

DIGITAL INFORMATION LITERACY SKILLS AMONG FACULTY MEMBERS OF ENGINEERING COLLEGES IN MANALORE, KARNATAKA: A STUDY

Shwetha Kumari K

Librarian,

Sahyadri College of Engineering and Management,

Mangalore – 575 007 (DK), Karnataka.

E-mail : shwethaknaik11@gmail.com

Dr. T Y Mallaiah

Deputy Librarian,

Mangalore University,

Mangalagangothri-574 199, (DK), Karnataka

E-mail: mallaihty@yahoo.com

Abstract

The prime aim of this study is to assess Digital Information Literacy of the faculty members of the Sahyadri College of Engineering and Management, Mangalore and to determine their strengths and weaknesses. The paper highlights the ways and means the faculty members search the information from different digital information sources. Further, the study finds the digital information resources used by the faculty members to get information relating to their own areas. The paper focuses on what are the resources used to get familiar with the subject(s). This study will definitely help to organize different information literacy programs in the college to promote and to develop the information literacy skills among faculty and to improve the teaching quality.

Key words: Digital Literacy, Information Literacy, Information Skill,

1. INTRODUCTION

Society has been transformed by the rapid development and diffusion of information and communication technology (ICT) into fields such as education, business, health, agriculture, and so on. Information users may be bewildered by a variety of digitized information. The process of identifying and selecting information has become complex. It is critical to promote information literacy (IL) in the digital age. Computers have become a necessary part of this digital society, and skills for computer use are a common prerequisite on many job applications.

Teachers are the core employees of colleges and they extensively contribute towards the attainment of institutional goals. With the emergence of ICT, teachers are facing variety of options to teach and learn. There is a bundle of resources in front of faculty members

to prepare themselves from which they have to consult to plan for teaching their students, as students and learners are well aware and more responsible. Faculty members now have to get up to date themselves with new trends of teaching, searching and learning more than the students.

2. DIGITAL INFORMATION LITERACY

Information Literacy is defined as the lifelong ability to recognize the need for, to locate, evaluate and effectively use information (American Library Association; 2006). Glister (1997) defines digital literacy as, “a set of skills to access the Internet; find, manage and edit digital information; join in communications; and otherwise engage with an online information and communication network. In simple terms, digital literacy is the ability to properly use and evaluate digital resources, tools and services and apply it to their lifelong learning process. The most essential aspect of digital literacy is the ability to make informed judgments about what is found online, for unlike conventional media, much digital information is unfiltered by editors and open to the contribution of all.

3. REVIEW OF LITERATURE

Moyo and Mavodza (2016) conducted study to establish and compare the provision of information literacy (IL) skills to university students both at undergraduate and graduate levels in South Africa (SA) and the United Arab Emirates (UAE). They strongly recommended to policy makers and librarians in the development of appropriate IL programmes in support of teaching and learning.

Khan (2015) examined use of information sources and need of information literacy among students in Aligarh Muslim University Aligarh. The main objective of the study was to find out the students use of various information sources and need of information literacy education in Aligarh Muslim University. The main findings of the study revealed that users need information to prepare their assignments and study material and they are aware about the basic concept of information literacy. Some of the users have vague concept about information literacy.

Ramamurthy, Siridevi and Ramu (2015) investigated the knowledge of information literacy and search skills of students in five selected Engineering Colleges in Chittoor District, Andhra Pradesh. It was found that preponderance of respondents have low knowledge of information literacy skills, showed high deficiency in identifying diverse information sources. The various information literacy programmes to the respondents' in institutions lacked hands-on training. Thus, the need for an enhanced and continuous library user education geared towards empowering students to be sufficiently familiar with information sources.

Rafique (2014) conducted a study entitled Information Literacy Skills of Faculty Members: A Study of the University of Lahore, Pakistan and found that majority of the faculty members were proficient in determining the existence of needed information and to organize, analyze, evaluate and fully understand the retrieved information.

Baikady and Mudhol (2013) carried out a study on Computer Literacy and the use of Web Resources: A Survey on the Medical Faculty and Students. The study revealed that almost all the respondents possessed basic computer literacy skills. The faculty and PG students who were having above average computer literacy skills used web resources less frequently. The faculty members and postgraduate students who were having below average computer skills did not access web resources frequently.

Maharana and Mishra (2007) conducted a study on A Survey of Digital Information Literacy of Faculty at Sambalpur University and found that a majority of the university faculty members had Internet knowledge. Search engines were most frequently used for browsing and searching on the web. Other tools such as subject gateways, bibliographic databases, etc. were less used by them.

Singh, A (2005) examined the faculty perceptions of students' information literacy competencies in journalism and mass communication program. They reported that most of their graduate students met the ACRL criteria for information literacy, but only some of their undergraduate students could be considered information literates by these standards. Faculty also reported consistent improvement in their students' research process after receiving library instruction.

4. OBJECTIVES OF THE STUDY

- ❖ To Determine the extent of digital information needed
- ❖ To know the Purpose for Using digital information
- ❖ To know the IT Skills of Faculty Members
- ❖ To know the Use of Internet Search Tools
- ❖ To Evaluation of Web Resources by Faculty Members

5. SCOPE AND LIMITATIONS OF THE STUDY

The present study covers **Digital Information Literacy Skills among Faculty Members of Engineering Colleges in Mangalore, Karnataka: A Study**. The study considered the digital information literacy skills by the faculty of engineering colleges. Geographically the study covers 11 Engineering colleges in Mangalore, affiliated to VTU.

6. METHODOLOGY

The survey method was adopted for the present study and a structured questionnaire was administered to collect the details about the attitude of respondents towards the digital information literacy by the faculty of engineering colleges. Totally 350 questionnaires were distributed among faculty members, out of which 240 filled in questionnaires were received. This constitutes 68.57% of the total response and same was used for analysis purpose. Simple random technique was used to collect the required data from the respondents.

7. RESULT AND DISCUSSIONS

7.1 Gender-wise distribution of respondents

Table 1: Gender – wise distribution of respondents

Sl. No.	Gender	No. of Respondents N-240	Percentage
1	Male	146	60.83%
2	Female	94	39.16%
Total		240	100

Table 1 gives the sex-wise breakup of the respondents. From the table, it's shows that of the 240 respondents, 146 (60.83%) are male and 94 (39.16%) are female.

7.2 Use of Internet

Internet facility is the backbone to access digital information. So the investigator asked the question about the use of Internet. It is found from the study that all the respondents are using Internet.

Table 2: Frequency of use of Internet

Sl. No.	Frequency	No. of Respondents N-240	Percentage
1	Daily	168	70%
2	Once in two days	34	14.16%
3	Thrice a week	14	5.83%
4	Once in a week	19	7.91%
5	Occasionally	5	2.08%

The table 2 shows that 70% respondents are using internet daily and 14.16% respondents using Internet Once in two days, 5.83% of the respondents using Internet thrice a week. 7.91% respondents using Internet once in a week, and 2.08% respondents are using it occasionally.

7.3 Purpose of use of digital information sources

Table 3: Purpose of Digital Information Resources

Sl. No.	Types of information sources	No. of Respondents N-240	Percentage
1	To prepare course material for teaching	172	71.66%
2	To update subject knowledge	136	56.66%
3	To support research	108	45%
4	To write paper for publication	142	59.16%
5	To attend or organize seminars/workshops	87	36.25%
6	To Carry out project works	68	28.33%

The Table - 3 shows that, among the 240 respondents 71.66% respondents stated that, they need digital resources to prepare course material for teaching. Followed by this, 56.66% respondent stated that they use digital information to update subject knowledge and 45% respondents use to support research. 59.16% respondents use to write paper for publication, 36.25% to attend or organize seminars/workshop and 28.33% to carry out project works.

7.4 Location of accessing Digital Information

Table 4: Location of accessing Digital Information

Sl. No.	Location	No. of Respondents	Percentage
		N-240	
1	Library	102	42.5%
2	Department	54	22.5%
3	Cyber cafe	46	19.16%
4	Home	38	15.83

Accessing Digital Information, the respondent's response in regard to location of accessing digital information is as shown in table 4. The majority which is 102(42.5%) of the respondents access information in the library. 54 (22.5%) of the respondents access digital information through department. Cyber café has a response rate of 46(19.16%) and the least is Home with a response rate of 38(15.83%)

7.5 Types of Information Sources

The questionnaire asked about types of electronic information sources used by the faculty members.

Table 5: Types of Information sources

Sl. No.	Types of information sources	No. of Respondents	Percentage
		N-240	
1	E-Newspapers	135	56.25%
2	E-Journals	171	71.25%
4	E-books	92	38.33%
5	E-databases	142	59.16%
6	Blogs	29	12.08%
7	Websites	24	10%
8	News groups/ Mailing lists	36	15%

The above Table-5 reveals that the demand for e-journals is 71.25%. The next place is for e-database i.e. 59.16%. The e-newspapers, e-books and articles placed next order. They accounting 56.25%, 38.33% and 33.75% respectively. The faculty also uses of other type

of resources such as Blogs, Websites and News groups/Mailing Lists were 12.08%, 10% and 15% respectively.

7.6 Awareness of Digital resources

Table 6: Awareness of E- Journals

Sl. No.	E-Journals	No. of Respondents	Percentage
		N-240	
1	IEEE	169	70.41%
2	Springer	135	56.25%
4	Taylor & Francis	56	23.33%
5	ASME	98	40.83%
6	ASCE	92	38.33%
7	Wiley Blackwell	29	12.08%
8	McGraw Hill	36	15%
9	J-GATE	24	10%
10	Elsevier- Science Direct	142	59.16%

Table 6 shows that maximum respondents 169 (70.41%) are aware of IEEE e-journals and minimum respondent 24 (10%) are aware of using J-GATE e-journals. And it was followed by 135 (56.25%) are aware of spring link, 56 (23.33%) are aware of using ASME, 92 (38.33%) respondents aware of ASCE, 29 (12.08%) Wiley Blackwell, 36(15%) McGraw Hill and 142 (59.16%) of respondents are aware of Elsevier-Science Direct e-journals.

7.7 IT Skills of Faculty Members

Table 7: IT Skill of the faculty members

Sl. No.	Types of IT Skills	No. of Respondents	Percentage
		N-240	
1	Internet	213	88.75%
2	MS-Office / DTP Tools	184	76.66%
3	Multimedia	96	40%
4	Programming Languages	163	67.91%

The Table-7 shows that among 240 respondents 88.75% have knowledge of Internet applications. A significant number 76.66%, however have working knowledge of MS-Office or other DTP tools, but only 40% in Multimedia, followed by 67.91% having knowledge in programming languages.

7.8 Use of Internet Search Tools

Table 8: Types of Internet Search Tools

Sl. No.	Types of Search Tools	No. of Respondents	Percentage
		N-240	
1	Search engines	208	86.66%
2	Subject Gateways	141	58.75%
3	Digital Library	94	39.16%
4	Online Bibliographic Databases	63	26.25%
5	Web Portals	42	17.5%

The Table-8 shows that among 240 respondents 86.66% respondents use search engine, 58.75% use Subject Gateways, 39.16% use Digital library, 26.25% of them use Online Bibliographic Databases and 17.5% respondents use Web Portals.

7.9 Use of Search techniques for searching web/Internet

Table 9: Use of Search techniques

Sl. No.	Response	No. of Respondents	Percentage
		N-240	
1	Yes	208	86.66%
2	No	32	13.3%

The table – 9 reveals the use of search techniques by faculty for searching Internet respondents out of 240 respondents of faculty of engineering colleges 86.6% yes and 32 % are no respondents.

7.10 Types of search techniques used

Table 10: Types of Search techniques used

Sl. No.	Search techniques	No. of Respondents	Percentage
		N-240	
1	Simple Key words	136	56.6%
2	Boolean Operators (AND, OR, NOT)	48	20%
3	Truncation	10	4.16%
4	Field search Title URL etc.	46	19.16%

Table-10 Shows the use of various search techniques by faculty of engineering colleges of Mangalore in searching web information. The majority of faculty use simple keyword

search 56.6% and least number of faculty use Truncation techniques in searching web 4.16%.

7.11 Digital Resources impact on academic

Table - 11 Digital resources impact on academic

Sl. No.	Disciplines	No. of Respondents	Percentage
		N-240	
1	Access to a current up-to-date information	186	77.5%
2	Easier access to information	164	68.33%
3	Faster access to information	190	79.16%
4	Access to a wider range of information	210	87.5%

Table 11 shows that, Majority 186 (77.5%) of respondents stated access to current up to date information is a benefit of using digital resources. Similarly 210 (87.5%) indicate access to a wider range of information, 190(79.16%) expressed faster access to information is the advantage and 164(68.33%) indicate easier access to information is the benefit to develop the academic career of the faculty.

7.12 Evaluation of web Resources by Faculty Members

Table – 12: Evaluation of web resources by the faculty members

Feature	Poor	Fair	Good	Very Good	Excellent
Accuracy	29 (12.08%)	23 (9.58%)	61 (25.41%)	87 (36.25%)	40 (16.66%)
Authority	71 (29.58%)	48 (20%)	45 (18.75%)	42 (17.5%)	34 (14.16%)
Accessibility	21 (8.75%)	43 (17.91%)	103 (42.91%)	43 (17.91%)	30 (12.5%)
Coverage	99 (41.25%)	44 (18.33%)	54 (22.5%)	43 (17.91%)	0
Usefulness	19 (7.91%)	31 (12.91%)	97 (40.41%)	63 (26.25%)	30 (12.5%)
Currency	98 (40.83%)	56 (23.33%)	48 (20%)	38 (15.83%)	0

The above table- 12 shows that out of the many features given in the table for only few features such as accessibility, accuracy, authority and usefulness the respondents rated as excellent and very good. Remaining all other features was rated as good, fair and poor.

8. DISCUSSION OF FINDINGS

- Of the total 240 survey, 146 (60.83%) respondent are male and 94 (39.16%) respondents are female.
- Majority of the respondents 168(70%) are using Internet daily.
- Majority of 172(71.66%) respondents use digital resources for the purpose of prepare course material for teaching.
- Majority of the respondents, i.e, 102 (42.5%) access digital information in the library.
- Study shows that majority of the faculty, i.e. 171(71.25%) use e-journals for accessing information.
- Study shows that 169(70.41%) respondents aware of IEEE e-journals.
- Majority 213 (88.75%) of faculty responded their IT skill in Internet. Followed by 184(76.66%) and 163 (67.91%) IT skill in MS-office/DTP Tools and Programming languages.
- Study shows majority i.e. 208(86.66%) faculty using Search engines as a search tool.
- Most of 208(86.66%) faculty respondents are using search techniques for searching in web/Internet.
- 136 (56.6%) faculty members are using simple key words in search techniques.
- 210(87.5%) respondents stated 'access to a wider range of information' is a benefit of using digital resources.
- Majority of faculty rated as excellent for accessibility, accuracy, authority and usefulness of web resources.

9. CONCLUSION

There is an educational imbalance between the rapidly developing technologies and information available to the users. Due to the technological advancement, most of the information sources today are available in the form of digital. The faculty members must know how to access, store, use and dissemination of information. They should be digitally literate. The present study is an attempt in this regards. There should be lot of studies should be conducted in this level to provide the effective services to the users community in the libraries. These types of studies also help much any organization while taking important decisions such as procuring the digital information resources to their library. The library should take a lead role in spreading knowledge of digital information resources.

REFERENCES

- American Library Association. (1989). American Library Association Presidential Committee on Information Literacy Accessed November 26, 2016, from <http://www.ala.org/acrl/issues/infolit/overview/intro>
- American Library Association (2006). Accessed November 28 2016 from <http://www.ala.org/ala/mgrps/divs/acrl/ilcomstan.cfm>

- Baikady, M. R., & Mudhol, M. V. (2013). Computer Literacy and the Use of Web Resources: A Survey on the Medical Faculty and Students. *International Journal of Information Dissemination and Technology*, 3(1), 27-32.
- Boekhorst, A., & Britz, J. (2004). Information literacy at school level: A comparative study between the Netherlands and South Africa. *South African journal of Library and Information Science*, 70(2), 63-71.
- Digital Information Literacy (2009). Accessed November. 26, 2016 from http://wikieducator.org/Digital_information_literacy
- Floyd, D. M., Colvin, G., & Bodur, Y. (2008). A faculty–librarian collaboration for developing information literacy skills among preservice teachers. *Teaching and Teacher Education*, 24(2), 368-376.
- Khan, J. (2015). Use of information sources and need of information literacy among students in Aligarh Muslim university, Aligarh. *International journal of library and information science*, 7(1), 10-13.
- Lau, J. (2001). Faculty-librarian collaboration: a Mexican experience. *Reference services review*, 29(2), 95-105.
- Maharana, B., & Mishra, C. A Survey of Digital Information Literacy of Faculty at Sambalpur University. *Library Philosophy and Practice*, Accessed March 3, 2017. <http://digitalcommons.unl.edu/libphilprac/2144>.
- Moyo, M., & Mavodza, J. (2016). A Comparative study of Information Literacy provision at University libraries in South Africa and the United Arab Emirates. *Library Review*, 65(1-2), 93-107.
- Ramamurthy, P., Siridevi, E., & Ramu, M. (2015). Information Literacy Search Skills of Students in Five Selected Engineering Colleges in Chittoor District, Andhra Pradesh: A Perspective *International Research: Journal of Library & Information Science*, 5(1), 107-121.
- Rafique, G. M. (2014). Information literacy skills of faculty members: A study of the University of Lahore, Pakistan. *Library Philosophy and Practice (e-Journal)*, Accessed July 20, 2016, <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2659&context=libphilprac>.
- Rehman, S. U., & Alfaresi, S. (2009). Information literacy skills among female students in Kuwaiti high schools. *Library Review*, 58(8), 607-616.
- Singh, A. (2005). A report of faculty perceptions literacy in educational change: A case study of University of Delhi. *Library Management*, 30(3), 163-175.