

# DIGITAL LITERACY SKILLS AND COMPETENCIES AMONG THE RESEARCH SCHOLARS AND PG STUDENTS OF DEEMED UNIVERSITY LIBRARIES, BANGALORE: A STUDY

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## **Abstract**

The study focuses on the digital literacy skills and competencies among the research scholars and PG students of deemed university libraries in Bangalore. The study aims to identify the awareness of e-resources, their usage, purpose of use, factors influenced, impact of e-resources and barriers faced in the access of e-resources. Survey method was used to carry out this research. A well-structured questionnaire was used to collect the data from the respondents; total 150 questionnaires were distributed to the sample population and received back 130 filled in questionnaires. The researcher took 130 questionnaires for analysis using simple percentage techniques.

**Keywords:** Digital Literacy, Literacy Skills, E-resources, Deemed Universities.

## **1.0 Introduction:**

With the impact of ICT every aspect of life in the society has changed, as a result many changes have occurred in the different ways of performing task. Today it has become important to have the right skills who are well versed in the use of these information and communication technologies to perform their duties. Digital literacy is important in the administration of e-learning as most institutions have embarked on online education. "In the new millennium, students require information literacy as well as digital literacy skills to succeed in academia and beyond" (Blummer, Barbara; Kenton, Jeffrey M. 2015), Sohala (2015) highlights that digital literacy is the variety of literacy's associated with the use of digital technology.

The ability to access, evaluate and use of information is a prerequisite for lifelong learning, and a basic requirement for the information society. At the University level, students are expected to contact independent exploration in diverse disciplines and topics and therefore, irrespective of their areas of study they need to use information effectively. The rapid growth of ICT (Information and Communication Technologies) has given rise to the several, Electronic resources, portal / gateway and global digital library. Digital literacy is a more recent concept than information literacy and can relate to multiple categories of library users in multiple types of libraries. Digital literacy has been defined in various ways (Bawden, 2008) since the term was first introduced by Glister (1997). The

term digital literacy refers to the ability to use ICT tools, and internet to access, manage, integrate, evaluate, create and communicate information in order to function in a knowledge society.

Digital literacy skills and competences make it possible for students to use digital tools to enrich their educational experience and improve them for society and lifelong learning. Glister cited in Despo and Nikleia (2011) defined digital literacy as the ability to understand information and more importantly to evaluate and integrate information in multiple formats that the computer can deliver. ALA (2013) defined digital literacy as the ability to use information and communication technologies to find, understand, evaluate, create and communicate digital information.

## **2.0 Deemed Universities:**

The higher education system in India includes both private and public universities. Public universities are supported by Government of India and the state governments, while private universities are mostly supported by various bodies and societies. Universities in India are recognized by the University Grants Commission (UGC), which draws its power from the University Grants Commission Act, 1956. Deemed university, or "Deemed-to-be-University", is a status of autonomy granted by the Department of Higher Education in the Union Human Resource Development Ministry, on the advice of the UGC, under Section 3 of UGC Act, 1956. The status allows full autonomy in courses, syllabus, admissions and fees. As of now there are 130 deemed universities in India and 15 deemed universities in Karnataka.

## **3.0 Objectives of the Study**

The following are the objectives of the study.

1. To identify the awareness of library resources among the respondents.
2. To know the ICT skills of the respondents
3. To know the awareness and use of different electronic resources among the respondents.
4. To identify the purpose of using e-resources.
5. To find out the factors that influence them to use e-resources
6. To identify the impact of e-resources on their academic and research work
7. To uncover the problems faced by the respondents while accessing e-resources

## **4.0 Scope:**

The scope of the study is confined to select deemed universities in Bangalore city. The present study is limited to the digital literacy skills and competencies of PG students and research scholars of deemed university libraries in Bangalore.

## **5.0 Research methodology**

Research methodology is defined as a sequential process involving several clearly defined steps involving in order to provide information to guide a decision variations are suggested for different situations but there is much similarity among the sequence proposed. For the present study the survey method of research was employed. A well-structured questionnaire was used as a data collection tool. A total of 150 questionnaires were distributed to the sample population and researcher received back 130 filled in questionnaires. The data collected was analyzed, tabulated and interpreted in the following section.

## **6.0 Literature Review**

**Pegeen, Jensen et.al. (2010)** describes on details of Digital literacy's and the NYSRA charlotte Award. Successful podcasting and wiki project conducted with NYSRA Award Charlotte Award nominated books. And also explore additional detail literacy project that teachers can use in their literature programs. **Kaur, Sidhu guruam et.al. (2015)** made a study on Postgraduate student's level of dependence on supervisors in coping with academic matters and using digital tools. In this articles among the factors that have contributed to this are postgraduate student's supervisory practices and student limitations in terms of knowledge, and 21<sup>st</sup> century skills such as critical thinking, autonomy and lifelong learning. **Abrizah, Abdullah and Zainab, A N (2008)** suggests that the Digital Library can

contribute to student's empowerment in information literacy practices while searching, using and collaboratively building the digital library resources. To illustrate this, the authors have been experimenting with the implementation of an integrated information literacy model based on Eisenberg and Berkowitz Big 6 model and describes the CDL features in association with the information literacy dimension in this model. **Marie, Cordell Rosanne (2013)** focused on this development in digitization in the information in a library to the information literacy and digital literacy is a more recent concept than information literacy and can relate to multiple categories of library users in multiple types of libraries. Determining the relationship between information literacy and digital literacy is essential before revision of the ACRL Standards can proceed. **Kathryn, Paige and Stephen, Dobson (2016)** developed Digital Literacy Teaching and Learning Tool. This teaching and learning tool has been incorporated as an assessment strategy in the curriculum area of science and mathematics with pre-service teacher (PSTs). This paper explores two themes developing twenty first century digital literacy skill and modeling best practice assessment tools in the growing debate about the impact of multi-model representation, researchers such as Hoban and Nielsen, and brown, Murcia and Hacking emphasis' the development of conceptual understandings and semiotics.

### 7.0 Data Analysis

The data collected from the respondents through questionnaires was analyzed using simple percentage technique.

**Table-1: Distribution of Questionnaires and Rate of Response**

Questionnaires Distributed	Questionnaires Received	Percentage
150	130	86.66

**Table-2: Distribution of Respondents**

Respondents	Distributed Questionnaire	Received Responses	Percentage
PG Students	100	90	69.23%
Research Scholar	50	40	30.77%
Total	150	130	100%

Table 2 indicates the response rate of students is 90 (69.25%) whereas response rate of research scholars is 40 (30.77%).

**Table-3: Awareness on following Library Resources**

Sl. No	Library Resources	Total response	Percentage
1	Text Book	125	96.15%
2	Reference Sources	100	76.92%
3	E-resources	95	73.08%
4	Journals	104	80.00%
5	Conference Proceedings	39	30.00%
6	Theses and dissertations	55	42.31%
7	Directories	38	29.23%
8	Handbooks	51	39.23%
9	Reports	64	49.23%
10	Gazetteers	12	9.23%

Table 3 indicates the awareness on different library resources, it is observed that majority of the respondents 125 (96.15%) are aware of text books, followed by journals 104(80.00%) and 100(76.92%) reference sources 95(73.08%) e-resources and the least being gazetteers 12(9.23%)

**Table 4 Ratings of Internet Skills**

Sl.No	Internet Skills	Total response	Percentage
1	Very good	35	26.92%
2	Good	73	56.15%
3	Uncertain	18	13.85%
4	Poor	4	3.08%
5	Very Poor	0	0.00
	Total	130	100.00

Respondents were asked to rate their internet skills, table 4 reveals that 73(56.15%) are of the opinion that they are good in internet skills, followed by 35(26.92%) and 18(13.85%) and 4(3.08%) opined that they are poor.

**Table No 5: Frequency of use of Internet**

Frequency	Responses	Percentage
Daily	121	93.08
Twice a week	1	0.77
Weekly	2	1.54
Once a fortnight	0	0.00
Occasionally	6	4.62
Total	130	100.00

Table 5 shows 121(93.08%) of the respondents are using internet daily 6(4.62%) occasionally.

**Table 6 Information Retrieved from the internet**

Sl. No	Features	Excellent	Good	Poor	Total
1	Accessibility	64 (49.23%)	62 (47.69%)	4 (3.08%)	130
2	Accuracy	28 (21.54%)	95 (73.08%)	75. (38.00%)	130
3	Authoritative	27 (20.77%)	86 (66.15%)	17 (13.08%)	130
4	Consistency	28 (21.54%)	90 (69.23%)	12 (9.23%)	130
5	Ease of use	71 (54.62%)	54 (41.54%)	5 (3.85%)	130

Respondents were asked to rate the information retrieved from the internet based on the features mentioned above in table no 6 71(54.62%) respondents is of the opinion that ease of use of information is excellent feature 95(73.08%) is accuracy and 4(3.08%) opined that accessibility of information is poor.

**Table 7 Purpose of using Internet**

Sl.No	Purpose of using Internet	Responses	Percentage
1	Keep Update in area of research work	94	72.31%
2	Access e-resources	101	77.69%
3	Electronic Mail	119	91.54%
4	For communication	103	79.23%
5	Reading online news papers	95	73.08%
6	Online dictionaries/encyclopedia/maps/atlas	92	70.77%
7	Social media	112	86.15%
8	Download games	58	44.62%
9	Entertainment	105	80.77%
10	Online Banking	100	76.92

It is observed from table no 7 that the students and research scholars are using internet for Email 119(91.54%) followed by 112(86.15%) for social media and 105(77.69%) for entertainment 101 (77.69) make use of internet for accessing e-resources.

**Table 8 Awareness of E-resources**

Awareness of E-resources	Responses	Percentage
Yes	120	92.31
No	10	7.69

Table 8 shows that the 120 (92.31%) of the respondents are aware of e-resources and 10 (7.69%) are not aware of e-resources

**Table 9 Different types of E-resources**

Sl. No	Types of E-resources	Responses	Percentage
1	E-books	112	86.15
2	E-journals	68	52.31
3	E-conference Proceedings	26	20.00
4	CD-ROM Databases	9	6.92
5	E-Theses and dissertations	29	22.31
6	Library Consortia E-resources	18	13.85
7	Audio-Visual Resources	37	28.46

Table 9 reveals that 112(86.15%) majority of the respondents preferred to use E-books and E-journals 68(52.31%) followed by audio visual resources 37(28.46%).About 29(22.31%)of the respondents use e-these and dissertations, 26(20.00%) opined that they use E-conference proceedings, 18(13.85%) expressed to use for library consortia e-resources and 9 (6.92%) CD-ROM databases.

**Table 10 Frequency of use of E-resources**

Sl. No	Frequency of use of E-resources	Responses	%
1	Daily	43	33.08
2	Twice a week	20	15.38

3	Weekly	21	16.15
4	Once a fortnight	9	6.92
5	Occasionally	37	28.46
	<b>Total</b>	<b>130</b>	<b>100</b>

Table 10 shows 43(33.08%) of the respondents use e-resources daily followed by occasionally 37 (28.46) and 21(16.15%) weekly 20 (15.38%) and 9 (6.92%) once a fortnight.

**Table 11 Methods of learning E-resources Skills**

Sl.No	knowledge about e-resources	Responses	%
1	Guidance from teachers	28	21.54
2	Guidance from friends	44	33.85
3	Library staff	7	5.38
4	Social Networks	48	36.92
5	Advertisements	3	2.31

Table 11 shows that 48(36.92) of the respondents are more prominent on social networks which is the most popular method of learning e-resource skills followed by guidance from friends 44(33.85%), 28(21.54) guidance from teachers.

**Table 12 Purpose of using E-resources**

Sr. No	Purpose	Strongly Agree	Agree	Uncertain	Strongly Disagree	Disagree	Total
1	For research purpose(thesis/dissertation s/project work	73 (56.15%)	46 (35.38%)	6 (4.62%)	3 (2.31%)	2 (1.54%)	130 100
2	Updated knowledge in my interested area	61 (46.92%)	51 (39.23%)	9 (6.92%)	5 (3.85%)	4 (3.08%)	130 100
3	For getting current information	69 (53.08%)	41 (31.54%)	15 (11.54%)	3 (2.31%)	2 (1.54%)	130 100
4	For teaching	37 (28.46%)	61 (46.92%)	19 (14.62%)	10 (7.69%)	3 (2.31%)	130 100
5	For writing and publishing articles/books	47 (36.15%)	34 (26.15%)	28 (21.54%)	16 (12.31%)	5 (3.85%)	130 100
6	To prepare research proposal	42 (32.31%)	38 (29.23%)	23 (17.69%)	19 (14.62%)	8 (6.15%)	130 100
7	Ease of search and navigation	59 (45.38%)	43 (33.08%)	14 (10.77%)	9 (6.92%)	5 (3.85%)	130 100

It is observed from the above table 12 that majority of the respondents 73 (56.15%) strongly agree that they make use of e-resources for research work, 61(46.92%) of the respondents agree they use e-resources for teaching purpose, 28 (21.54%) are uncertain about their usage for writing and publishing articles /books, 19(14.62%) and 8 (6.15%) strongly disagreed about their using e-resources for preparing research proposal.

**Table 13 Factors that influence to use E-resources**

Sr. No	Factors	Strongly Agree	Agree	Uncertain	Strongly Disagree	Disagree	Total
1	Easy and free access	71 (54.62%)	47 (36.15%)	8 (6.15%)	3 (2.31%)	1 (0.77%)	130 100
2	Accessible anywhere ,any time	61 (46.92%)	44 (33.85%)	18 (13.85%)	5 (3.85%)	2 (1.54%)	130 100
3	Get easy, fast,current and updated information	50 (38.46%)	54 (41.54%)	18 (13.85%)	5 (3.85%)	3 (2.31%)	130 100
4	Less expensive and time saving	58 (44.62%)	49 (37.69%)	11 (8.46%)	7 (5.38%)	5 (3.85%)	130 100
5	Easy to search and retrieve required information	49 (37.69%)	61 (46.92%)	12 (9.23%)	6 (4.62%)	2 (1.54%)	130 100
6	Access to variety of electronic information resources	46 (35.38%)	56 (43.08%)	16 (12.31%)	7 (5.38%)	5 (3.85%)	130 100
7	Simultaneously en number of users can access	50 (38.46%)	51 (39.23%)	13 (10.00%)	10 (7.69%)	6 (4.62%)	130 100

It is clear from table 13 that 71(54.62%) strongly agree that easy and free access has influenced the respondents to use e-resources, 56(43.08%) agree that access to variety of electronic information resources, 18 (13.85%) are uncertain about the easy and free access to e-resources and to fast, current and updated information, 10(7.69%) and 6 (4.62%) strongly disagree on number of users can access e-resources simultaneously.

**Table no 14 Impact of E-resources**

Sr. No	Impact	Strongly Agree	Agree	Uncertain	Strongly Disagree	Disagree	Total
1.	Reading skills has been improved	45 (34.62%)	49 (37.69%)	19 (14.62%)	12 (9.23%)	5 (3.85%)	130 100
2.	Academic excellence has been improved	30 (23.08%)	70 (53.85%)	17 (13.08%)	10 (7.69%)	3 (2.31%)	130 100
3	Improved my independent and life-long learning skills	40 (30.77%)	59 (45.38%)	14 (10.77%)	13 (10.00%)	4 (3.08%)	130 100
4	Number of Publications have increased	21 (16.15%)	51 (39.23%)	35 (26.92%)	15 (11.54%)	8 (6.15%)	130 100
5	Expanded my reading possibility	39 (30.00%)	57 (43.85%)	17 (13.08%)	9 (6.92%)	8 (6.15%)	130 100
6	Research achievement	28	53	26	13	10	130

has increased	(21.54%)	(40.77%)	(20.00%)	(10.00%)	(7.69%)	100
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Table 14 indicates that 45(34.62%) strongly agree that their reading skills has been improved, 70(53.85%) agree that they have improved in their academic excellence, 35(26.92%) are uncertain about their increase in the number of the publications followed by 15(11.54%) strongly disagree, and 10(7.69%) disagree that their research achievement have increased

**Table 15 Problems faced in accessing e-resources**

Sr. No	Problems	Strongly Agree	Agree	Uncertain	Strongly Disagree	Strongly Disagree	Total
1	Lack of academic/ research related information on my topic	26 (20.00%)	41 (31.54%)	31 (23.85%)	24 (18.46%)	8 (6.15%)	130 100
2	Inadequate skills on how to use e-resources	14 (10.77%)	35 (26.92%)	29 (22.31%)	40 (30.77%)	12 (9.23%)	130 100
3	Information Overload/irrelevance	20 (15.38%)	41 (31.54%)	33 (25.38%)	26 (20.00%)	10 (7.69%)	130 100
4	Inadequate facilities for using e-resources in my library	22 (16.92%)	27 (20.77%)	33 (25.38%)	36 (27.69%)	12 (9.23%)	130 100
5	Lack of awareness on literature search techniques	13 (10.00%)	43 (33.08%)	24 (18.46%)	36 (27.69%)	14 (10.77%)	130 100
6	Lack of skilled library staff to assist	15 (11.54%)	40 (30.77%)	36 (27.69%)	26 (20.00%)	13 (10.00%)	130 100
7	Inconsistency of document formats	21 (16.15%)	35 (26.92%)	42 (32.31%)	24 (18.46%)	8 (6.15%)	130 100
8	Poor network connectivity /slow download speed	11 (8.46%)	38 (29.23%)	35 (26.92%)	32 (24.62%)	14 (10.77%)	130 100

The above table 15 shows the problems faced by the respondents using e-resources, 26 (20.00%) Strongly Agree Lack of academic/ research related information on their topic, 43(33.08%) agree that they are not aware on literature search techniques, 42(32.31%) are uncertain about the inconsistency of the document format, 40 (30.77%) strongly disagree about their Inadequate skills on how to use e-resources.

**Table 16 Training**

Sr. No	Training	Responses	Percentage
1	Yes	73	56.15%
2	No	57	43.85%

Table 16 shows that 73(56.15%) of them reported that training is required to access and use e-resources and 57(43.85%) of them suggested that training is not required



**8.0 Findings:**

1. 125 (96.15%) are aware of text books, followed by journals 104(80.00%) the least being gazetteers 12(9.23%).
2. 73(56.15%) are of the opinion that they are good in internet skills.
3. 71(54.62%) respondents opined that easy use of information is excellent feature.
4. 112(86.15%) majority of the respondents preferred to use E-books and E-journals 68(52.31%) followed by audio visual resources 37(28.46%).
5. 43(33.08%) of the respondents use e-resources daily.
6. 48(36.92) of the respondents are more prominent on social networks which is the most popular method of learning e-resource skills.
7. 73 (56.15%) strongly agree that they make use of e-resources for research work.
8. 71(54.62%) strongly agree that easy and free access has influenced the respondents to use e-resources.
9. 70(53.85%) agree that they have improved in their academic excellence after using e-resources.
10. 73(56.15%) of them reported that training is required to access and use e-resources

**9.0 Conclusion:**

It is apparent that Digital Learning platforms are conducive to strengthening both academic and digital literacy skills. As more and more incoming freshmen require university level developmental reading classes, the need to support these skills with instruction that reflects intuitiveness and responsiveness to how they think, live and learn using digital learning environments will be very important.

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