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Digital Literacy Skills among Users of State Central Library, Thiruvananthapuram: An Investigative Study

Sreelekshmi V M
sreebhadra07@gmail.com

Mini Devi B
University of Kerala, drminidevi1968@gmail.com

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Sreelekshmi V M

Mlisc Student

Department of Library and Information Science

University of Kerala

Dr. B Mini Devi

Head of the Department

Dept of Library and Information Science

University of Kerala

Abstract : The study aims to ascertain digital literacy skills of users of State Central Library, Thiruvananthapuram. Data were collected using questionnaire distributed to a random sample of 160 members, out of which 150 are received with required details. It is observed that the respondents possess essential digital literacy skills. Majority of users were students and they have basic knowledge about digital materials and also used e-resources. Internet based resources and services are widely used. Google chrome is the most preferred web browser. Facebook is the social networking site used by the majority of respondents. Most of the library users identified the problem such as the absence of computer labs and free Wi-Fi facilities.

Keywords:- Digital Literacy, Skills, Users, State Central Library, Thiruvananthapuram, Investigative Study.

I. Introduction

Libraries play a vital part in helping people become digital citizens because they are accessible and trusted institutions in the community. They provide free access to learning. Lifelong learning and knowledge creation have long formed the core of library services. Libraries all over the world have been faced with the evolving technological advancement, globalisation, and digitisation of information.

Computer literacy is very important because they are applied in almost all the fields in the modern era. They are mainly used in one to one communication, banking, business, medical science, education, media, sports, weather prediction and in our

daily life activities like entertainment and so on. Higher educational institutions in advanced countries have adopted Information and Communication Technology (ICT) as a means to impart upon the student's knowledge and skills demanded by 21st-century (Parvathamma & Pattar 2013).

Another type of literacy was introduced in the mid-1990s, digital literacy (DL) that deals with computer network knowledge and skills (Digital literacy, 2016). DL is linked to computer literacy and information literacy. Network literacy is being able to participate as a peer within the emerging knowledge networks that are now the product of the internet and to have as deep an understanding of the logic or protocols of these networks as we do of print. The most fundamental quality of network literacy is recognising that content and its containers, whether web pages, blog posts, photos, video or any other media type, are distributed across the network, and that we weave these together very easily using simple protocols that were developed to allow 'inter' and 'intra' communication between different sorts of internet services. (Miles, 2007).

Digital literacy refers to an individual's ability to find evaluate, and compose clear information through writing and other mediums on various digital platforms. Digital literacy is evaluated by an individual's grammar, composition, typing skills and ability to produce writings, images, audio and designs by using technology. While digital literacy initially focused on digital skills and stand-alone computers, the advent of the internet and use of social media has caused some of its focus to shift to mobile devices. Digital literacy does not replace traditional forms of literacy instead of building upon the skills that form the foundation of traditional forms of literacy.

Digital literacy support happens every time someone interacts with the catalogue, borrows an audio book, uses library Wi-Fi on their phone, and visits the library website. It no longer makes sense to separate digital from the non-digital. This presents some exciting new ways to approach digital literacy that enables people to learn new skills in social, collaborative and meaningful ways. Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, to enable constructive social action (Koltay et al., 2016).

II. Purpose Of The Study

The information about digital is playing a vital role, and it is becoming essential to almost every aspect of modern life which means that there is a need for library users who are information literate in a digital context. Many innovations today are as a result of the exposure and access to the world of ICTs, and people all over the world can access information from any part of the world about their interests in life. Digital literacy support at the library remains instructions and linear, while maker spaces get to be constructionist and creative for some reason, these two streams of services have not intervened.

User community requires awareness about digital technology to locate, organise, understand, evaluate and analyse information. But it has been observed that there is an information gap in the use of digital devices among State Central library users. Most of them employ the services of internet cafes to source materials from the internet. The reason for this could be as a result of lack of skills in the use of these new technologies and inadequate information about the use of the devices. The study examines the digital literacy of public library users.

III. Review of Literature

The study undertaken by **Seghayar (2020)** investigated the adequacy of EFL learner's abilities in three major dimensions of digital literacy skills and whether self-assessment of competence was consistent with their actual performance. It also identified factors that affected learner’s use of selected digital literacy skills. The EFL learners responded to a five-part cross-sectional questionnaire of 36 items categorized according to three dimensions of digital literacy skills. They also engaged in 11 predetermined real-time internet search tasks. The data were analyzed with descriptive statistics and paired t-tests. The results indicated that the participant's success in searches was measured by the total number of tasks completed accurately. The results indicated that the participants were ill-equipped to efficiently handle the three key L2 digital literacy skills.

An article written by **Anthonysamy (2019)** investigated digital literacy deficiencies in the digital learning environment among university students. Digital technology had changed the way university students approach learning because it has

become a necessity and an integral part of their lives. University students were accustomed to using their digital for almost anything such as communication, collaboration, access to multiple sources of information for solutions, etc. Although these digital generations are undeniably engaged with technologies and they were very comfortable and confident used technology to accomplished tasks. Current studies revealed that students do not have the required digital literacy skills for digital learning. Digital literacy significantly enhances graduate employability because it empowers graduates to achieve more in the digital economy.

A study was conducted by **Wu (2019)** explored digital literacy as the ability to effectively identify information needs, access needed information, evaluate and use information, is a crucial skill set for both individuals and organizations. Therefore, understanding the relationships between information literacy, creativity, and work performance could not only help enterprises recognize the importance of information literacy, and its influence on the workplace, but also provide educators with guidance for planning-related training programs. The empirical study explored the relationship between self-efficacy in information literacy, creativity, and work performance. The findings show that self-efficacy in defining information needs; self-efficacy in using information can significantly positively affect creativity. Creativity can significantly positively affect work performance; and creativity mediates the association between self-efficacy in information literacy and work performance. Implications based on the findings are also discussed.

Another study was conducted by **Kumar and Singh (2015)** explored the impact of digital literacy among library and information science research scholars of Babasaheb Bhimrao Ambedkar University in Lucknow. A structured questionnaire was used for data collection. The findings of the study revealed that the advancement of information technology and communication tools has been forced to develop technological skills to effective and efficient utilization of it. About 62.96% of research scholars used laptops for accessing the internet after that smart phone and desktop. About 66.66% of research scholars used the internet from the department and only a little number of research scholars use hostel. The digital literacy skills are very high in library science doctoral researchers but they find gaps in their search results and some other difficulties like connectivity and places for internet access were also occur.

A dissertation study of **Ginger (2015)** scrutinized the role of the public library in fostering digital literacy in undeserved Illinois communities. Research methods included several kinds of site observation as well as interviews with librarians. The data suggested that library roles to digital literacy are changing in several substantial ways. First, libraries were moving beyond merely providing internet to proactively promoting assisted public computing. Second, they were shifting their view of themselves as a community space to include leadership in community networking. Finally, they were working to cultivate information experiences that progress beyond consumption to involve a dimension of generative learning.

IV. Objectives of the Study

The objectives of the study are:

1. To identify the preference of using e-resources
2. To discover the purpose of using e-resources
3. To understand the familiarity and usefulness of online resources
4. To identify the field used for searching and usefulness of advanced search facilities.
5. To find out the types of digital literacy training programme needed by the respondents.

V. Scope and Limitation of the Study

- The study is focused on the users of the State central library, Thiruvananthapuram.
- Each and every category of users to be included in this study. The categories include ‘A’ class, ‘B’ class, ‘C’ class, ‘D’ class and ‘E’ class.
- The study is confined only to the users of the State central library, Thiruvananthapuram.
- This study excludes the users of children’s library.

VI. Research Methodology

Public libraries which come under the State Library Council were selected for the study. The study was carried out through survey method using a pre-structured questionnaire. Based on the literature review and the objectives of the study, a structured questionnaire was designed to collect data on the digital literacy skills of user’s of State Central Library. The respondents were selected randomly among 150 respondents with different categories. One hundred and sixty (160) questionnaires

were distributed among the respondents. Out of them, one hundred and fifty (150) were selected for the analysis. Data should be gathering through a structured questionnaire with open-ended and closed-ended questions from the users. To facilitate quantification and analysis of data, mainly closed ended questions were used. The questionnaire was entered in MS Excel 2013 worksheet, and the analysis was done using SPSS version 22.

VII. Analysis of Data

a. Type of Resources Used

Various types of electronic resources are available for providing information to users. There are general as well as subject-specific electronic information sources. Different types of e-resources are used for accessing more information. As shown in table 1, highlights the type of resources used by the users of State Central Library.

Table 1

Type of Resources Used

Resources*	Frequency	Percentage
E-Books	101	84.17
E-Journals	71	59.17
E-Databases	31	25.83
E-Theses	29	24.17
E-Dissertations	22	18.33
E-Archives	22	18.33

**Multiple Response*

Majority of library users are mostly preferred e-books (101) as the first rank. The 71 users preferred e-journals as to the second rank. 31 library users preferred e-databases in the third rank. E- Thesis is in the fourth rank. And e-Dissertations and e-Archives are ranked as fifth respectively. From the table clear that the library users are commonly used the e-resources as e-books, e-journals, and e-database. It is found from the results that, out of 150 respondents in library users, 84.17% gave first preference to e-books, second preference to e-journals (59.17%), third preference to e-databases (25.83%), e-theses (24.17%) fourth preference, fifth preference is to e-dissertations and e-archives (18.33%), sixth preference to consortia (1.67%), only 2 users gave a positive response to this electronic resource.

b. Difference in the Preference of Using e-resources among Male and Female Users

To analyze the significant gender-wise difference in the type of using e-resources among users of various age groups Chi-square test was conducted. The result of the analysis is presented in table 2.

Table 2
Difference in the Preference of Using e-resources among Male and Female Users

Resources	Gender				Chi-square	Sig.
	Male		Female			
	Frequency	Percentage	Frequency	Percentage		
E-Journals	27	55.10	44	61.97	15.012	0.020
E-Theses	6	12.24	23	32.39		
E-Dissertations	6	12.24	16	22.54		
E-Database	8	16.33	23	32.39		
E-Books	41	83.67	60	84.51		
E-Archives	6	12.24	16	22.54		

The analysis given in the following table (table 2) clearly indicates that the significant level of chi-square is less than 0.05, which indicates that there is no significant difference in the preference of using e-resources among users of various age groups. The e-books are used by male and female users are 83.67% and 84.51% respectively, e-journals is 55.10% and 61.97%, e-database is16.33 and 32.39%, and only 12.24%and 32.39% of users used e-theses. Only 12.24% of male and 22.54% of female users used e-archives and e-dissertations.

From the above analysis, it is evident that the type of e-resources used by the respondents. As the significance level of chi-square is less than 0.05, there is a significant difference in the preference of using e-resources among male and female members. Hence the result rejects the null hypothesis that there is no significant difference in the preference of using e-resources among male and female users and accepts the alternative hypothesis that there is a significant difference in the preference of using e-resources among male and female users.

c. Purpose of Using e-resources

E-resources are recognized as a major source of scholarly information. Most of the time students, researchers, and teachers need electronic resources not only for

improving their knowledge but also for specific purposes. Table 3 highlights the purpose of using e-resources by public library users.

Table 3

Purpose of Using e-resources

Purpose	Using		Not Using		Total	
	N	%	N	%	N	%
To update new knowledge	143	95.33	7	4.67	150	100.00
To collect material for teaching	79	52.67	71	47.33	150	100.00
To write articles for publication	50	33.33	100	66.67	150	100.00
To attend seminars/ workshops	84	56.00	66	44.00	150	100.00
To carry out project work	96	64.00	54	36.00	150	100.00
To prepare for a competitive exam	114	76.00	36	24.00	150	100.00

Analysis given in the following table (table 3) shows that majority of the people are using e-resources to update knowledge (95.33%) because the respondents were mostly students, and 76% of users use e-resources for preparing for competitive examinations, and 64% of users use these types of e-resources to prepare project works. Only 56% of users use e-resources to attend seminars or workshops, 52.67% of users use e-resources to collect materials for teaching, and only 33.33% of users use e-resources to write articles for publication and in this category of users are in the teaching field.

d. Frequency of Use of Internet

The internet is the wider network that allows computer networks around the world run by companies, governments, universities, and other organizations to talk to one another. The result is a mass of cables, computers, data centers, routers, servers, repeaters, satellites, and Wi-Fi towers that allows digital information to travel around the world. The internet is an informal term for a worldwide communication network of computers. The World Wide Web is one of its biggest services. It is used a few billion people all over the world. Table 4 depicts the frequency of use of the internet. Table 4.7 depicts the frequency of use of the internet.

Table 4

Frequency of Use of Internet

Frequency	Respondents	Percentage
Daily	132	88.00
2-3 times	7	4.67
Once in a week	3	2.00
Occasionally	8	5.33
Total	150	100.00

The analyses given in table 4 revealed that a very large percentage of users accessing the internet daily (88%), only 5.33% of users use the internet occasionally and 2% of users use the internet once in a week.

e. Familiarity on Web based Services

The use of web-based library services by the users in the State Central Library provides web access to their collections and user support for the access and problems faced by users in accessing web-based library users. Web 2.0 is the second stage of development of the Internet, characterized especially by the change from static web pages to dynamic or user-generated content and the growth of social media. It refers to websites that emphasize user-generated content. Figure 1 presents the familiarity on web based services.

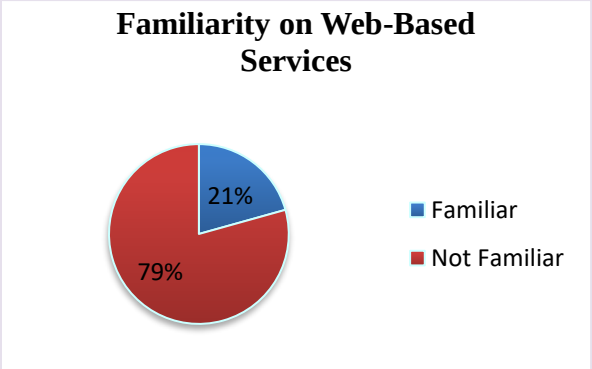

Figure 1 Familiarity on Web-Based Services

The analyses given in figure 1 revealed that majority (79.33%) of users are not familiar with web-based services and 20.67% of respondents are familiar with web based services. The researchers and Post Graduate students are familiar with web-based services.

f. Type of Devices Used

Library users may access e-resources from different places. The analysis based on the types of devices used is given in figure 2.

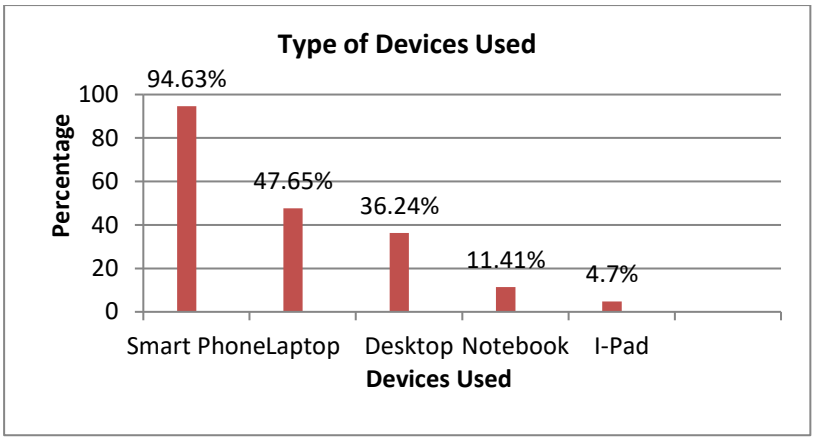

Figure 2 Types of Devices Used

The analyses given in the figure 2 revealed that it is clear that the majority of users use a Smartphone for accessing digital resources 47.65% of users use a laptop, 36.24% of users use desktop. And the notebook and I-Pad are used for personal use.

5.7 Status of using Web Browsers

Browsers can be used to access information on the web and web servers in private networks. This section deals with the status of using browsers by different categories of respondents. Respondents were asked to rank the status of the search field as 'used' and 'Not used'. Table 5 depicts the use of web browsers.

Table 5

Use of Web Browsers

Web browsers	Used		Not used		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Internet Explorer	121	80.67	29	19.33	150	100.00
Google Chrome	147	98.00	3	2.00	150	100.00
IBM web	10	6.67	140	93.33	150	100.00
Opera	86	57.33	64	42.67	150	100.00
Netscape Navigator	11	7.33	139	92.67	150	100.00
Apple-safari	14	9.33	136	90.67	150	100.00
Mozilla Firefox	114	76.00	36	24.00	150	100.00
MSN Explorer	28	18.67	122	81.33	150	100.00

Analysis given in the following table (table 6) shows that out of 121 respondents, 98% gave first preference to Google chrome, second preference to

Internet Explorer (80.67%), third preference to Mozilla Firefox (76%), fourth preference to Opera (57.33%), fifth preference to MSN Explorer (18.67%), sixth preference to Apple-safari (9.33%), seventh preference to Netscape navigator (7.33%), and final preference was given to IBM Web (6.67%).

5.8 Types of Digital Materials Used

Digital materials were used by the majority of State Central Library users. The type of digital materials used by the respondents is presented in table 6.

Table 6

Types of Digital Materials Used

Type of digital materials used*	Frequency	Percentage
CD-ROM	96	68.57
Maps, Slides	72	51.43
Videocassettes	56	40.00
Audio cassettes	45	32.14
*Multiple Response		

The library users are mostly using digital material like CD-ROM (68.57%), maps, slides (51.43%), video cassettes were used by 40% of users and audio cassettes were used by 32.14% of library users.

5.9 Frequency of Use of Searching Techniques

Advanced search facilities are needed for retrieving appropriate information efficiently and effectively from the various information archives or aggregators. Respondents were asked to rate their opinion regarding the usefulness of advanced search facilities as ‘Always’, ‘Rarely’, and ‘Never’. Table 8 depicts the frequency of the use of searching techniques.

Table 8

Frequency of Use of Searching Techniques

Search Techniques	Always		Rarely		Never	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Simple search	132	88.00	14	9.33	4	2.67
Boolean search (AND, OR, NOT)	12	8.00	67	44.67	71	47.33
Phrase search	24	16.00	59	39.33	67	44.67
Truncation search (? & *)	3	2.00	29	19.33	118	78.67
Field search	10	6.67	38	25.33	102	68.00
Federated search	3	2.00	24	16.00	123	82.00

The analyses indicated in the table 8 indicated that simple search (88%) is commonly used by respondents for searching the Internet, truncation search (2%), and federated search (2%) is used at a very low level.

5.10 Training on Digital Literacy

Before accessing the digital literacy of library users, it is necessary to know from the users whether they have got training on digital literacy. Figure presents training on digital literacy.

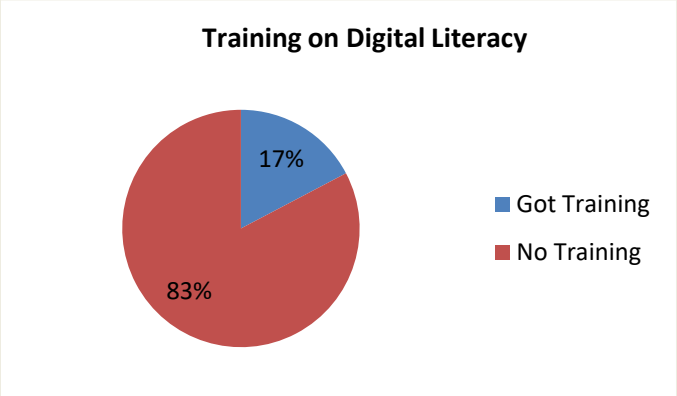

Figure 3 Training on Digital Literacy

As shown in figure 3, it is clear that 82.70% of users did not get any digital literacy training program and 17.30% of users got digital literacy training.

VIII. Findings

The result of the study demonstrates that every student and researcher in the State Central Library needs e-resources. A great majority of the respondents were not

familiar with web based services, which means a service offered by an electronic device, communicating with each other via, World Wide Web. The respondents were aware of field based searching and advanced search facilities. Only a minority of respondents in all user communities attended the digital literacy training programme. These findings coincide with the study conducted by Pratap and Singh (2018) revealed that majority of the respondents were male and 86.67% of the respondents use digital resources daily. The majority of the respondents were females. Most of the library users were elders and they visited library for accessing printed materials. The majority of the respondents were general public. Majority of the respondents make use of their computer skills mainly for study purpose. Google chrome is the most often used Web browser. Simple search technique (88%) was mainly used by the respondents of the State Central Library, and 16% of users prefer phrase search and a very narrow percentage of users prefer Boolean search. Only a minority of respondents in all user communities attended the digital literacy training program. Compared with other digital literacy training programs, more respondents of different categories of users strongly agreed with the need for a training program in online resource searching skills and a minority of users responds that the training program about digital literacy was conducted by the library itself.

IX. Recommendations

Taking into consideration, the findings of the study and suggestions received from the respondents, the investigator provides the following suggestions to improve the digital literacy skills among the library users. Today everyone depends on the internet for any piece of information for enabling Web to facilitate for all sections of the library will be beneficial for the library users. The major suggestions are:

- Conduct training programs and orientation programs regarding how to use digital resources.
- The library and concerned authorities should play an active role to promote and make familiar the features and benefits of digital resources.
- Conduct training programs to library users regarding how to search e-resources.
- The library should provide an internet connection to the whole users.

- Conduct seminars and workshops about digital literacy skills.

X. Conclusion

The main objective of the study was to make a comprehensive study of the digital literacy skills among State Central Library users. There is an imbalance between the rapidly developing technologies and information available to the library users. E-resources perform an important role in the academic community. The technology developed the dissemination of information to find new ways in the form of online resources. In the growing era of information, digital resources play an important role in updating knowledge to all user communities. E-resources provide more advantages to almost all fields of knowledge.

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