

USE OF ONLINE RESOURCES BY THE ENGINEERING FACULTIES: A CASE STUDY

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Abstract :

The term 'Online resource' is a broader term. It may be content from a website, blog, wiki, discussion form, discussion group, online journal etc. In the era of information technology, online resources are one of the main tools for dissemination of information to the academicians. This study focuses on finding the use of online resources by the engineering faculties of Mysore. The study was conducted through a questionnaire based survey. Questionnaires were distributed to 160 engineering faculty selected from 5 departments of 8 different Engineering colleges of Mysore. 138 completed questionnaires in all respects were received. The aim of the study was to obtain the feed back of faculty members, on frequency of use of online resources, purposes of use of online resources. It was found that, 81.26% used for teaching material, 62.32% for finding relevant information in the area of specialization, 49.28% for research work and 31.88% for publishing articles/papers. Types of use of online resources were found to be, e-journals (78.99%), e-books (52.90%), e-reference (46.38%) and e-thesis/report (32.61%). Importance of online resources and impact of online resources on their academic activities along with advantages of online resources and present the by departmental wise is highlighted. The problems faced by the faculty members and suggestion for improvements of online resource usage have also been presented.

KEYWORDS :

Online resource, Engineering Colleges, online resource Use, Purpose of use of online resources.

INTRODUCTION

With technology developing at a rapid pace in this information era, growing enthusiasm for online resources is becoming ever more popular and significant. It is timely to consider how information access methods of online resources are changing, notably whether provision for new technology has a place within higher education libraries. Faculty members in most of the countries, nowadays, tend to rely more on computer-based resources, sometimes, more than the students for sending mails, watching video, sending free e-cards etc. But faculty members may use online resources in much more useful way too, such as Administrative tools for the routine administration of courses, advertising the class, circulating copies of the syllabus, assigning discussion groups, getting course news, announcing subject/topic assignments for a specific group, uploading lecture notes and e-resources, as well as creating electronic discussion groups and e-mail lists.

The online resources available in a library play a prominent role in facilitating access to required information to the faculty members in an easy and swift manner. Further, one need not go to library to make use of print formats as the digital resource can be made use of by any user through online access via networks or authentication methods at any time comfortably sitting at home or office. Leu (2000) pointed-out, "Literacy is rapidly and continuously changing as new technologies for information and communication repeatedly appear and new environments for exploring these technologies are continuously crafted by users".

This paper explores from the user-perspective, the use of e-resources, limited to the through a case study among engineering faculty members of the colleges based in Mysore City. It investigates the current habits and needs of faculty members regarding online resource provision by engineering college libraries. The research is aimed to discover what type of online resources, the faculty member's access for their academic work, and the purpose of use of online resource, with a focus on how they feel online resources of their library could be developed. Identifying the right-type of online resources, and in the user expected format, alongside, studying their current and desired use of online resource for education, supports decision-making on the potential of online resource 'within libraries' service provision.

OBJECTIVES

The advent of modern technologies and lack of knowledge in using these technologies by the Indian academicians have made the job more untidy and laborious. Sometimes to get the needed information is also not possible at the right time. We need deeper knowledge about the hindrance and problems they face in use of online resource. The main aim of the research is to gain in-depth understanding of the usage pattern of the online resource by academicians.

Other objectives include:

- 1) To prepare the demographic profile of the academicians.
- 2) To identify the type of online resource the academicians prefer.
- 3) To identify the purpose of using online resources.
- 4) To find impact and importance of online resource to the academicians.
- 5) To find areas of training needed by academicians to utilize online resources.

REVIEW OF LITERATURE

Several researchers have carried out studies of the faculty member's use of E-resources. Few of the relevant studies on the topic have been discussed. Sujath, and Mudhol (2008) examined the use of electronic information sources by the teachers/scientists, research scholars and postgraduate students in the college of fisheries, Mangalore. Kumar, and Kumar, (2010) examined the perception and use of e-resources and the internet by the academicians from engineering, medical and management in Bangalore City, India. Satpathy, Sunil and Rout, (2010) evaluated the use of e-resources by the faculty members of C.V. Raman College of Engineering (CVRCE), Bhubaneswar, with a view to examine the exposure of faculty members to e-resources. Mulla (2011) studied the use of electronic resources by the faculty members of HKBK College of Engineering, Bangalore. Sudhier (2011) evaluated the use of e-resources by the students and research scholars of Faculty of Arts in the University of Kerala. Kumar and Kumbar, (2012) evaluated the use of electronic resources among the faculty in five autonomous engineering colleges in Bengaluru. Kavitha, (2013) studied to know the sources and purpose of accessing e-resources and the use of electronic resources by teachers of degree college in Cuddalore district.

METHODOLOGY

The present study was carried out as a survey-based study using questionnaire as the tool for data collection to obtain information related to objectives of the study. Few questions were open ended to get feed back from the respondents. A questionnaire consisting of 15 Questions were distributed among 160 faculties belonging to 5 different departments of 8 engineering colleges of Mysore, out of which 138 duly filled questionnaires were received back. The data thus collected has been tabulated using MS- Excel software and presented in the form of table, charts and diagrams after the analysis of the data.4. Data Analysis

Demographic profile of the faculty members

First few questions of the survey dealt with demographic profile of the faculty members. The 138 faculties of diverse background, who were surveyed, varied in their age, gender, qualification, departments and place of work etc.

From Table 01, out of the 138 samples selected for the study, majority of the samples belonged to the age group of 26-30 years (50.72%), followed by the age group of between 31-35 years (17.39%), 36-40 years (13.76%), below 25 years (9.42%) and very few of them were in the age group of over 40 years(8.69%). Further it is clear that 42 of the sample belonged to computer Science & Engineering, 29 of the electronics and communication engineering, 29 of them electrical and electronics engineering, 19 of them mechanical engineering and 21 of them were from civil engineering.

Table 1
Department wise distribution of Age

Age	CS	EC	EE	ME	CV	Total
Under 25 years	2	4	3	-	4	13
	4.76%	13.79%	11.11%	-	19.04%	9.42%
26-30	20	12	17	8	13	70
	47.61%	41.37%	62.96%	42.1%	61.9%	50.72%
31-35	13	6	3	2	-	24
	30.95%	20.68%	11.11%	10.52%	-	17.39%
36-40	6	4	2	6	1	19
	14.28%	13.79%	7.4%	31.57%	4.76%	13.76%
Over 40 years	1	3	2	3	3	12
	2.38%	10.34%	7.4%	15.78%	14.28%	8.69%
Total	42	29	27	19	21	138
Percentage	100%	100%	100%	100%	100%	100%

Note: CS= Computer Science, EC=Electrical and Communication, EE=Electrical and Electronics, ME=Mechanical, CV=Civil

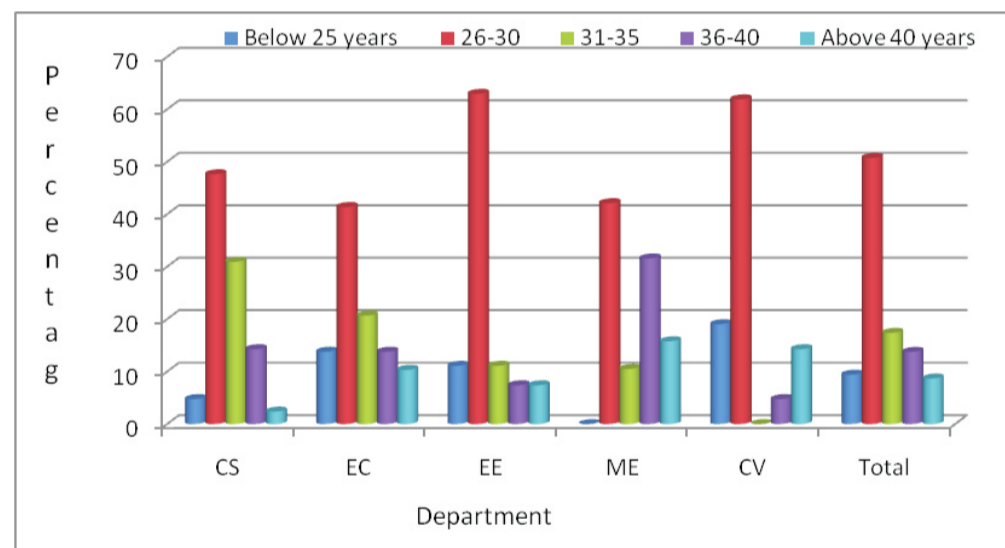


Fig 1 Percentage variation of faculty age with the department

It is observed from Fig. 1 that 62.96% of respondents from electrical and electronics engineering in the age group of 26-30 years, 31.57% of respondents from mechanical engineering in the age group of 36-40 years, 30.95% of respondents from computer science engineering in the age group of 31-35 years, 19.04% of respondents from civil engineering in the age group of under 25 years and lastly 15.78% of respondents from electrical and electronics Engineering in the age group of over 40 years. .

Distribution of faculty members by gender

The Gender-wise distributions of the faculty members by department wise are given in the Table-2. From the above table gender-wise distribution revealed that majority of them were males (55.07%) and remaining 44.93% of them were female respondents

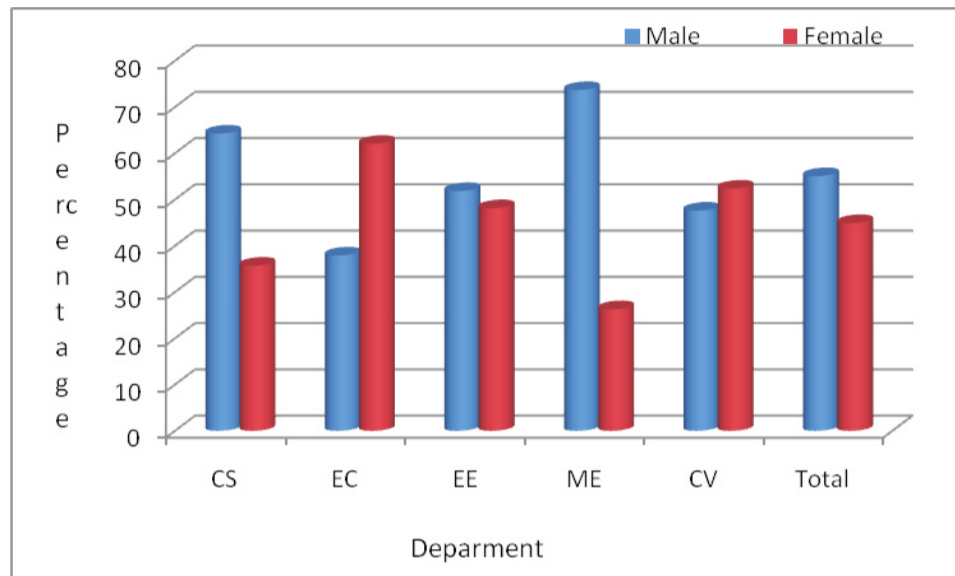


Fig 2 Percentage Variation of Faculty Gender with the Department

Fig. 2 is shows that 79.5% were males respondents representing mechanical engineering and 73.68% were female respondents from electronics and communication engineering.

Distribution of faculty members by College and Department

160 Questionnaires were distributed among the faculty members of all the six departments coming under the eight different engineering colleges in Mysore. Out of 160 Questionnaires distributed, 138 duly filled in questionnaires fit for further analysis were received. The department-wise and college wise distributions of the faculty members are given in the table 2.

**Table – 2
College and Department wise distribution**

Name of the College	CS	EC	EE	ME	CV	Total
ATME	4	3	4	3	2	16
	9.5%	10.34%	14.81%	15.78%	9.52%	11.59%
GSSS	9	4	6	-	-	19
	21.42%	13.79%	22.22%	-	-	13.76%
MIT	6	3	-	3	3	15
	14.28%	10.34%	-	15.78%	14.28%	10.86%
NIE	-	4	4	3	7	18
	-	13.79%	14.81%	15.78%	33.33%	13.04%
NIEIT	8	5	4	-	-	17
	19.04%	17.24%	14.81%	-	-	12.31%
SJCE	7	3	-	3	4	17
	16.66%	10.34%	-	15.78%	19.04%	12.31%
VVCE	4	4	4	4	1	17
	9.52%	13.79%	14.81%	21.05%	4.76%	12.31%
VVIET	4	3	5	3	4	19
	9.52%	10.34%	18.51%	15.78%	19.04%	13.76%
Total	42	29	27	19	21	138
Percentage	100%	100%	100%	100%	100%	100%

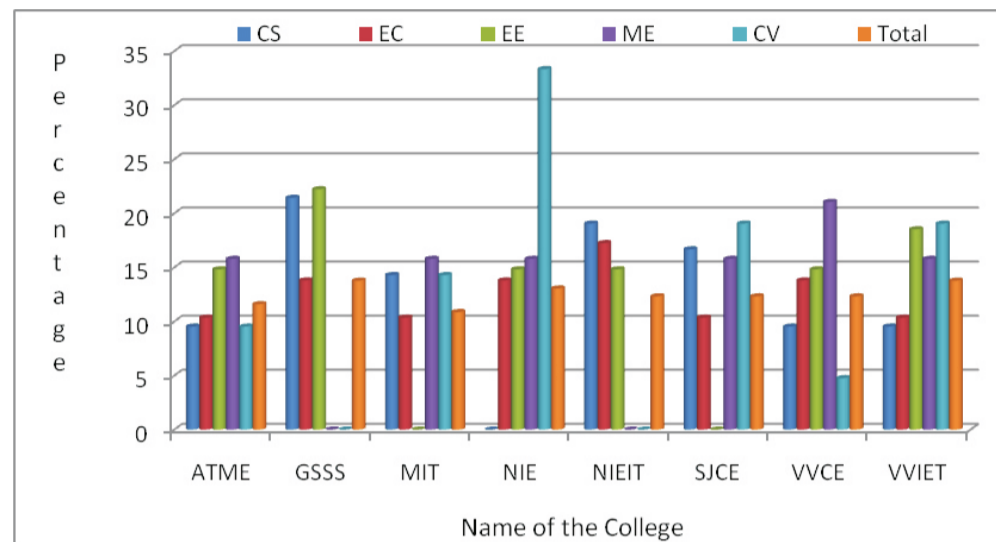


Fig 3 Percentage Variation of Faculty from different departments with the Institutions

The analysis of Fig. 3 college wise shows that, out of 138 faculty members surveyed 13.76 % of the faculty members belong to VVIET and GSSS, 13.04 % of them belong to NIE, 12.31 % of them belong to NIEIT, SJCE and VVCE and remaining 10.86 % of faculty members belong to MIT. Whereas department wise analysis of the table shows, the department of electronics and communication has a response rate of 29 and electrical and electronics has 27. In the department of civil engineering the response rate is 21 and in department of mechanical engineering has 29. The highest rate of response 42 was from department of computer science.

Frequency of use of online resources

The results of the analysis shown in the Fig. 4 shows the frequency of use of online resource by the faculty members of various departments based on the questionnaire.

Fig. 4 shows revealed that 39.13% of the respondents visit the library once in week to use of online resources, 30.43% of the faculties' use the online resources on daily basis, 19.56% of the faculties once in a month and only 10.86% of the faculties occasionally use of online resources.

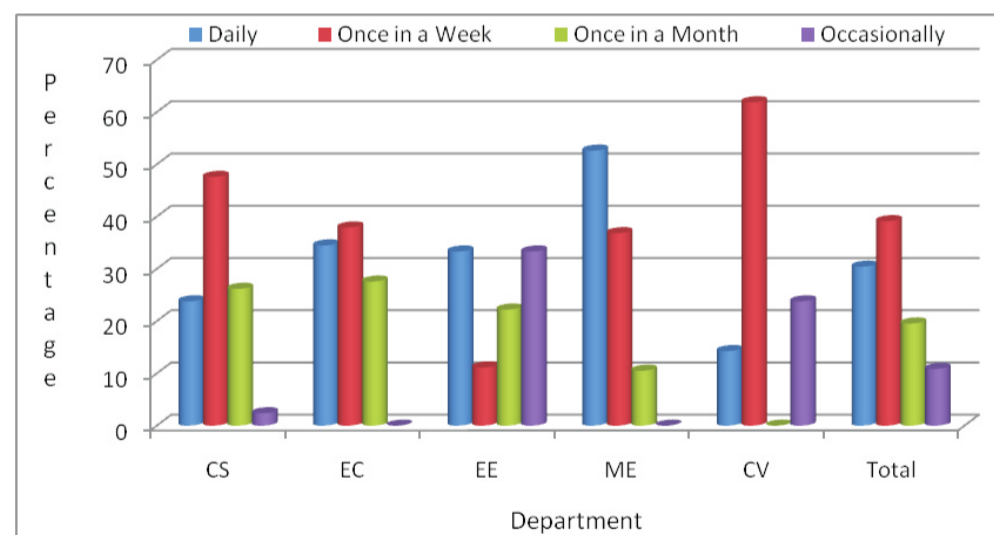


Fig 4 Percentage Variation of Frequency of usage of online resources from Faculty from different departments

It is observed from the Fig. 4 that the highest usage of online facility on daily, weekly and monthly and on occasional basis respectively recorded are 52.63% from mechanical engineering, 47.61% from computer science engineering, 33.33% by electrical and electronics engineering and 27.58% of the faculties by electronics and communication engineering.

Type of online resources used

The department wise distribution of faculty members according to the type of usage of online resources is shown in

Fig. 5.

When the responses were elicited for the type of online resource used, it was found that 78.99% of the faculty members uses for online journals, 52.90% of the faculty members uses for online books, 46.38% of the faculty members uses for online reference work and 32.61% of the faculty members use for online thesis/reports.

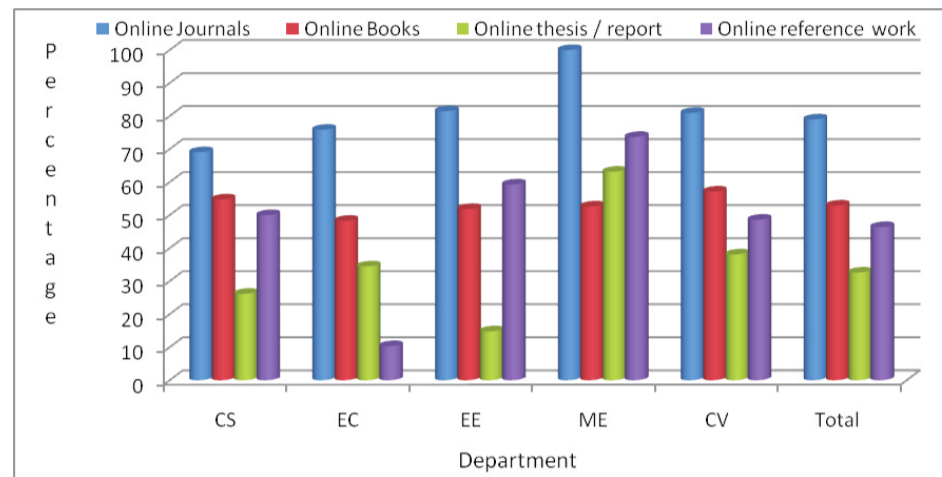


Fig 5 Percentage variation of usage of type of online resources from faculty from different departments

It is seen that the type use of online resources, 100% of the mechanical engineering faculty members use for online journals, 73.68% of the mechanical engineering faculty members use for online reference work, 57.14% of the civil engineering faculty members use of online books and 63.16% of the mechanical engineering faculty members use for online thesis/ report.

Purpose of use of online resources

Online resources act as nodal point for providing various academic supports to faculty members. The analysis of the feedback of the faculty members on purpose of use of online resources is shown in Fig. 6.

The Fig. 6 is the result of the responses that were elicited with respect to the use of online resources and it was found that 81.26% of the faculty members used for teaching, 62.32% of the faculty members found relevant information in the area of specialization, 49.28% of the faculty members for research work and only 31.88% of the faculty members used for publishing articles.

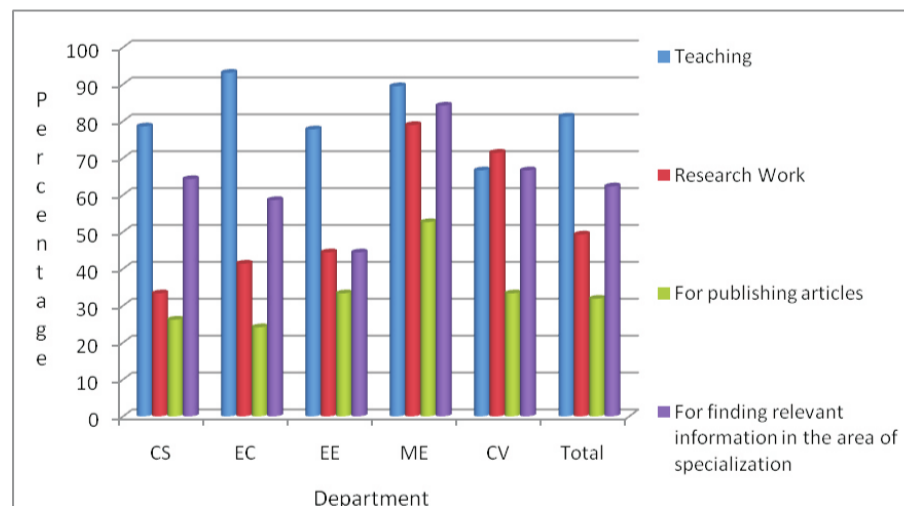


Fig 6 Percentage variation of usage of type of online resources from faculty from different departments

It is clear observed from the table, 93.10% of the faculties use online resource for teaching reported by electronics and communication engineering, and 84.21% of the faculties use online resources for finding relevant information in the area of specialization, 78.95% and 52.63% of faculties use online resources for research work and publishing articles reported by mechanical engineering.

Advantages of online resources usage

The viewpoints of faculty members on the issue of advantages of online resources usage is as shown in Fig. 7.

The Fig. 7 shows the advantages of using online resource. It is found that about 71 % of the faculty members under study felt that online resource usage is advantageous in time saving, followed by 62.32 % felt that the usage is advantageous for information storage and transfer, 60.87 % felt that the usage is advantageous as it is easy to use and less expensive, 44.93% of the faculty members felt online resource usage is advantageous as it has user friendly interface and only 42.75 % of the faculty members said online resources usage is advantageous for remote access. Majority of them considered time saving is most advantageous part of online resource usage, as time is considered to be precious and time lapse is irreversible.

Table -3
Department wise advantages of online resources usage

Advantages	CS	EC	EE	ME	CV	Total
	35	22	14	15	12	98
Time Saving	83.33%	75.86%	51.8%	78.95%	57.14%	71.01%
	30	21	14	11	8	84
Easy to use	71.43%	72.41%	51.85%	57.89%	38.10%	60.87%
	19	15	7	7	11	59
Remote Access	45.24%	51.72%	25.93%	36.84%	52.38%	42.75%
	23	13	9	6	11	62
User Friendly Interface	54.76%	44.83%	33.33%	31.58%	52.38%	44.93%
	31	13	13	15	12	84
Less Expensive	73.81%	44.83%	48.15%	78.95%	57.14%	60.87%
	26	11	20	15	14	86
Information storage and Transfer	61.90%	37.93%	74.07%	78.95%	66.67%	62.32%

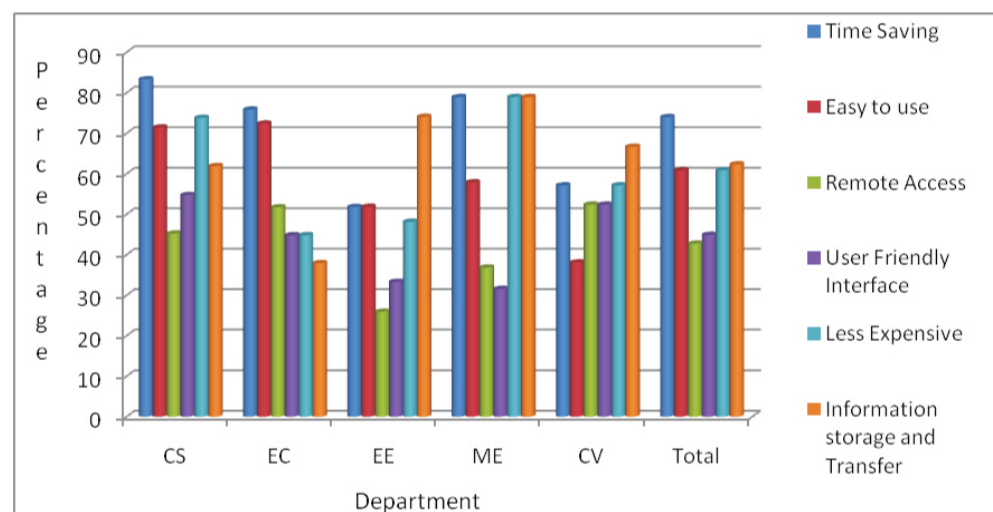


Fig 7 Percentage Variation of advantage of the usage of online resources from Faculty from different departments

It is clear from the Fig. 7 that, 83.33% of the computer science engineering faculty members felt that online resource usage is advantageous for saving of time. The advantages felt by 78.95% of mechanical engineering faculty members are that it is less expensive and information storage and transfer is good. 72.41% of the electronics and communication engineering faculty members felt that it is easy to use, 54.76% of the faculty members from computer science engineering felt it has user friendly interface and 52.38% of the faculty members from civil engineering felt remote access is advantageous so that it can be used from anywhere and anytime.

Methods of learning to use online resources

The faculty members were asked to know as to how they learnt the methods of using online resources. The response received is analyzed as shown in Fig. 8.

From this Fig. 8, it is evident that overall, 38.41 % of the faculty members are learning the necessary methods and skill to use online resources through self instruction - trial and error method, 28.26 % learned through the assistance from friends, 26.09 % through assistance from the library staff and 7.25 % of the faculties are learning to use online resources through formal training.

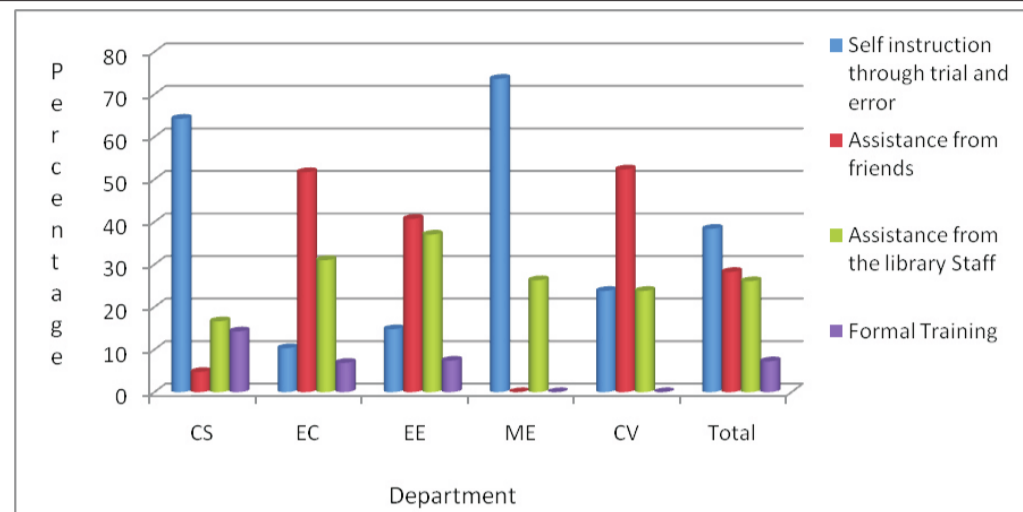


Fig 8 Percentage variation of methods of the learning the usage of online resources from Faculty from different departments

Further, 73.68% of the mechanical engineering faculty members are learning the methods to use online resource by self instructional- trial and error method, 52.38% of the civil engineering faculty members are getting the assistance from friends, 37.04% of the electrical engineering faculty members are getting the assistance from the library staff and only 14.29% of the computer science and engineering faculty members are getting formal training.

Problems faced while accessing online resources

Though online resource has become a common information source among the academic and research community, there are certain problems faced by the faculty members when accessing online resources. The specific problems faced are given in table-9.

The table shows that the problems faced while accessing online resources, 47.83 % of the faculty members say internet problem, followed by 36.96 % of the faculty members say it takes too long to download information, 34.06% of the faculty members say lack of training, 25.36% of the faculty members say overload of information, 23.19% of the faculty members say band width connecting, 21.01% of the faculty members say insufficiency of computers and only 7.25% of the faculty members say lack of IT knowledge.

**Table -4
Department wise problems faced while accessing online resources**

Problems	CS	EC	EE	ME	CV	Total
Insufficiency of computers	5	7	7	7	3	29
	11.9%	24.14%	25.93%	36.84%	14.29%	21.01%
Internet problem	15	19	8	11	13	66
	35.71%	65.32%	29.63%	57.89%	61.90%	47.83%
Lack of Training	19	7	11	3	7	47
	45.24%	24.14%	40.74%	15.79%	33.33%	34.06%
Band width connection	11	6	6	5	4	32
	26.19%	20.69%	22.22%	26.32%	19.05%	23.19%
It takes too long to download information	13	10	16	7	5	51
	30.95%	34.48%	59.26%	36.84%	23.81%	36.96%
Overload of information	15	5	7	6	2	35
	35.71%	17.24%	25.93%	31.58%	9.52%	25.36%
Lack of IT knowledge	3	1	2	-	4	10
	7.14%	3.45%	7.41%	-	19.05%	7.25%

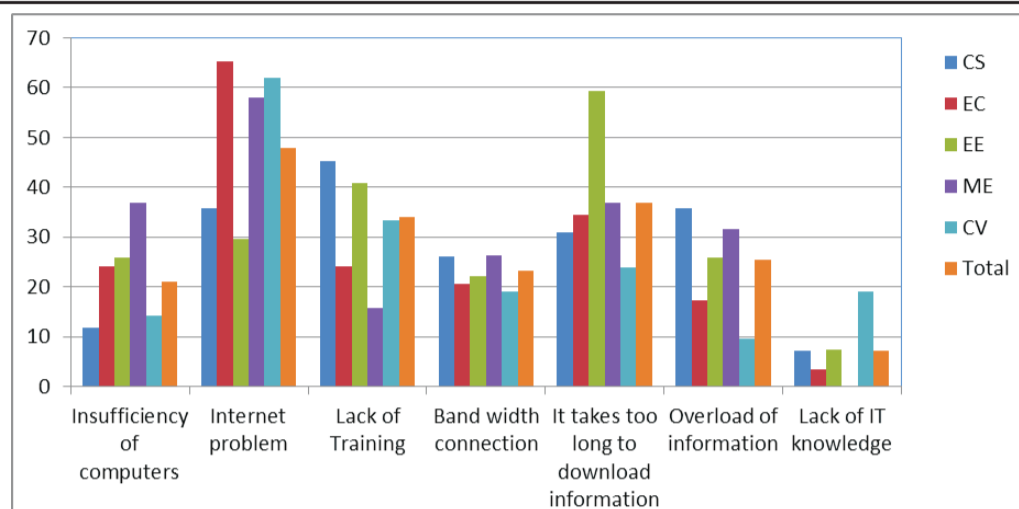


Fig 9 Percentage variation of problems faced during the usage of online resources from Faculty from different departments

It is clear from the Fig. 9 that problems faced while accessing online resource is that 65.32% of the faculty members of electronics and communication engineering complained about internet connectivity problem, 59.26% of electrical and electronics engineering faculty members said that it takes too long to download information, 45.24% of computer science engineering faculty members complained about lack of training, 36.84% of the mechanical engineering faculty members told about insufficiency of computers reported by, 35.71% of the computer science and engineering faculty members mentioned about the overload of information, 26.32% of the mechanical engineering faculty members said that the band width connection is too low and 19.05% of civil engineering faculty members regretted about lack of IT knowledge.

SUGGESTIONS

Overall, it can be accepted that most of the faculty members from various departments and engineering colleges agreed that the usage of online resources are advantageous and helps to improve their content delivery and teaching and learning process. Hence to overcome the problems faced by the faculty members, the following suggestions are made.

- 1) To focus on the exact method and type of searching the desired content, User orientation sessions and workshops on how to search retrieve and use online resources should be arranged for the faculties.
- 2) To promote the usage for downloading the premium content developed by premier institutions and developers from various disciplines, more number of computers, networked and with sufficient band width should be made available.
- 3) Information relevant to the course should be made available.
- 4) Access to online resource should be made available at libraries and colleges.
- 5) Awareness about online resource among faculties must be increased for maximizing their usage. Charts and tables of various web sites and their contents can be displayed in the Library.

CONCLUSION

The present study substantiates the finding of similar studies that online resource has become an indispensable information source of the academic community. The analysis on the feedback of the learners indicated that online resource has been accepted nearly by all age groups of academicians, ranging from 24 years to 45 years. Majority of academicians use online resources for teaching purpose. As most of the academicians learnt about online resources on trial and error method, an online or hands-on workshop orientation is required to train them. Online and face to face orientation and workshops could be used to market library online resources and services.

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