WEB TECHNOLOGY FOR USE OF ELECTRONIC RESOURCES IN ENGINEERING TECHNOLOGY LIBRARIES IN BANGALORE: A STUDY

Dr. T.R.Sridevi*

Abstract

With the advent of information communication technology, libraries now a day are moving with the trend to meet its stakeholder's requirements in terms of electronic resources. The library professionals are trained with the help of the management are striving their best to make all its stakeholders namely students, faculties, research scholars make use of library e resources to the fullest extend to full fill the needs in terms for class, seminar presentation, conference presentation and for journal publications. In view of this library professionals conduct various information literacy programmes for the benefits of its stakeholders. This paper is a case study on usage of web technology and electronics resources for engineering technology libraries, with an objective to analyze various patterns of using web technology for accessing electronic resources, its merits and demerits in usage of electronic resources. Survey and observation methods are used for analyzing the data collected. Based on the data collected from survey it is exhibited in form of pictorial graphs, with the recommendations for effective usage of the electronics resources.

Key Words: Electronics Resources, Stakeholders, Web Technology, Web Technology Skills.

* *Librarian, R.V.College of Engineering, R.V.Vidyanikethan Post, Mysore Road, Bangalore 560 05.India*

1. Introduction

The present day information has reached every individual in various forms irrespective of the domains they specialize in. The information communication technology offers high quality of web technology electronic resources that are shared among the stakeholders virtually. The library professionals are the key resource personnel in executing the usage of electronics resources through retrieving, disseminating and educating its readers use web technology for accessing electronics effectively. For this study around 20 engineering technology institutions were selected and around 700 questionnaires were distributed and interaction was done face to face in certain cases among then valid questionnaire sought was 500 which is considered for the study and represented in form of tables and percentages depicted in form of pie and bar charts. This paper highlights use of web technology and electronic resources in engineering technology libraries.

2. Literature Review

Chetan Sharma and Harpal Singh (2012)[1], conducted a study on electronic access in Swami Devi Dayal Institute of Engineering and Technology where the author[1], speaks about the impact on use of e-resources by the faculty and students for which the author[1], has used the survey method questionnaire to find its impact of e-resources, databases access by faculties and students. Through this survey the author Chetan Sharma and Harpal Singh[1], concludes e-resources are been used very effectively by the faculties and the students and the readers were very much satisfies with the existing IT infrastructure and e –resources in the institute.

In a study utilization of electronic resources by the students of engineering colleges in Kanchipuram district, a study conducted by the author Jayanthi, G; Saravanan,T (2013)[2], highlights about the awareness of e-resources, its approach, purpose of using electronic resources etc. as the electronic resources have become one of the most important aspects of a digital library. The author[2], has used a structured questionnaire to collect the data from the students of engineering colleges in Kanchipuram district. The author [2], has distributed around 1500 questionnaires out of which 1250 valid questionnaire were collected and the data was analyzed and tabulated in form of tables and percentage. The findings found by the author[2], reveals that 44% of respondents were aware of electronic resources and services through their colleagues and friends. Further the author Jayanthi, G; Saravanan, T [2], concludes information professionals play a key role in disseminating information to it readers.

Selvaganapathi, N; Surianarayanan, S (2013)[3], conducted a study to evaluate how electronic resources used by the faculties improve the efficiency and productivity in the academic activities. It was revealed to develop a plan for implementation of use electronic resources further the author[3], highlights the need

for electronic resources in libraries were because of information explosion, multiuse of machine readable records and storage capacity. To arrive at this need the author[3], has used a questionnaire method to tabulate the data. The findings the author[3], indicates frequency of use of electronic resources, daily access are found more than access in one week among the faculty members. Further the author[3], concludes that subscription of electronics resources to be increased and the speed of internet connectivity to access these e- resources to be increased.

Felcy Lewis; Mallaiah, T Y (2014)[4], conducted a study on use of information resources in engineering college libraries of Dakshina Kannada and Udupi Districts where the author[4], speaks the importance of information which is an essential tool for the study, teaching and research where the engineering institutions libraries play an important role in fulfilling the information needs of the users. The author [4], has covered 20 engineering colleges in Karnataka Visvesvaraya Technological University (VTU), where the author [4], highlights on the preference and use of information resources in colleges, satisfaction level of respondents on the available information resources in the library. Stratified sampling techniques were used for the selection of students, faculty members and research scholars. The findings as highlighted by the author [4], was engineering colleges having a good collection of printed information resources such as text books, reference books, subject journals etc. The reason being all these libraries are members of INDEST –AICTE consortium. The author Felcy Lewis; Mallaiah, T Y[4], concludes that libraries must be aware of how the students seek for the information.

In a study on user's satisfaction of electronic resources and services in the self financing colleges affiliated to Madurai Kamaraj University the authors Rani,S ; Chinnaswamy, K[5],highlights on the influence of e-resources services in the self financing colleges affiliated to Madurai Kamaraj University, in this study the author[5],has used the survey design and questionnaire for the data collection. Further the author speaks about the problems for implementation of e-resources to student's community to be made mandatory. The authors Rani, S; Chinnaswamy, K[5], concludes that self financing institutions should be well developed and equipped with latest infrastructure to meet the requirements of the users.

3. Objectives

- To review the patterns of use of web technology accessing electronic resources.
- To review the current status of accessing electronic resources in engineering technology libraries.
- To propose various recommendations for effective dissemination of electronic resources through web technology for its stakeholders.

4. Methodology

- Literature review on use of web technology and electronic resources was carried out by referring to various related journal articles and internet resources.
- Engineering technology libraries were identified and current patterns of use of web technology and electronics was reviewed through a survey and observation.
- Highlights the challenges faced by the stakeholders in accessing electronic resources through web technology.
- Through survey and observation, recommendations are made effective retrieving and dissemination of electronic resources through web technology.

5. Data Analysis

Table 5.1 Age of the Respondent

Age	No. of Respondent	Responded	Percentage
21-30	500	200	40
31 - 40	500	150	30
41- 50	500	100	20
51 -60	500	30	06
61 and Above	500	20	04
Total		500	100

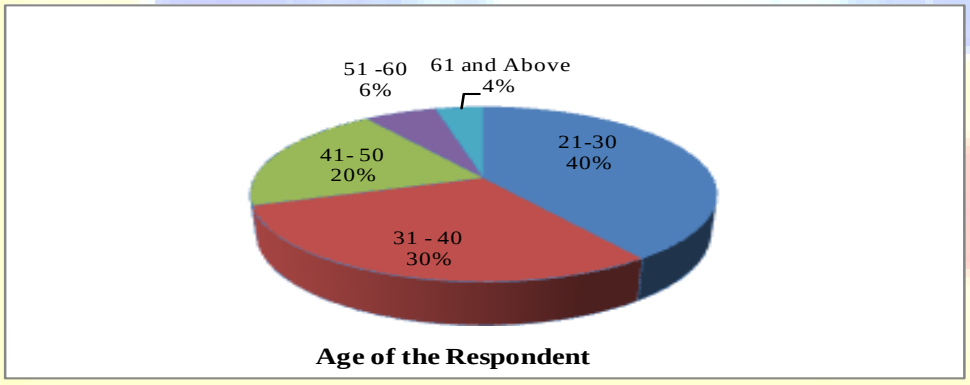

Figure 5.1 Age of the Respondent

The above figure 5.1 depicts that the age group in between 21-30 have responded around 40 % which includes the stakeholder's undergraduate, post graduates students and lecturers. The least responded is in the age group 61 and above. It's clear from the graph that the youngster is more keen in exploring the web technology.

Table 5.2 Gender Response

Gender	No. of Respondent	Responded	Percentage
Male	500	350	70
Female	500	150	30
Total		500	100

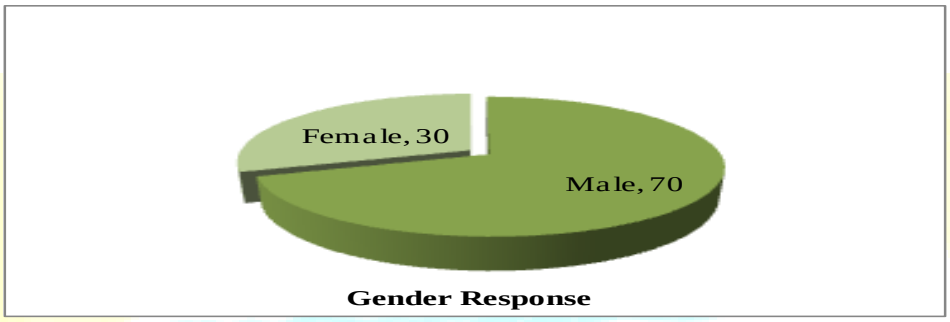

Figure 5.2 Gender Response

The gender response in the Figure 5.2 highlights the male at 70% responses compare to the female at 30% responses. The reason for the low was less exposure to the usage of web technology and most of them were conservative. For which they should be give some training programmes to present themselves in the fast moving technology.

Table 5.3 Experiences in Use of Web and Electronic Resources

Years of Experience in use of Web Technology	No. of Respondent	Responded	Percentage
1 – 5	500	30	06
6-10	500	45	09
11-15	500	75	15
16 -20	500	100	20
20 and Above	500	350	50
Total		500	100

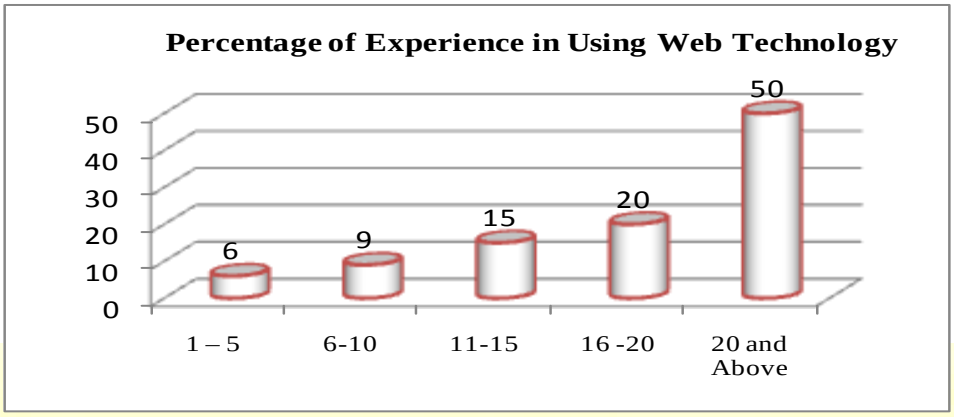

Figure 5.3 Experience in using Web Technology

The above figure 5.3 depicts the experience in use web technology for the electronic resources were 20 years and above which in mainly by the assistant professors, dean, head of the institutions and with indicates 50 % and the least is the 6% that of the fresher's in using web technology, as the fresher's are just entering to the technical education in case of undergraduates.

Table 5.4 Usage of Web Technology Skills

Web Technology Skills	No. of Respondent	Responded	Percentage
Expert	500	200	40
Moderate	500	75	15
Average	500	100	20
Fresher	500	75	15
Poor	500	50	10
Total		500	100

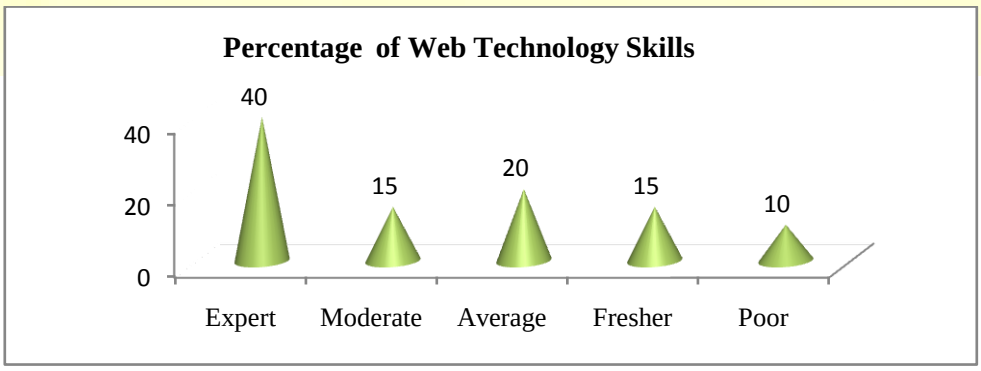

Figure 5.4 Percentage of Usage on Web Technology Skills

40 % of the respondent has responded to expert in web technology skills based on the teaching skills and experience which is followed by the moderate, fresher 15% and average around 20%. These skills are mainly based on experience and knowledge in using web technology for teaching- learning activities.

Table 5.5 Acquired Web Technology Skills - Source

Acquired Skills	No. of Respondent	Responded	Percentage
Computer Training Centre	500	50	10
From College	500	200	40
Self Study	500	50	10
External Source	500	50	10
Observation	500	150	30
Total		500	100

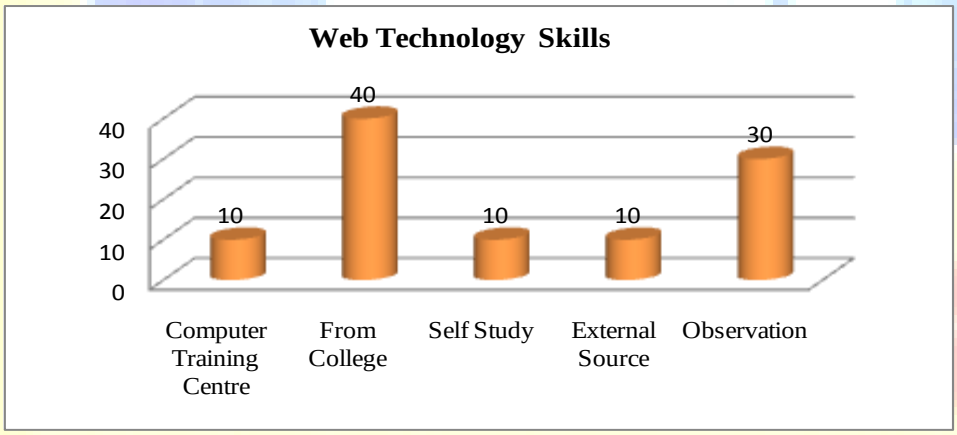

Figure 5.5 Percentage on Web Technology Skills Acquired – Source

The above graph 5.5 depicts 40 percent of web skills are acquired from college which clearly states that engineering technology libraries are in constant use of web technology in updating their knowledge and skills for retrieving the data, followed by 30 percent by observation and the other 10 percent was shared among the computer training centre, self study and external sources.

Table 5.6 Place of Accessing Web and Electronic Resources

Place of Accessing	No. of Respondent	Responded	Percentage
Library	500	300	40
Institute Campus	500	75	15
Café	500	50	10
Home	500	75	15
While Travelling	500	100	20
Total		500	100

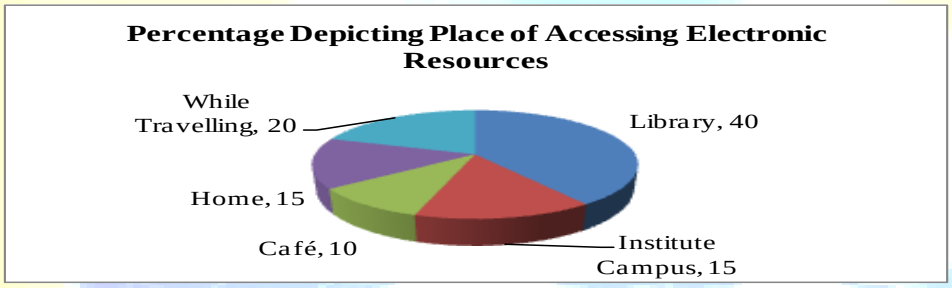

Figure 5.6 Percentage Depicting Place of Accessing Electronic Resources

In the figure 5.6 it clearly states that library has the highest with 40 percent, for the place of accessing the electronic resources, which speaks that there is a good utilization of library not only for books but also digital library for accessing the electronics resources like e- journals, e- books, and conference proceedings.

Table 5.7 Frequency for Using Web Technology for Accessing Electronic Resources

Frequency	No. of Respondent	Responded	Percentage
Daily	500	300	60
Weekly	500	100	20
Fortnightly	500	30	06
Monthly	500	50	10
When Requirement Arises	500	20	04
Total		500	100

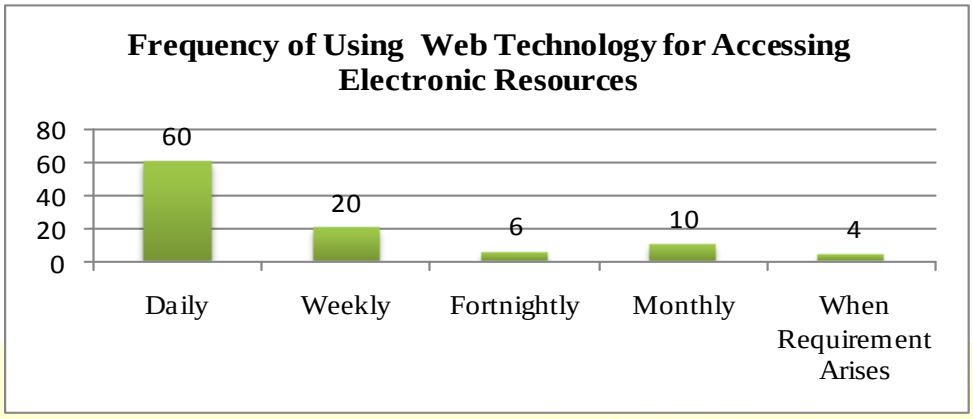

Figure 5.7 Percentage depicting Usage of Web Technology Accessing Electronic Resources

The above figure5.7 depicts that the electronics resources were used on a daily basis by the stakeholders which represents around 60% where as the other category were 20% on weekly basis, 10% on monthly basis and 4% as and when information is required.

Table 5.8 Frequently used Web Technology for E- Resource Services

Web Technology	No. of Respondent	Responded	Percentage
Browsing	500	50	10
E- Mails	500	100	20
E-Books	500	150	30
E-Journals	500	175	35
DVD / CD's	500	25	05
Total		500	100

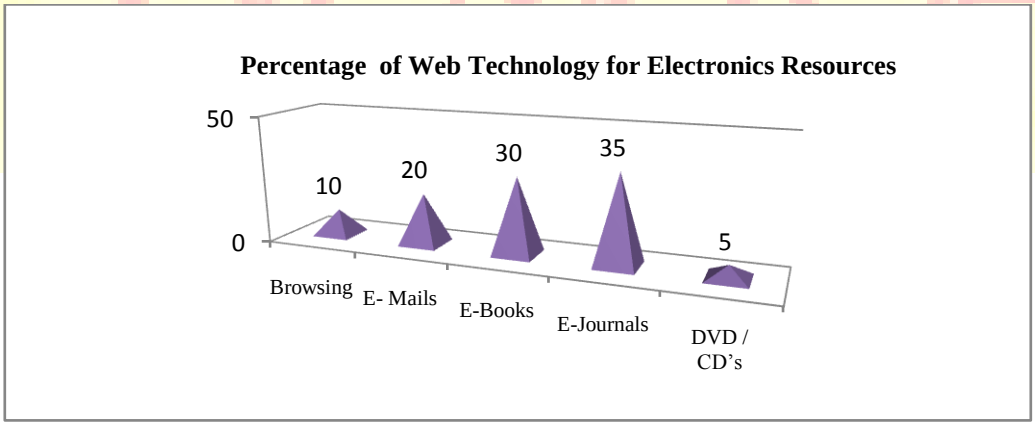

Figure 5.8 Percentage Indicates for Using Web Technology for Electronic Resources

It is clear from the above figure 5.8 that the usage of e-journals are rapidly more about 35% when compared to the other resources, the least is the DVD/ CD's which has 5% which indicates that most of the resources are available on the web technology.

Table 5.9 Problems Faced While Using Web Technology for Electronic Resources

Problem Faced	No. of Respondent	Responded	Percentage
Low Bandwidth	500	200	40
Not Aware in Retrieving Process	500	100	20
Frequent Interruptions in Internet Connectivity	500	100	20
Firewalls	500	50	10
Long Downloading Time	500	50	10
Total		500	100

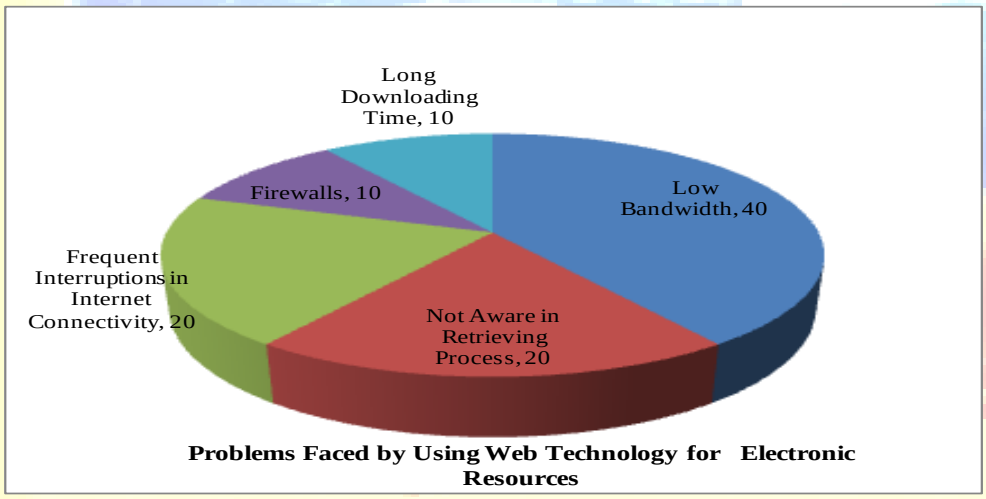

Figure 5.9 Problems Faced by Using Web Technology for Electronic Resources

40% of the respondents have responded to low bandwidth which can be due to the type of connectivity, and 10% speaks about the firewalls as many institutions policies to prevent certain sites where the stakeholders find it difficult to retrieve the documents.

Table 5.10 Frequently used Electronic Resources

Electronic Resources	No. of Respondent	Responded	Percentage
IEEE	500	100	20
ASCE	500	55	11
Proquest	500	50	10
Science Direct	500	100	20
Springer Link	500	65	13
Taylor & Francis	500	50	10
CRC E Books	500	30	06
IET Digital Library	500	25	05
EBSCO	500	25	05
Total		500	100

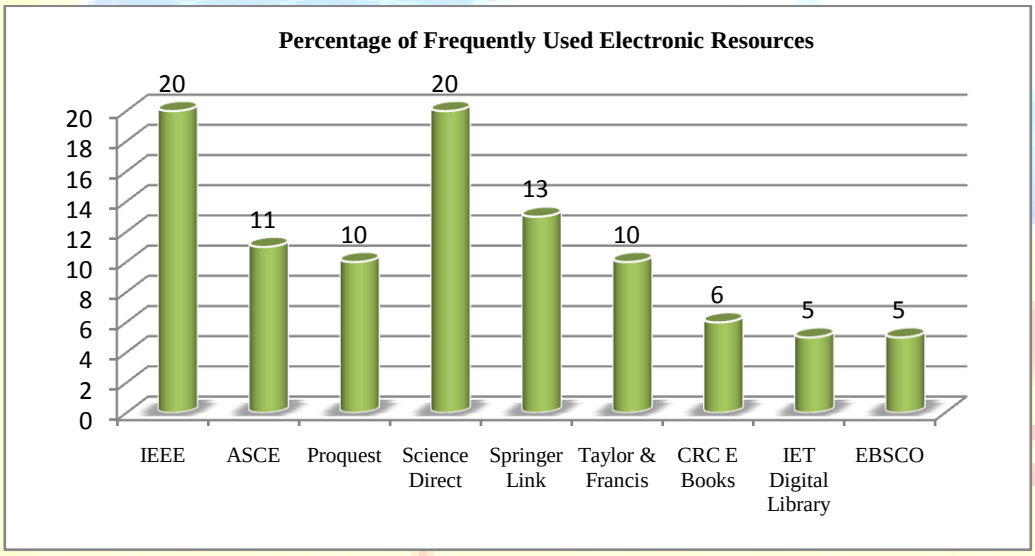

Figure 5.10 Percentage for Frequently Used Electronic Resources

The above figure5.10 depicts that there is a great demand in usage of IEEE and Elsevier Science by the stakeholders for various purposes, followed by the other resources Springer link around 13% and Proquest, Taylor & Francis about 10%. This usage depends on the kind of information required.

Table 5.11 Level of Satisfaction in using Web Technology for Accessing Electronic Resources

Level of Satisfaction	No. of Respondent	Responded	Percentage
Great Extend	500	300	60
Some Extend	500	175	35
Least Extend	500	25	5
Total		500	100

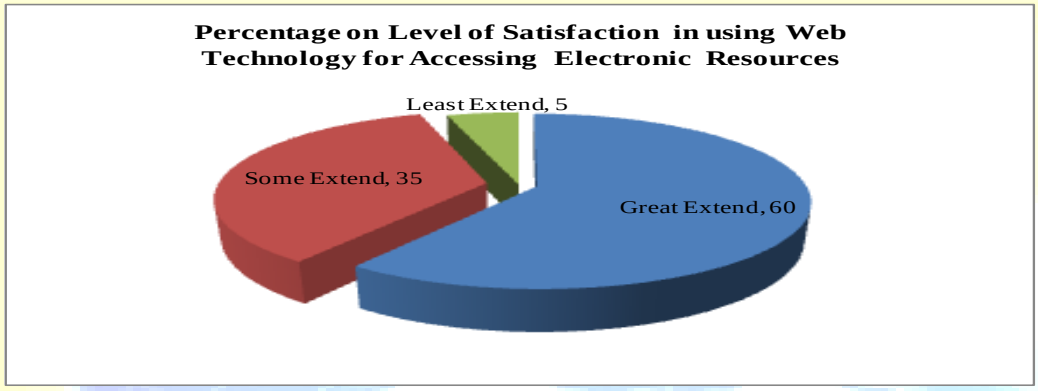

Figure 5.11 Depicts the Percentage on Level of Satisfaction in Using Web Technology for Accessing Electronic Resources

The above figure 5.11 depicts that there is a greater extend of satisfaction in using the web technology for accessing the electronic resources, which represents 60% followed by some extend that is 35% and least extend which indicates around 5 %. This significantly reveals that there is a good utilization of electronic resources through web technology in the engineering technology institutions.

6. Summary of the Data Analysis

i. 40% of the stakeholder's respondents were namely undergraduates, postgraduates, students and lecturers.

ii. The response from the male students, male faculty were highlighting around 70% compared to that of female stakeholders.

iii. 50% of respondents had experience of 20 years and above using the web technology for accessing the electronic resources.

iv. Experts in using web technology were 40% of the respondents.

v. Through library the usage of web technology was at a higher end which indicates around 40%.

vi. Overall it highlights that there is a good utilization of electronic resources through web technology in engineering technology institutions.

7. Recommendations

i. The upcoming engineering technology institutions should be well equipped with good infrastructure and manpower for developing electronic resources which meets all the stakeholder's requirements.

ii. The new entrants should be given information literacy training for using web technology for electronic resources.

iii. Library professional should keep up to date information and the same to be conveyed to its entire stakeholder's.

8. Conclusion

This paper has analyzed various patterns of web technology for accessing electronic resources focused to engineering technology institutions. It is also seen that the stakeholder's are constantly updating their knowledge by means of electronics resources for their class, seminars, projects or research work. Library professionals are also keen and enthusiastic in giving update information to all its stakeholders.

9. References

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