

## Utilization of Web Based Information Sources among Engineering College Students: A Case Study

**Bhimarayangouda Patil**

Librarian

Acharya School of Design

Acharya Doctor Sarvepalli Radhakrishnan Rd.  
Soladevanahalli, Bangalore, Karnataka-560107

Email.Id-patil.bm22@gmail.com

**Dr. M. Dhanamjaya**

Pro Vice-Chancellor

REVA University

Rukmini Knowledge Park

Kattigenahalli, Yelahanka

Bangalore-560064

e-mail: provc@reva.edu.in

**Abstract** - The present study of utilization of web based information resource by library user community conducted at GMIT Engineering College, Davanagere. A total of 400 questionnaires distributed but 370 were returned duly filled in as a sample. A structured questionnaire was designed for collecting data from the chosen sample group. It is observed that majority 284(76.7%) of the respondents have learnt how to access the web based information resources through their teachers, followed by 256(69.1%) of the respondents got guidance from library staff. A large number of respondents 121 (32.7%) visit the library daily to access web based information sources, whereas 117(31.6%) of them visit the library weekly twice to access web based information sources. Most 211 respondents (67.1%) of the respondents preferred to access the information in PDF format, followed by 103(27.9%) who were used Word & PPT format for download information from Internet and remaining 19(5.0%) use HTML format. It is noticed that majority 317(85.6%) of the respondents indicated lack of speed is the major problem while accessing the web resources, followed by 284(76.8%) Bulk Information, 152(41.0%) Lack of time and remaining 46(12.4%) by lack of knowledge.

**Key Words:** Engineering College, Web sources, ICT, Engineering Students,-1 Post Graduate.

### Introduction

Engineering college libraries play an important role in imparting quality education to the undergraduate and postgraduate students and researchers of engineering (Varadaraju, 2018). The emergence and use of information technology is the century's most significant development affecting scholarly communication. Today, libraries are shifting their role from the custodian of traditional information resources to the provider of service oriented digital information resources. The emergence of technological development in the context of computer, telecommunication, electronic, reprography and micrographic has been adopted in libraries (Brar, 2016). E-Resources usually consist of e-books, e-Journals, articles, newspaper, thesis, dissertation, databases and CD-ROMs, which are likely to be the alternative to the print media. Emerald, Ebsco, Scopus are some of the examples of online databases.

In this web based environment, the information resources and services can be accessed and delivered as and when required, therefore, the services of the libraries are not confined by the four walls, but are integrated into local, regional, national and international networks. The best way to ensure that the access and outcome of information services is timely, convenient and equitable is to develop web-based services that mirror and improve traditional in-house and telephone services. This clear understanding of the Web as a service delivery method and not just as a digital brochure results in a project development path leading to both self-services and live, librarian mediated services offered online. The aim of this study is to identify how web based information resources are utilized by engineering students.

### **Review Literature**

**Patel(2015)** in their study highlights the access to web-based library and information services in the engineering college Libraries at CHAROTAR Region, particularly in recent past are providing some of notable information services that can be accessed via the College library websites are Web OPAC, latest addition display, data search, and federated search, access to full text and bibliographic databases, online document delivery, access to institutional repository and open access resources, databases and multimedia access resources, live chat, compilation of research profile, web based CAS and SDI, remote access and so on.

**Ravichandran and Elanchezhiyan (2016)** conducted a study to describe the needs, requirements and use of electronic information sources especially scholarly information and analyzes the same in the Engineering colleges. The progress of any subject is impeded unless new knowledge generated by research flow freely, quickly and timely among the user community. As information system, therefore, must bring into attention the newly information by its very nature is perishable. Hence assessments of user needs are very important task of any efficient information system so that information needs of users may be identified and the information available in different types of formats and through a variety of channels may be provided to the users.

**Newmon and Sengar (2016)** jointly conducted a study is to identify the knowledge of use of e-resources. Also to find the problem faced by Engineering College Student during accessing and using e-resources. So how can the problems be resolved and the effect of lack of availability of e-resources. Today availability of e- resources in a college library is very common. But their proper and maximum use is a matter for discussion. The present paper examines the existence of various e- resource databases in CIT Engineering college library. The study also highlights the preferences and importance of online resources among the teacher and students.

**Shivakumaraswamy(2019)** paper focusses on the Use of Web-Based Library Services in Mysore City Engineering Colleges. The study covers Web-Based Reference, Acquisition, Circulation, Cataloguing, Periodical Services, ILL/Document delivery services, problems in accessing Web based library services by users of engineering college libraries of Mysuru city. We were also consulted to design the questionnaire. A well-designed questionnaire was an issue to engineering college's students in Mysore city. Altogether 300 questionnaires were issued personally to users of engineering college's students of Mysore city and 250 were collected with a response rate of 83.3%. Essential statistical techniques (SPSS) and methods will be used to examine the research data.

### **Objectives of the study**

- To know the methods of learning to access web-based information resources among the PG engineering students

- To know the purpose of using Web resources among the PG engineering students
- To know the preferred format of Web-Resources
- To Know the difficulties encountered by the users while using Web resources

### About GMIT College of Engineering

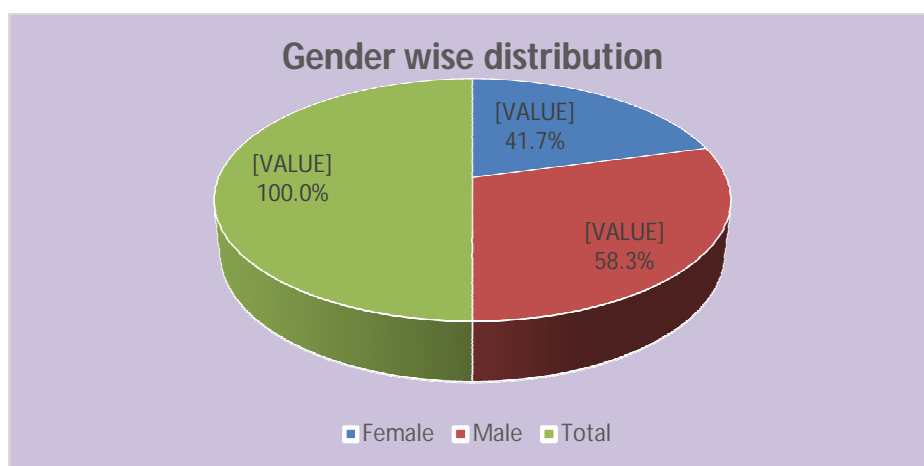
GM Institute of Technology a Hi-tech Engineering institute established in the Academic Year 2001-02. The GMIT is on the National Highway No 4, 265 Km away from Bangalore. The campus is spread over 54 acres of lush green land. It has well planned monolithic buildings with the state-of-the-art infrastructure. The Institution is affiliated to Visvesvaraya Technological University (VTU), Belagavi, and is accredited by NBA for the programs CSE, ECE, Civil and Mechanical Engineering. In addition to this the institution is also accredited by NAAC, New Delhi. The institution has AICTE approval. It is one of the leading Engineering and Management Institution in the central part of Karnataka.

### Methodology

This study of the research used questionnaire-based survey method in order to achieve the above objectives. For this purpose a well-structured questionnaire was designed to collect the data from the PG engineering students of GMIT. 400 questionnaires were distributed, out of which 370 duly filled in questionnaires were received back. The collected data were classified, analyzed and tabulated by using statistical methods.

**Table - 1: Gender wise distribution of responses**

Gender	Respondents	Percentage
Female	154	(41.7%)
Male	216	(58.3%)
Total	370	(100.0%)

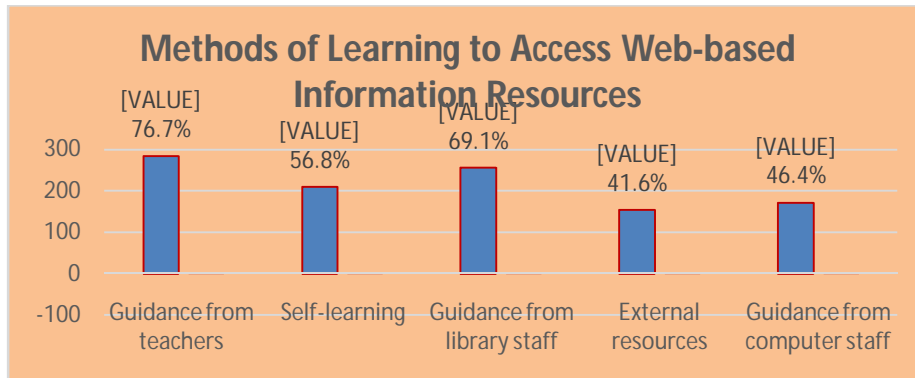


*Figure - 1: Gender wise distribution of responses*

To study the population of this study in different genders the respondent was required to mention their gender in the questionnaire and the responses are shown in table-1 and figure-1. It is observed that, male respondents are more in comparison to their female counterparts. That is, the male respondents represent 216(58.3%) as compared to 154 (41.7%) of the female respondents.

**Table - 2: Methods of Learning to Access Web Based Information Resources**

Methods	Respondents	Percentage
Guidance from teachers	284	(76.7%)
Self-learning	210	(56.8%)
Guidance from library staff	256	(69.1%)
External resources	154	(41.6%)
Guidance from computer staff	172	(46.4%)

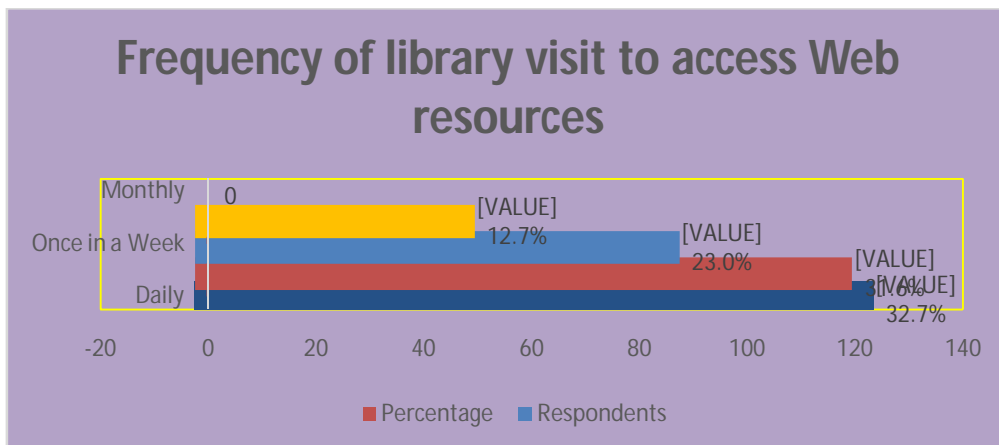


*Figure - 2: Methods of Learning to Access Web Based Information Resources*

The table 2 and figure 2 indicate the methods of how they have learned to access the web based information resources. It is observed that majority 284(76.7%) of the respondents have learnt how to access the web based information resources through their teachers, followed by 256(69.1%) of the respondents got guidance from library staff, 210(56.8%) of the respondents have learnt how to access the web based information resources through their personal experience or self-learning process and remaining 154(41.6%) of the respondents have indicated that they learnt to use web based information resources from external sources.

**Table - 3: Frequency of library visit to access Web Based Information Resources**

Frequency	Respondents	Percentage
Daily	121	(32.7%)
Weekly twice	117	(31.6%)
Once in a Week	85	(23.0%)
Fortnightly	47	(12.7%)
Monthly	0.0	(0.0%)

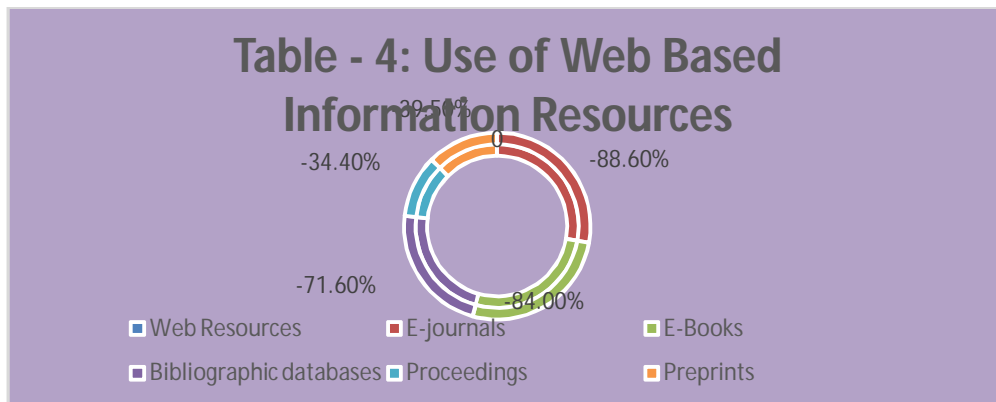


*Figure - 3: Frequency of library visit to access Web Based Information Resources*

Table 3 and figure 3 reveals that, a large number of respondents 121 (32.7%) visit the library daily to access web based information sources, whereas 117(31.6%) of them visit the library weekly twice to access web based information sources and only 47(12.7%) of them who visit the library fortnightly to access web based information sources.

**Table - 4: Use of Web Based Information Resources**

Web Resources	Respondents	Percentage
E-journals	328	(88.6%)
E-Books	311	(84.0%)
Bibliographic databases	265	(71.6%)
Proceedings	127	(34.4%)
Preprints	146	(39.5%)

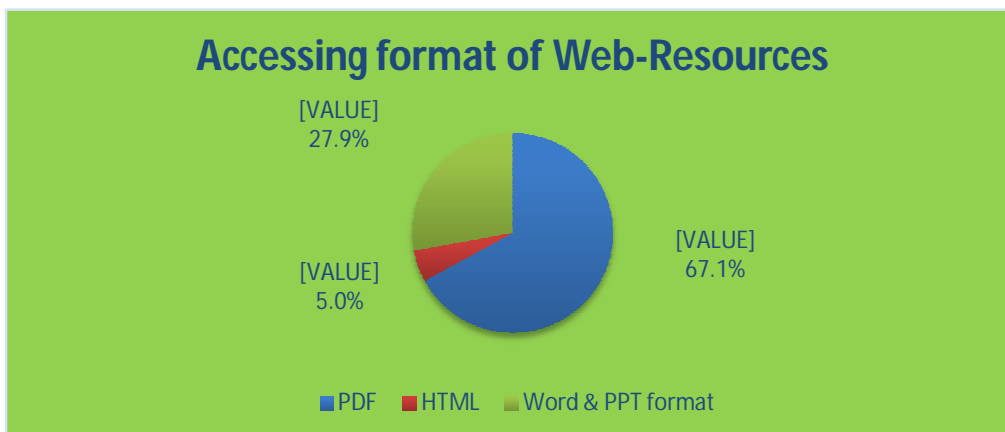


*Figure - 4: Use of Web Based Information Resources*

Table 4 and figure 4 highlights preferences in the use of web based information resources among the respondents. The study shows that 328(88.6%)of the respondents preferred e-journals, followed by 311 (84.0%) E-Books, 265(71.6%) Bibliographic databases and 127(34.4%).

**Table - 5: Accessing format of Web Based Information Resources**

Format	Respondents	Percentage
PDF	248	(67.1%)
HTML	19	(5.0%)
Word & PPT format	103	(27.9%)

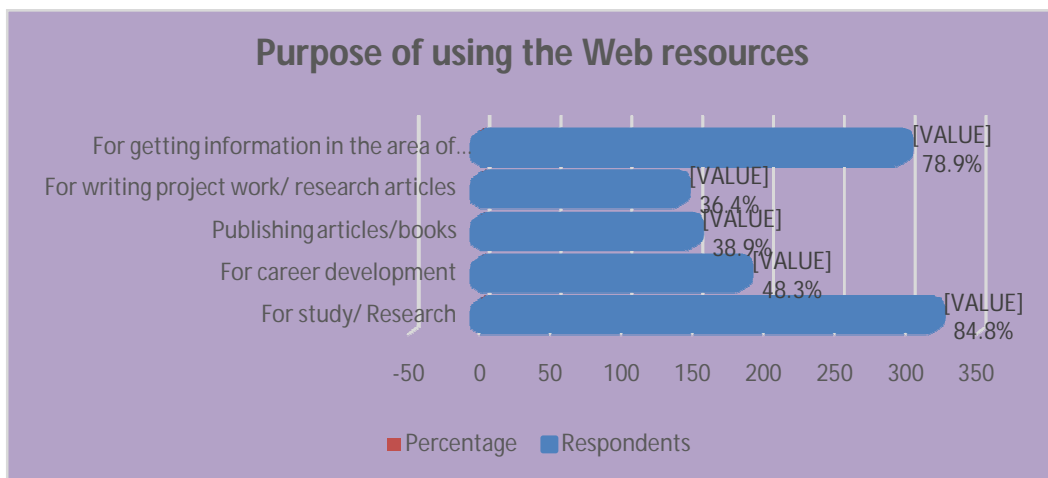


*Figure - 5: Accessing format of Web Based Information Resources*

Table 5 and figure 5 shows the types of format preferred to download the information. In this study, most 211 respondents (67.1%) of the respondents preferred to access the information in PDF format, followed by 103(27.9%) who were used Word & PPT format for download information from Internet and remaining 19(5.0%) use HTML format.

**Table - 6: Purpose of using the Web Based Information Resources**

Purpose	Respondents	Percentage
For study/ Research	314	(84.8%)
For career development	179	(48.3%)
Publishing articles/books	144	(38.9%)
For writing project work/ research articles	135	(36.4%)
For getting information in the area of specialization	292	(78.9%)



*Figure - 6: Purpose of using the Web Based Information Resources*

Figure 6 shows that purpose of using web based information resources. The findings shows that majority 314(84.8%) of the respondents are using the web resources for study/ research in their subject area, while 292(78.9%) of them using the web resources for getting information in the area of specialization, 179(48.3%) of them using the web resources for career development and remaining 135(36.4%) respondents are using the web resources for writing project work/ research articles.

**Table - 7: Awareness and use of the Web Based Information Resources**

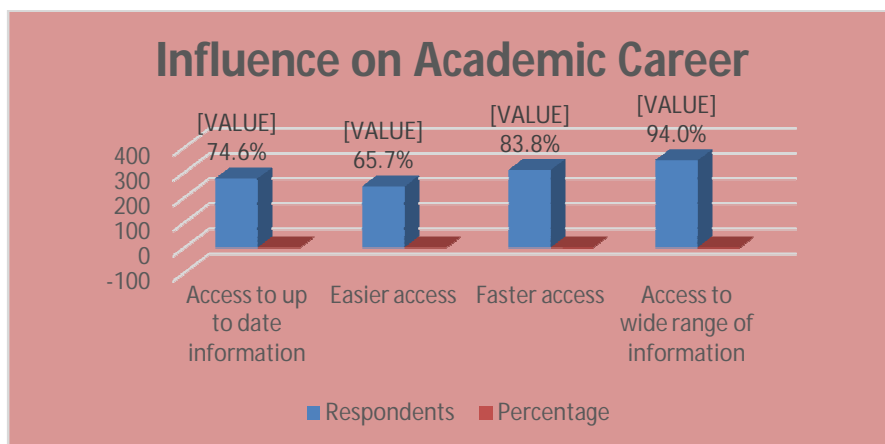
Databases	Respondents	Percentage
IEEE	307	(56.0%)
McGraw Hill	268	(72.4%)
IETE	98	(26.4%)
ELSEVIER	289	(78.1%)
ASTM Digital	197	(53.4%)
J-GATE	312	(84.3%)
Springer Links	297	(80.3%)

The Table.7 shows that the using the databases by the respondents. Majority 312(84.3%) of the respondents using J-GATE database frequently, followed by 297(80.3%) were use Springer Links, 289(78.1%) were using Elsevier Science Direct, 268 (72.4%) of them using

McGraw Hill databases, 307(56.0%) were use IEEE and 197(53.4%) of them using ASTM Digital.

**Table 8: Influence of Web Based Information Resources on Academic Career**

Opinion	Respondents	Percentage
Access to up to date information	276	(74.6%)
Easier access	243	(65.7%)
Faster access	310	(83.8%)
Access to wide range of information	348	(94.0%)



*Figure 7: Influence on Academic Career*

Table 8 and figure 7 shows the influence of web based information resources on the academic career of respondents. The study shows that 348(94.0%) of the respondents indicated that web based information resources have enabled them to access to wide range of information of their respective subjects, followed by 310(83.8%) of the respondents are of opinion that they can access information in faster manner by using the web based information resources and 279(74.6%) of the respondents indicated that web based information resources have enabled them to access up to date information of their respective subjects.

**Table - 9: Problems while using the Web Based Information Resources**

Problems	Respondents	Percentage
Lack of Speed	317	(85.6%)
Lack of Training	83	(22.4%)
Lack of Knowledge	46	(12.4%)
Lack of time	152	(41.0%)
Bulk Information	284	(76.8%)

Table 9 shows that various problems faced by the respondents while accessing the web resources. The problems such as lack of networking, lack of speed, lack of training, lack of time, problems in downloading and lack of knowledge about web resources. It is noticed that majority 317(85.6%) of the respondents indicated lack of speed is the major problem while accessing the web resources, followed by 284(76.8%) Bulk Information, 152(41.0%) Lack of time, and remaining 46(12.4%) by lack of knowledge.

**Findings of the study**

- It is observed that, male respondents are more in comparison to their female counterparts. That is, the male respondents represent 216(58.3%) as compared to 154 (41.7%) of the female respondents.

- It is observed that majority 284(76.7%) of the respondents have learnt how to access the web based information resources through their teachers, followed by 256(69.1%) of the respondents got guidance from library staff, 210(56.8%) of the respondents have learnt how to access the web based information resources through their personal experience or self-learning process and remaining
- A large number of respondents 121 (32.7%) visit the library daily to access web based information sources, whereas 117(31.6%) of them visit the library weekly twice to access web based information sources and only 47(12.7%) of them who visit the library fortnightly to access web based information sources.
- The study shows that 328(88.6%)of the respondents preferred e-journals, followed by 311 (84.0%) E-Books, 265(71.6%) Bibliographic databases and 127(34.4%).
- Most 211 respondents (67.1%) of the respondents preferred to access the information in PDF format, followed by 103(27.9%) who were used Word & PPT format for download information from Internet and remaining 19(5.0%) use HTML format.
- The findings shows that majority 314(84.8%) of the respondents are using the web resources for study/ research in their subject area, while 292(78.9%) of them using the web resources for getting information in the area of specialization, 179(48.3%) of them using the web resources for career development and remaining 135(36.4%) respondents are using the web resources for writing project work/ research articles.
- Majority 312(84.3%) of the respondents using J-GATE database frequently, followed by 297(80.3%) were use Springer Links, 289(78.1%) were using Elsevier Science Direct, 268 (72.4%) of them using McGraw Hill databases, 307(56.0%) were use IEEE and 197(53.4%) of them using ASTM Digital.
- The study shows that 348(94.0%) of the respondents indicated that web based information resources have enabled them to access to wide range of information of their respective subjects, followed by 310(83.8%) of the respondents are of opinion that they can access information in faster manner by using the web based information resources and 279(74.6%) of the respondents indicated that web based information resources have enabled them to access up to date information of their respective subjects.
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### **Conclusion and Recommendations**

Today the World Wide Web has emerged as most powerful medium for information publishing and access. A plethora of information sources for education and research are available on the web, including scholarly journals, technical reports, theses, courseware, concern pages, data sets, patents and discussion forms. Library should provide internet accessibility with more number of terminals to the users. College library should educate on available engineering databases information among users. Now-a-days there is a lot of improvement in online databases access, the people who are in engineering courses there should be an immediate access of the information. These people should be always updated with the current knowledge, that to within less time. So online databases access is one of the means which updates and educates one knowledge. Library has to conduct formal training/orientation programmes to overcome the obstacles and effective utilization of e-resource.



## References

1. Brar, I. S. (2016). Use of web based information resources and services Dr.Asia Pacific Institute of Advanced Research (APIAR), 2(2), 124-130.
2. Case, D.O. (2007). Looking for information a survey of research on information seeking, needs, and behavior. Amsterdam; Oxford University Press.
3. Dervin, B. and Nilan, M. (1986). Information needs and uses. *Annual Review of Information Science and Technology*, 21, 25-29.
4. Esmailand Nagarajan ( 2012). Use of Electronic Resources at Krishnasamy College of Engineering & Technology Library, Cuddalore. *Library Philosophy and Practice*.
5. Haneefa, K.(2007). Use of ICT based resources and services in special libraries in Kerala. *Annals of Library and Information Studies*, 54(1), 23-31.
6. Mcmenemy, D. (2010). Whither rational thought the responsibilities of the information and library profession in ensuring balance. *Library Review*, 59(1), 5-8.
7. Newmon, M., &Sengar, V. (2016). Digital Library and E-Resources Uses and Problem In Engineering College Of Rajasthan. *International Research Journal of Engineering and Technology (IRJET)* 3(4), 1087- 1090.
8. Patel, U. (2015). Utilization of Web Based Information Sources and Services in Engineering College Libraries in Charotar Region: A Study. *Journal of Information Technology and Sciences*, 1(1), 1-9.
9. Prabakaran, K., (2013) Use of E-Resources Among Faculty Members of Engineering Colleges in Cuddalore District: A Study. *Journal of Advances in Library and Information Science*, 2(2), 71-75.
10. Ravichandran, &Elanchezhiyan. (2016). A Study on the Usage of Web Resources and Services by Faculty Members of Engineering and Technology Institutions in Tamil Nadu. *Journal of Advances in Library and Information Science*, 5(2), 107-111.
11. Shivakumaraswamy, K. N. (2019). Use of Web-Based Library Services in Mysore City Engineering Colleges in Karnataka, India: A Study. *Library Philosophy and Practice (e-journal)*, 2370.
12. Sridhar, M, S. (1995), Understanding the User - Why, What and How? *Library Science with a slant to Documentation and Information Studies*, 32(4), 151-164.
13. Varadaraju. (2018). Use of Library Resources and Services at Stanley College of Engineering and Technology for Women, Hyderabad: A Case Study NCH. . *Indian Journal of Information Sources and Services*, 8(1), 46-53.
14. <https://www.gmit.ac.in/subpage.php?id=31>

