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# E-Resources are boon for the teaching and research work of an academic institute: A survey on usage and awareness of e-resources by the NMIMS (Deemed University) engineering faculties, Mumbai

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# E-Resources are boon for the teaching and research work of an academic institute: A survey on usage and awareness of e-resources by the NMIMS (Deemed University) engineering faculties, Mumbai

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**Abstract**: *Information is a nervous system for the teacher and researcher, without the information they cannot teach and generate new information in an academic institute. The information and communication technology tools have changed the mode of communication and availability of information in a digital environment. In this study, efforts have been made to study the use and awareness of e-resources by the engineering faculties of NMIMS (Deemed to be University), Mumbai. The result shows that majority of the faculty members i.e. 85.71 % access e-resources for the research and learning purpose, it is also found that busy schedule in the institute prevents the effective and efficient use of the e-resources i.e. 552.38 % respondents.*

*Keywords: E-resources, Databases, Usage and awareness, Teaching and learning, NMIMS, Mumbai, Academic library.*

## Introduction

There is no doubt that the library is a heart of any academic institute, simultaneously it is an accumulation of various resources published in a variety of form. The availability of information resources in a different format has changed the functions of the library and information centre and also the duties and responsibilities of the library and information science professionals. The library is not a just repository of publications or sources of information, it is a life partner for a researcher, a teacher and parent organisation to provide information to survive for the future. In a networked environment e-resources are most preferred resources for the teaching and research work in the academic library. There are different types of e-resources available such as books, journals, standards, patents, etc.

NMIMS is one of the reputed university in India. NMIMS is known as Narsee Monjee Institute of Management Studies, deemed to be a university, which is located at Mumbai. University is accredited by NAAC with Grade A+, and Category 1 University by MHRD / UGC – Graded Autonomy Regulations 2018. The university is investing a huge amount of money on library e-resources. Presently, the university library is providing access to more than twenty online databases to its users on different subject areas like Management, Law, and Engineering, etc. The library professionals are providing user education/orientation to all faculty members and students every year to make amicable with the subscribed online databases to the get return on investment. In this study, efforts have been made to analyse the usage and awareness among engineering faculties of the university.

**Role of the universities in modern society**

The main role of the university is to provide a responsible citizen to the nation with the help of standardised teaching, research, and learning. The UNESCO also reported that universities have three important aims i.e. teaching, research and serving the community i.e. society. Dr. A. P. J. Abdul Kalam said "The engines for growth of a nation will be accelerated by launching of the five national missions viz. water, energy, education and skills, infrastructure and employment generation. The totality of these five missions will enable achievement of 10% GDP growth rate per annum". This can be achieved by only with help of higher education through university. As per UGC, there are 903 universities (399 state universities, 126 deemed to be universities, 48 central universities, and 330 private universities) are functioning in India with different status. All these universities have lighten up the world with knowledge and wisdom and eradicate illiteracy. In modern society, universities have played an additional role in building new institutions of civil society, in developing new cultural values, and in training and socializing people of the new social era. Apart from this university should also provide new knowledge and skills needed to meet the challenges of sustainable development in a community, in raising public awareness and providing preconditions for informed decision-making, responsible behaviour (Sharma, 2015).

**Importance of E-resources in teaching and research work of the Institute**

The primary sources of information such as journals, proceedings, standards, patents, etc., are very important for the academic library. They disseminate current and nascent information to the end user. Due to changes in the publication sector now these resources are available in electronic or digital version. Nowadays e-resources are considered as mines of information in the academic library. A large number of sources of information can be retrieved simultaneously

and instantly in the library. These e-resources are allowing library as well as patron access around the clock, speedily and save the time and money of user. The University grant commission (UGC) body Information and Library Network (INFLIBNET) is connecting university and other academic libraries with a strong network for scholarly communication among academician and researchers in the country. The e-Shodhsindhu is providing access to core and peer reviewed online databases with negotiated rates to the university library to promote research in the academic institutes.

**Objectives of the study**

The main objective of the present study is to assess the use and awareness of the e-resources available in the NMIMS library by the engineering faculties. The other objectives of the study are set as follows.

- To analyse the frequency of usage of e-resources available in the library.
- To determine the purpose of access the e-resources by the faculty members.
- To investigate the sources of awareness of e-resources among faculty members.
- To find out usage and awareness of various e-resources available in the library.
- To identify the key constraints that prevent the effective use of e-resources to faculty members.

**Methodology of the study**

For the present study, the questionnaire method was adopted to collect the data from the faculty members. A well designed questionnaire was prepared with the help of Google form and the link has been sent to faculty members. Questions were listed related to usage and awareness of e-resources available in the library. Total of 84 faculty members was selected for the study using a simple random sampling method. So, the percentage of the study is 100.00%.

**Review of the literature**

The literature review is very important for any research work; it provides background information about the study. In this study, efforts have been made to review the literature on usage and awareness of e-resources / online databases. Sue (2014) discus on the usage of e-resources by the staff, faculty, and students based on the research as well as teaching requirements in the University of Montana. The author also draws attention to the grade point average in the study. The result found that students, faculty members, and staffs are satisfied with the e-resources available in the university library. Tlakula (2016) analyse the usage of e-

resources at the University of Venda by the student community. The result found that usage is very low and need training and library orientation to enhance the usage of resources.

Whereas, Yamson, Appiah, and Tsegah (2018) explore in their study on the usage of electronic vs. print resources in Central University, Ghana library. It is found that users are more attracted to print resources rather than e-resources. The library professionals are putting an extra effort to increase the usage of e-resources because the university is spending a huge amount on e-resources. Peters (2002) & Yi and Borin (2006) elaborate on the statistics of usage of e-resources in the library management. These statistics are very useful to the working library professionals to improve their performance of the library as well as a tool for the selection of the right database for their users. Pawar and Moghe (2014) express the importance and need of e-resources in the academic library. The study also highlights the types of e-resources available and selection of the right resources for the library. Kashyap (2016) conducted a study on a comparative study of e-resources usage in the states of Madhya Pradesh and Chhattisgarh by university faculty members. The data analysis shows that the majority of the faculties in Chhattisgarh are using e-resources compared to Madhya Pradesh. The author also suggested a depth study to know the cause of less usage.

Adeleke and Olorunsola (2010) discuss the importance of training in for the effective use of e-resources. The study also provides the guidelines for framing the standard information literacy at the university level for the students and faculty members. While Ndungu (2016) explores the importance of marketing of library products and how library professionals can promote their e-resources economically for the library.

**Data analysis and discussion**

The collected data was analysed with help of MS-Excel. The following tables and discussions will provide the results of the study. Total nine questions were asked to the faculty members for quick response and easy to understand the phenomenon.

**Frequency of accessing e-resources**

Users can access subscribed online databases on campus as well as from remote area. A question was asked to the faculty member regarding frequency of access to e-resources. The response is presented in the Table-1.

**Table 1 - Frequency of accessing e-resources.**

| Sr. No. | Variable | Respondent | Percentage |
|---------|----------|------------|------------|
| 1 | Daily | 17 | 20.24 % |

| | | | |
|---|---|---|---|
| 2 | Weekly | 38 | 45.24 % |
| 3 | Fortnightly | 11 | 13.10 % |
| 4 | Monthly | 06 | 07.14 % |
| 5 | Occasionally | 12 | 14.28 % |
| 6 | Never | 00 | 00.00 % |
| | **Total** | **84** | **100.00 %** |

The finding is very stimulating that a large number of the faculty members are using the e-resources and they are required in great extent for the teaching and research. The table-1 shows that majority of the respondents i.e. 45.24 % are accessing on weekly basis, followed by 20.24 % respondents are accessing on daily basis, 14.28 % respondents are accessing on occasionally, 13.10 % respondents accessing every fortnightly and 7.14 % respondents accessing on monthly basis.

**Purpose of using e-resources**

Information is very much essential for the teaching and research work of the institute. The Table-2 presents various other purposes of using e-resources in the library.

**Table 2 – Purpose of using e-resources.**

| Sr.no | Variable | Respondent | Percentage |
|---|---|---|---|
| 1 | Teaching | 59 | 70.24 % |
| 2 | Research/Learning | 72 | 85.71 % |
| 3 | General Information | 18 | 21.43 % |
| 4 | Career advancement | 17 | 20.24 % |
| 5 | Any other | 01 | 01.19 % |

From the table-2 discovered that research & learning activities ranked highest with 85.71 % followed by 70.24 % using it for teaching purpose**,** 21.43 % for the general information, 20.24 % for the career advancement purpose and 1.19 % for any other purpose. It indicates that all subscribed e-resources are in high demand among teaching faculties of the institute. The study conducted by Habiba and Chowdhury (2012) shows that e-resources are exclusively used for the learning followed by current information and less importance is given on research and teaching.

**Access point of e-resources**

The institute is having an incredible infrastructure to support teaching, learning and research work. An Air conditioned library, well equipped lab, outstanding classrooms, and excellent

faculty cabins. The table-3 explores the access points of e-resources within and outside the institute.

**Table 3 – Access point of e-resources.**

| Sr.no | Variable | Respondent | Percentage |
|-------|----------|------------|------------|
| 1 | Computer Lab | 06 | 07.14 % |
| 2 | On desk | 81 | 96.42 % |
| 3 | Library | 06 | 07.14 % |
| 4 | At Home | 18 | 21.42 % |
| 5 | Any other places | 04 | 04.76 % |

The library is providing remote access to online databases with authentication login. Most of the Faculties prefer to access e-resources on their Desk i.e. 96.42 %, followed by 21.42 % of faculties prefer at Home, 7.14 % of faculties prefer in Computer Lab and Library and 4.76 % of faculties opine as any other places, it may be accessed through smart phones or tablets while traveling.

**Sources of awareness of e-resources of the Library**

The library arrange orientation / user education programs at regular intervals to enhance the usage of subscribed online databases. The table-4 elaborate on different types of sources to increase awareness among faculty members.

**Table 4 – Sources of awareness of e-resources of the library.**

| Sr.no | Variable | Respondent | Percentage |
|-------|----------|------------|------------|
| 1 | Library orientation programme | 30 | 35.71 % |
| 2 | Library staff | 22 | 26.19 % |
| 3 | Library Notification system (through e-mail) | 46 | 54.76 % |
| 4 | Professional friends / colleagues | 13 | 15.48 % |
| 5 | HOD meeting | 06 | 07.14 % |
| 6 | Any other | 04 | 04.76 % |

The orientation programme bridges the gaps between the library user and the various resources available in the library**.** The result implies that majority of the faculties opine that Library notification system increase the awareness among faculties i.e. 54.76 %, followed by 35.71 % of faculties by library orientation programme, 26.19 % of faculties increase awareness by interacting with library staff, 15.48 % of faculties express that professional friend and colleagues helps to know about subscribed databases, 7.14 %  of faculties said HOD meeting and 4.76 % of faculties comment other sources will increase the awareness. It clearly indicates

that library professionals are actively involved in the promotions of subscribed online databases through library notification and library orientation.

**Awareness and usage of databases**

Being a university, the library is subscribing varied resources such as e-journal databases, statistical databases, research databases, legal databases, etc. to fulfil the different needs of the users and accomplish goals of the university. The table-5 explores the level of awareness and usage of subscribed online databases.

**Table 5 – Awareness and usage of databases**

| Sr. No. | Name of the database | Aware & Using | Aware but Not using | Aware but Don't know how To use | Unaware |
|---|---|---|---|---|---|
| 1 | ASCE | 48 (57.14) | 27 (32.14) | 00 (0.00) | 09 (10.71) |
| 2 | ASME | 42(50.00) | 29 (35.00) | 00 (0.00) | 13 (15.00) |
| 3 | Capitaline | 40(48.00) | 15 (18.00) | 03 (4.00) | 26 (31.00) |
| 4 | CMIE | 42(50.00) | 18 (21.00) | 02 (2.00) | 22 (26.00) |
| 5 | Delnet | 39(46.00) | 22 (26.00) | 04 (5.00) | 19 (23.00) |
| 6 | Ebrary | 55(65.47) | 12 (14.00) | 01 (2.00) | 16 (19.00) |
| 7 | EBSCO | 46(54.76) | 21 (25.00) | 02 (2.00) | 15 (18.00) |
| 8 | Emerald emerging | 44(52.38) | 17 (20.00) | 00 (0.00) | 23 (27.00) |
| 9 | EPW | 03 (45.00) | 34 (40.00) | 01 (2.00) | 11 (13.00) |
| 10 | EPWRF | 40(48.00) | 13 (15.00) | 06 (7.00) | 25 (30.00) |
| 11 | Euro monitor | 39(46.00) | 10 (12.00) | 05 (6.00) | 30 (36.00) |
| 12 | Frost & Sullivan | 37(44.00) | 15 (18.00) | 04 (5.00) | 28 (33.00) |
| 13 | Hein online | 38(45.00) | 07 (08.00) | 04 (5.00) | 35 (42.00) |
| 14 | IEEE/IEL online | 72(86.00) | 09 (11.00) | 01 (2.00) | 02 (2.00) |
| 15 | India stat | 39(46.00) | 17 (20.00) | 04 (5.00) | 24 (29.00) |
| 16 | ISI emerging markets | 37(44.00) | 15 (18.00) | 06 (7.00) | 25 (30.00) |
| 17 | JSTOR | 51(61.00) | 18 (21.00) | 02 (2.00) | 13 (15.00) |
| 18 | Lexis Nexis | 37(44.00) | 09 (11.00) | 05 (6.00) | 33 (39.00) |
| 19 | Manupatra | 37(44.00) | 10 (12.00) | 04 (5.00) | 33 (39.00) |
| 20 | McGraw hill e-books | 60(71.00) | 14 (17.00) | 05 (6.00) | 05 (6.00) |
| 21 | Pearson e-book | 61(73.00) | 15 (18.00) | 05 (6.00) | 03 (4.00) |
| 22 | ProQuest central | 55(65.00) | 15 (18.00) | 02 (2.00) | 12 (14.00) |
| 23 | Science direct | 76(90.00) | 04 (5.00) | 02 (2.00) | 02 (2.00) |
| 24 | Springer | 78(93.00) | 05 (06.00) | 00 (0.00) | 01 (2.00) |
| 25 | SSC online | 37(44.00) | 09 (11.00) | 05 (6.00) | 33 (39.00) |
| 26 | TVAd index | 38(45.00) | 12 (14.00) | 03 (4.00) | 31 (37.00) |
| 27 | WARC | 37(44.00) | 12 (14.00) | 04 (5.00) | 31 (37.00) |
| 28 | West law | 37(44.00) | 09 (11.00) | 05 (6.00) | 33 (39.00) |

*Figures in parenthesis indicate the percentage*

The table-5 depicts the awareness and usage of subscribed online databases. As expected being an engineering faculties all engineering databases are in high demand compared to other databases. The engineering databases like ASCE, ASME, Delnet, IEEE/IEL Online, Springer, Science direct, McGraw Hill e-books, Pearson e-books, and e-brary are used rigorously. The data also shows that faculties are familiar with the social science databases such as EPW, Ebsco, Jstor, Emerald and Proquest. It is also found that there is a moderate usage and known the research and law databases i.e. CMIE, Euromonitor, Forst & Sullivan, ISI emerging markets, Capitaline, India Stat, Tvad index, Warc, Hein Online, Lexis Nexis, Manupatra, West law and SSC Online as these databases do not cover the engineering subjects.

**Recommending databases to the student community**

It has been found that faculties are the best source to recommend to use specific online databases to the student community. Faculty members always assigned various academic projects to students to make them familiar with the latest developments in the field of engineering and make use of the online databases to access current information. The table-6 presents the faculty response for the recommendation of online databases to the student community.

**Table 6- Recommending database to the student community**

| Sr.no | Variable | Respondent | Percentage |
|-------|----------|------------|------------|
| 1 | Yes | 81 | 98.00 % |
| 2 | No | 03 | 02.00 % |
| | **Total** | **84** | **100.00** |

It is found from the table-6 that majority of the faculties i.e. 98% recommending the online databases to the student community. It indicates that faculties are always engaged in various academic activates and making use of all databases.

**Promoting e-resources among the student community.**

After knowing the faculty recommendations for the use of online databases, it is also very important to know what purpose faculties are asking to use databases. The table-7 explores the purpose of promoting e-resources among the student community.

**Table 7 – Promoting e-resources among the student community**

| Sr.no | Variable | Respondent | Percentage |
|-------|----------|------------|------------|
| 1 | Classroom assignments | 44 | 52.38 % |
| 2 | Publishing/Writing articles | 34 | 40.47 % |
| 3 | To update their knowledge | 40 | 47.61 % |

| 4 | To participate in conference/seminar | 34 | 40.47 % |
| 5 | Any other | 06 | 07.14 % |

The analysis found from the table-7 that most of the databases are recommended to solve classroom assignments i.e. 52.38 %, followed by 47.61 % to update their (students) knowledge, 40.47 % to publish / write articles and participate in Conference / Seminar and 7.14 % for other purposes.

**Rating of e-resources collection.**

The main purpose of the library is the acquisition of information in all format and dissemination of information to the targeted audience. After the acquisition of information, it should be analysed to know the adequacy, coverage, and availability. The table-8 indicates the rating of e-resources available in the library.

**Table 8 - Rating of e-resources collection**

| Sr.no | Variable | Very Good | Good | Satisfactory | Poor |
|-------|----------|-----------|------|--------------|------|
| 1 | Adequacy | 26 (30.95 %) | 41 (48.80 %) | 15 (17.85 %) | 02 (02.38 %) |
| 2 | Coverage | 18 (21.42 %) | 47 (55.95 %) | 15 (17.85 %) | 04 (04.76 %) |
| 3 | Availability | 25 (29.76 %) | 38 (45.23 %) | 19 (22.61 %) | 02 (02.38 %) |

E-resources are very important for teaching, learning and research activities of the institute. It is found from the table-8 that the majority of the faculties i.e. 48.80 % opine Adequacy of the e-resources 'Good', followed by 30.95 % faculties find e-resources collection adequacy is 'Very Good', 17.85 % said e-resources collection adequacy 'Satisfactory' and 2.38 % said e-resources collection adequacy is 'Poor'. The response for the Coverage of e-resources in the library, the majority of the faculties i.e. 55.95 % found that collection is 'Good', followed by 21.42 % found that coverage of e-resources is 'Very Good', 17.85 % of faculties said the coverage of e-resources is 'Satisfactory' and 4.76 % of faculties found that coverage of e-resources is 'Poor'. For the availability of e-resources 45.23 % of faculties opine 'Good', followed by 29.76 % of faculties said the availability of e-resources is 'Very Good', 22.61 % of faculties said e-resources the availability is 'Satisfactory' and 2.38 % of faculties said the availability of e-resources is 'Poor'.

**Key constraints that prevent effective use of e-resources**

The e-resources are considered as the mines of information for teaching and research activities. The large collections of information resources can be searched and retrieved simultaneously

and instantly. The table-9 discloses key constraints that prevent effective use of e-resources in the university.

**Table 9 - Constraints that prevent effective use of e-resources**

| Sr.no | Variable | Respondent | Percentage |
|-------|----------|------------|------------|
| 1 | Slow due to poor bandwidth | 09 | 10.71 % |
| 2 | Busy schedule | 44 | 52.38 % |
| 3 | Difficult to find relevant information | 23 | 27.38 % |
| 4 | Lack of proper training | 13 | 15.47 % |
| 5 | Library staff attitude | 01 | 01.19 % |
| 6 | Any other | 07 | 08.33 % |

The key constraints encounter on effective usage of e-resources need the attention of the higher authorities of the university. It is found from the table-9 that the 'Busy schedule' in the university is the main constraint i.e. 52.38 %, followed by 'Difficult to search relevant information' constraint 27.38 %, 'Lack of proper training' constraint 15.47 %, 'Slow due to poor bandwidth' constraints 10.71 %, 'Other' constraints 8.33 % and 'Library staff attitude' 1.19 % constraint prevent the effective and efficient use of the online databases of faculties. The study conducted by the Singh and Varma (2017) explore that Time taking process to retrieve the information, followed by Slow response from server are main challenges faced while browsing the e-resources and Break down of the system, Power outage and high cost of surfing time are the other constraints to prevent the effective use of e-resources.

**Major Findings**

The major findings of the study are as follows.

1. All e-resources are in high demand i.e. 45.24 % of faculties using in great extent on a weekly basis.
2. Majority of the faculties using e-resources for the Research/Learning (87.71 %) and Teaching (20.24 %) purpose.
3. Majority of the faculties prefer to access on their Desk i.e. 96.42 %.
4. The library notification system (54.76 %) followed by the library orientation programme enhance the awareness of e-resources among faculty members.
5. The engineering databases like ASCE, ASME, IEEE, Springer, Science Direct, McGraw-Hill e-books, Pearson-e-books, Ebrary are in great demand with social science databases such as Ebsco, Proquest, Emerald, and Jstor.

6. Faculties were promoting the e-resources among student's community by assigning various academic projects like Classroom assignments (52.38 %) and to update their knowledge (47.61 %).

7. Majority of the faculties are satisfied with the e-resources in terms of Adequacy, coverage, and availability.

8. Busy schedule (52.38 %) and Difficult to find relevant information (27.38 %) in e-resources are the prime constraints that prevent the effective and efficient use of e-resources.

## Conclusion

The main role of the university is the progress of mankind, it can be achieved when university and society linked together with higher education. The hybrid library which contains both prints, as well as digital resources are more important to cater to the needs of faculty members of the institute. In this study, it is noticed that all faculties are familiar with the engineering and social science databases. The law databases are in less demand because no related information is available. The continued user education programmes explore the advantages of all e-resources and faculties can learn new search strategies to retrieve pin pointed information from the resources.

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