareness about ICT based library services	No. of Respondents (n =51)	Percentage*
1.	Access to full text databases like e-books, e-journals	30	58.8
2.	OPAC	15	29.4
3.	CAS/SDI & Online reference service	10	19.6
4.	Documents scanning and sharing	2	3.9
5.	Library automation – circulation, gate entry, reporting etc	5	9.8
6.	E-Mail alert service	2	3.9

(*Multiple Response Percentage)

Data Interpretation

Table 3 - ICT based library services awareness

The most acknowledged services is E-resources access (58.8%), OPAC (29.4%); Less acknowledged services is Library automation functions (9.8%), followed by document scanning/sharing (3.9%) and E-mail alert services (3.9%).

Summary

Awareness tends to focus on widely utilized resources such as e-journals and OPAC. There is a significant lack of awareness regarding backend and advanced ICT services, highlighting the importance of instructing students about a full range of library automation tools.

Table 4

Distribution of the respondents according to their awareness about concepts related to digital content, such as copyright, plagiarism, and fair use of information.

Knowledge Level	Copyright	Plagiarism	Fair Use of Information
Expert	**7**	**4**	**4**
Good	**16**	**21**	**19**
Average	**26**	**22**	**28**
Poor	**1**	**4**	**0**
Not Aware	**1**	**0**	**0**

Data Interpretation

Table 4 – Awareness about digital content (Copyright, Plagiarism, Fair use of information)

Copyright - Majority (26 respondents) rate their knowledge as average, 16 respondents rate as good, only 7 respondents rate as experts and 2 respondents rate as poor/not aware.

Plagiarism – 21 respondents rate as good, 22 rate as average and 4 have rated as experts and 4 consider their knowledge as poor.

Fair use of Information – 28 respondents have rated as average, 19 have rated as good, 4 have rated as expert and non-have rated as poor/not aware, that indicates baseline awareness.

Summary

Most students have at least an average grasp of important digital content areas, but there is a scarcity of expert-level expertise across all three subjects. The findings indicate a necessity for enhanced training and awareness initiatives on Copyright, Plagiarism, and Fair Use to improve their preparedness for managing digital content in a legal and ethical manner.

Table 5

Distribution of the respondents according to their obstacles faced when trying to enhance their digital literacy skills

S. No.	Obstacles faced when trying to enhance their digital literacy skills	No. of Respondents (n =51)	Percentage*
1.	Not enough time in the course	10	19.6
2.	Lack of sufficient personal expertise	48	94.1
3.	Lack of external support	5	9.8
4.	Lack of student interest	7	13.7
5.	Lack of student technology skills	8	15.7
6.	Lack of space/equipment	3	5.9
7.	Not part of the course	2	3.9
8.	None	3	5.9

(*Multiple Response Percentage)

Data Interpretation

Table 5 – Obstacles faced when trying to enhance digital literacy skills

Major barrier – Lack of personal expertise (94.1%), lesser issues – Not enough course time (19.6%), Lack of Interest (13.7%), Technology skills (15.7%); Infrastructure issues (space/equipment) and curriculum exclusion were minor concerns.

Summary

The students mostly believe that they lack individual resources to develop their digital skills, demonstrating the need for focused capacity building and integration into the curriculum. Furthermore, it is essential to strengthen the motivation and support systems.

Table 6

Distribution of the respondents based on their opinion on the need for training to enhance digital literacy skills

S. No.	Opinion on need to enhance your digital literacy skills through training	No. of Respondents (n =51)	Percentage*
1.	Basic Information Technology concepts (MS Office)	19	37.3
2.	Basic hardware and networking	12	23.5
3.	Library management software	19	37.3
4.	Institutional repositories	16	31.4
5.	OPAC & barcoding	8	15.7
6.	Internet browsing and accessing web information services	11	21.6
7.	Web 2.0, creation of website	27	52.9
8.	Subscription & access to online journals/databases	26	51.0
9.	Search techniques/strategies	6	11.8

(*Multiple Response Percentage)

Data Interpretation

Table 6 – Need for training to enhance digital literacy skills

The most mandatory training areas identified were Web 2.0 & Website creation (52.9%), followed by access to online journals/databases (51.0%), then the Library management software (37.3%) & MS Office (37.3%); less preferred areas for training are search techniques (11.8%), OPAC/barcoding (15.7%).

Summary

The students expressed keen interest to learn sophisticated and hands-on digital skills, in particular the web technologies and access to academic resources. The interest shown for learning basic search techniques is comparatively lower, possibly because it is viewed as already proficient or not adequately valued.

8. Discussion

The study has surveyed various facets of digital literacy skills in postgraduate students who are studying Library and Information Science (LIS) in the Tiruchirappalli District. The results of this study indicate both positive developments and major limitations in digital readiness.

8.1 Awareness and Use of Digital Tools and Devices

The study shows that there is a visible gap in digital skills among LIS students. Nearly 56.9% have inadequate familiarity about technology, while around 43.1% have a strong awareness about digital resources. Most of the students prefer to use pen drives (68.6%) and Google Drive (58.8%) for data storage. However, 39.2% still use PCs or laptops. Traditional media like CD and DVD usage is very rare at 3.9%.

8.2 Awareness in ICT Based Library Services

The ICT knowledge basically focused on the e-resources (58.8%) and OPAC systems (29.4%). Contradictorily, awareness of library automation (9.8%), document scanning and sharing (3.9%), and email alerts (3.9%) remains very less. This indicates that the curriculum basically focuses on the content access instead of understanding or handling digital library systems.

8.3 Knowledge on Plagiarism, Copyright

The students have basic understanding about the digital ethics, but most of them lack in-depth knowledge. Most of them rated their understanding of copyright (26%), plagiarism (22%), and fair use (28%) as average. None of them reported being "not aware" of fair use. Still, the limited understanding affects the readiness to handle the real digital content and copyright issues.

8.4 Challenges in Digital Literacy enhancement

Almost 94.1% of students felt that the lack of their personal knowledge as a main barrier in improving their digital literacy. 19.6% students expressed limited course time, whereas 15.7% students responded to insufficient technical skills. The findings emphasized on the need for personal development and organized training to enhance digital skills.

8.5 Areas for Training

The students exhibited their strong interest in digital skill enhancement, mainly in:

- Web 2.0 tools and website development (52.9%)
- Gaining access to online databases and journals (51.0%)
- Using library management software (37.3%)
- MS Office and fundamental IT skills (37.3%)

This highlights a need for training that is not only practical but also focused on tools that are crucial for digital librarianship and academic research. Interestingly, search techniques (11.8%) received the fewest selections, which may suggest either a sense of overconfidence or a lack of awareness regarding advanced search methods.

9. Recommendations

Based on the above listed findings, the key underlying recommendations are being proposed in order to improve the digital literacy of library and information science (LIS) students:

9.1 Integrate Digital Literacy in the Core Curriculum

9.1.1 Digital Literacy skills must be integrated as a mandatory part of the LIS curriculum, which would address key topics like information ethics, digital storage, Web 2.0 technologies etc.

9.1.2 Incorporate hands-on training, assignments and use real-time demo to create awareness to utilizing the latest technologies in the libraries.

9.2 Conduct Workshops Focused on Skill Development and Certification Programs

9.2.1 Conduct workshops that focus on key topics like library automation, digital content management, advanced search techniques etc.

9.2.2 Introduce certification courses that can cover copyright, plagiarism tools, intellectual property laws etc.

9.3 Hands-on Training/Projects to Foster Knowledge Acquisition.

9.3.1 Encourage students to create blogs, institutional repositories using open-source software or tools.

9.3.2 Hands-on training that focuses on OPAC, Library management software, RFID based library services and facilities etc.

9.4 Create Structures for Peer Learning and Mentorship

9.4.1 Create digital literacy groups or mentoring programs to aid those have difficulties in gaining the technical skills.

9.4.2 Orienting through the real-world experiences of LIS professionals, mentors by highlighting the challenges and the solutions that can be thought about.

9.5 Utilize the ICT infrastructure provided by the Institution

9.5.1 Students to be provided with access to latest technology, upgraded internet connectivity which would aid in hands-on training.

9.5.2 Obstacles such as time constraints can be overcome by having flexible and blended learning features.

9.6 Concentrate on the Legal and Ethical aspects

9.6.1 Conduct sessions that highlights the ethical information utilization, copyright policy and policy that pertain to maintain academic integrity.

9.6.2 Facilitate training programs to students on using the plagiarism software such as Turnitin, iThenticate.

10. Scope for Future Study

This research has established a foundation for comprehending the levels of digital literacy among postgraduate Library and Information Science (LIS) students in the Tiruchirappalli District. Nonetheless, various facets remain available for additional investigation. The future research can be done including the students from different regions, thereby comparing the academic and cultural differences. Long-term studies can enable to track how digital literacy is being developed during the students' education in order to determine the effects of the curriculum. Assessing the digital skills of LIS faculty will provide clear picture of the teaching and learning environment. In addition, the research can also look at how digital literacy impacts the academic success, research projects, and job openings. It can also assess the usefulness of specific training programs. Considering the technological growth of AI, virtual library concepts, the future studies must focus on curriculum updation to aid the students and on how they ethically use and evaluate digital information.

11. Conclusion

This study highlights the diverse aspects of digital literacy among postgraduate Library and Information Science (LIS) students in the Tiruchirappalli District. Although the students' exhibits better engagement in use of digital tools and platforms, particularly the storage options like pen drives, cloud storage like Google Drive, however they lack broad digital skills. Almost half of the respondents mentioned that they have limited technological knowledge and many have identified that their personal weaknesses as a major hindrance to refining their digital skills. The findings also highlights a concerning lack of understanding about the important ICT based library services, like library automation and document scanning. There is also inadequate knowledge about vital digital content principles such as copyright, plagiarism and fair use. This scenario emphasizes on the need for LIS curriculum updation with more comprehensive and

hands-on digital literacy programs. Despite these concerns the students are keen to learn innovative digital skills like Web 2.0 technologies, online database access and library management software. In conclusion, it is highlighted that there is an immediate need to integrate latest digital literacy education in the LIS curriculum, by incorporating hands-on training in digital skills, enhanced curriculum, ethical information knowledge etc. This is considered vital not just to ensure academic growth but also to help the graduating students to be more competent and succeed in the digital job market.

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