
An Analytical Study of Electronic Sources and Services Provided to Users With Special Reference to Research Scholars of Visvesvaraya National Institute of Technology Library, Nagpur

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Abstract

Electronic sources play a vital and viable role to cater to the needs of research scholars in the process of advancement of society in present environment. The prime function of any library is to provide efficient services to its users. This paper describes an analytical study of electronic sources and services provided to users with special reference to research scholars of VNIT library, Nagpur. The objective of this article is to study the different factors such as information, sources, services, adequate collection, various channels of information and the constraints faced by the research scholars in using or searching information through electronic sources.. The author adopted questionnaire survey and statistical analysis of data by applying simple percentage and chi-square test. The finding of the study is that research scholars access information through various electronic sources and services to keep pace with the developments taking place in the scientific world.

Keywords : Library Services, Electronic Sources, User Study, Academic Library

0. Introduction

It is obvious that electronic technologies have already had considerable impact. Virtually all libraries, at least in the most developed countries, are new members of networks that greatly facilitated the location of sources of information and gaining of access to them. Card catalogues have largely been replaced by online catalogue and these are being expanded through the addition of materials not previously included. The whole idea of what a catalogue should be, is changing; it is no longer seen as a tool bounded by the collection of a single library but one reveals the availability of resources in a network of libraries or even one that is essentially a gateway to a universe of information resources in printed, electronic or other forms. Use of terminals or work stations to access databases of various kinds is now routine for the libraries and add electronic resources to their collection in CD-ROM or other forms.

1. VNIT At a Glance

The Visvesvaraya National Institute of Technology, Nagpur (VNIT) is one of the first six Regional Engineering Colleges established under the scheme sponsored by Government of India. Named after the great engineer, statesman & visionary of modern India, Visvesvaraya National Institute of Technology, Nagpur (VNIT) was established in 1960 as a joint venture of Government of India and Government of Maharashtra. VNIT has a beautiful green campus of about 210 acres near Ambazari dam. All departments & laboratories are housed on the campus.

The Library and Information centre of VNIT, Nagpur is transforming into learning resources centre with the help of World Bank. The recent up-gradation of earlier VRCE to VNIT- a Deemed University, is undergoing radical changes from its building to setting up of Digital library resources.

2. Aims & Objectives

The aim of the present study is to make “An Analytical study of Electronic sources and services provided to users with special reference to research scholars of VNIT library, Nagpur”.

The allied objectives of the study are as follows:

1. To examine the different factors which facilitate information/sources/services to the user of VNIT library.
2. To correlate the adequacy of the collection vis-à-vis research needs of the users of VNIT library.
3. To identify the various channels of electronic sources through which information is accessed by users of VNIT library.
4. To identify the constraints faced by the research scholars in using/searching information on electronic sources in library.

3. Methodology

Methodology in research is a way to solve the problem, to unfold the probable answer, and to test the hypothesis stated. As there are many roads leading to a city, likewise there are many methods to solve the problems of research.

The main purpose of the present study is to study the electronic sources and services provided to the users of VNIT library, Nagpur. The author adopted the survey method. 100 questionnaire were circulated among the users of VNIT library out of which 72 users responded.

4. Research Hypothesis

1. VNIT library provides facility of electronic sources and services to the users, and the research scholars are fully satisfied with adequate collection in the library.
2. The users access information through various channels equally.
3. The users do not face any constraints in using or searching information on electronic sources in the library.

5. Statistical Analysis Employed

The statistical analysis of the data for the present study was done by applying;

1. Simple percentage and 2. Chi-square test.

Chi-square test was used to compare an observed group of frequencies with an expected group of frequencies. This led to deduce the expected frequencies from the null hypothesis.

Tables : 1. Facilities available in the library.
2. Information retrieval services rendered and used.
3. Level of satisfaction about various types of services in the library.
4. Various channels of accessing information.
5. Problems facing in using/searching information through electronic sources.

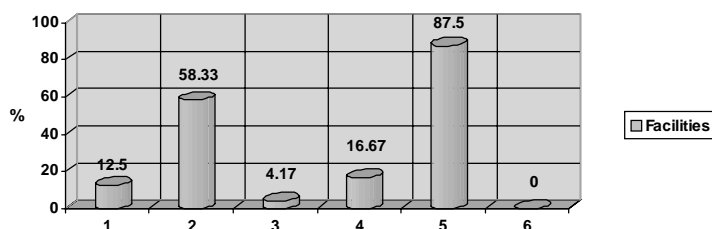
Figures : 1. Cylinder chart - Facilities available in the library
2. Cone chart - Various channels of accessing information.
3. Bar chart - Problems facing in using/searching information through electronic sources.

Table 1. Facilities available in the library

Sr. No	Facilities	Number	Percentage
1.	Microfiche/Microfilm	9	12.50
2.	Electronic mail	42	58.33
3.	Fax machine	3	4.17
4.	Scanner	12	16.67
5.	Xerox machine	63	87.50
6.	Electronic typewriter	0	0.00

The analysis indicates from the table 1 that large majority of users i.e. 63 (87.50%) make use of reproduction facility in the library.

It is a further indication that electronic mail service is expressed by 42 (58.33%) users. The response to the microfiche/microfilm is found to be less.

**Figure 1 Facilities available in the library****Table 2. Information retrieval services rendered and used**

Information Retrieval Library services			
Services	Yes	No	Total
Automated lending	72 [38.25](29.78)	0 33.75	72
Automated CAS	60 [38.25](12.37)	12 [33.75](14.02)	72
Automated translating	0 38.25	72 [33.75](43.25)	72
E-mail	45 [38.25](1.19)	27 [33.75](1.35)	72
Telex	0 38.25	72 [33.75](43.35)	72
Fax	0 38.25	72 [33.75](43.25)	72
CD-Net	60 [38.25](12.37)	12 [33.75](14.02)	72
Dial up service	60 [38.25](12.37)	12 [33.75](14.02)	72
Technical communication	45 [38.25](1.19)	27 [33.75](1.35)	72
Electronic Bulletin Board system	12 [38.25](18.01)	60 [33.75](20.42)	72
CD-ROM Search	57 [38.25](9.19)	15 [33.75](10.42)	72
On-line search	57 [38.25](9.19)	15 [33.75](10.42)	72
Internet browsing	60 [38.25](12.37)	12 [33.75](14.02)	72
Web-based OPAC	30 [38.25](1.78)	42 [33.75](2.02)	72
TELNET	27 [38.25](3.31)	45 [33.75](3.75)	72
Voice chatting	27 [38.25](3.31)	45 [33.75](3.75)	72
Total	612	540	1152

Figure in the square parenthesis indicate the expected frequency (Fe) & round parenthesis indicate the cell Chi-square

$$df = (r - 1) \times (c - 1)$$

$$df = (16 - 1) \times (2 - 1)$$

$$= 15 \times 1$$

$$= 15$$

Chi-Square 514.51

Chi-square at 15 df & 0.05 level of significance is 24.996

Null Hypothesis Rejected.

Automated lending service rendered and used is found 100%, followed by CAS, E-mail, CD-NET, Dial up service, CD-ROM search, technical communication, online search and Internet browsing are mostly used in comparison to voice chatting, Telnet, Web-based OPAC, Electronic bulletin board system. Automated translating found no response as it is not rendered in the library.

It is also found that the users do not use Telex, fax service in the library.

Table 3. Level of satisfaction about the various types of services in the library

Sr. No	Item	Satisfactory	Fair	Unsatisfactory	No Response	Total
1	Library Services	57 [24.33] (43.85)	9 [14.33] (1.98)	3 [2.33] (0.19)	3 [31.00] (25.29)	72
2	Videos	6 [24.33] (13.81)	9 [14.33] (1.98)	3 [2.33] (0.19)	54 [31.00] (17.06)	72
3	Periodicals	24 [24.33] (0.00)	12 [14.33] (0.38)	6 [2.33] (5.78)	30 [31.00] (0.03)	72
4	BibliographicalService	9 [24.33] (9.66)	18 [14.33] (0.94)	0 [2.33] (2.33)	45 [31.00] (6.32)	72
5	CDROM service	21 [24.33] (0.46)	18 [14.33] (0.94)	3 [2.33] (0.19)	30 [31.00] (0.03)	72
6	Photocopying	33 [24.33] (3.09)	12 [14.33] (0.38)	3 [2.33] (0.19)	24 [31.00] (1.58)	72
7	Internet	15 [24.33] (3.58)	21 [14.33] (3.10)	0 [2.33] (2.33)	36 [31.00] (0.81)	72
8	OPAC	36 [24.33] (5.60)	15 [14.33] (0.03)	0 [2.33] (2.33)	21 [31.00] (3.23)	72
9	ElectronicReferenceLibrary	18 [24.33] (1.65)	15 [14.33] (0.03)	3 [2.33] (0.19)	36 [31.00] (0.81)	72
	Total	219	129	21	279	648

Figure in the square parenthesis indicate the expected frequency (Fe) & round parenthesis indicate the cell Chi-square

$$df = (r - 1) \times (c - 1)$$

$$df = (9 - 1) \times (4 - 1)$$

$$= 8 \times 3$$

$$= 24$$

Chi-Square = 160.36

Chi-square at 24 df & 0.05 level of significance is 36.415

Null Hypothesis Rejected.

Table 3 reveals that among 72 respondents, 57 users expressed their views that they are satisfied with library services while 9 users expressed fair satisfaction.

It is further indication that 33 users are satisfied with photocopying and 24 users expressed satisfaction about periodicals, while 18 users are satisfied with electronic reference library, 15 users are satisfied with Internet and 21 users expressed fair.

Table 4. Various channels of accessing information

Sr. No	Channel	Number	Percentage
1	A skiing the author for the reprint	18	25.00
2	Attending Seminars, Conferences, Symposia etc.	39	54.17
3	Accessing on-line databases	33	45.83
4	Writing a letter to friends in India/ Abroad	27	37.50
5	Through Telephone	6	8.33
6	Through Fax	3	4.17
7	Through e-mail	30	41.67
8	Personal visit to a subject specialist	18	25.00
9	Personal collection of colleagues	15	20.83
10	Personal Collection	12	16.67
11	College Library	33	45.83
12	University Library	3	4.17
13	Any other Channels	6	8.33

It is evident from the table 4 (Fig 2) that 39 (54.17%) users access information through seminars, conference, symposia etc., 33 (45.83%) users access from online databases, 33 (45.83%) users access information from college libraries, 30 (41.67%) users access through electronic mail followed by 27 (37.50%) through friends in India/Abroad.

Majority of the users expressed that the information can be accessed from their own departments as the teachers and research scholars are provided individual facility of computer with Internet connectivity and networking for OPAC services.

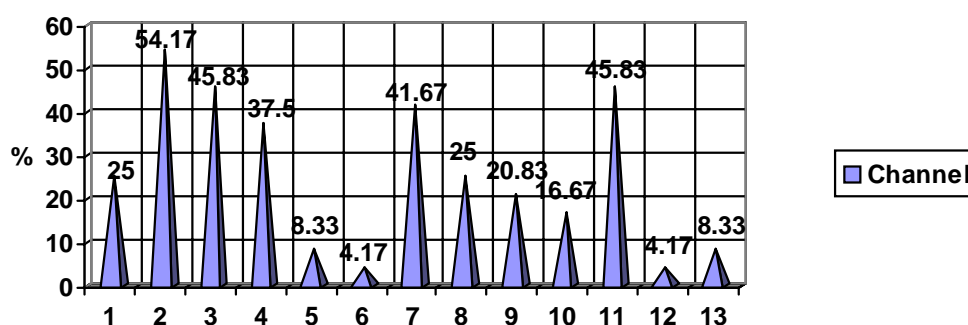
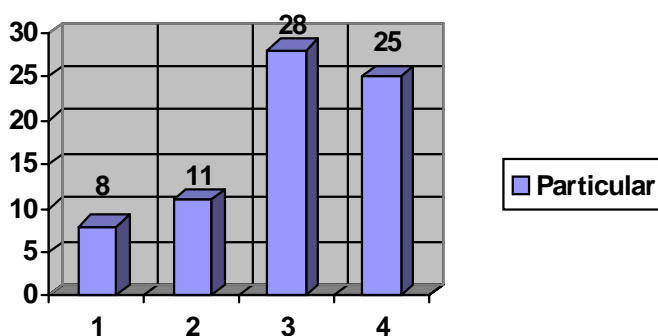


Fig 2. Various channels of accessing information

Table 5. Problems faced in using / searching information through electronic sources

Sr. No	Particular	Number	Percentage
1	Extremely Difficult	8	11.11
2	Considerable Problem	11	15.28
3	Little Problem	28	38.89
4	No Problem	25	34.72

Table 5 (Fig. 3) reveals that among 72 respondents, 28 (38.88%) users face little problem and 25 (34.72%) users face no problem in using / searching information through electronic sources.

**Figure 3. Problems faced in using / searching information through electronic sources**

6. Discussion

1. From the above data it is observed that majority of the users make use of reproduction facility to tap the current information from the journals. Microfiche / Microfilm use is found to be less as it is outdated. Email facility is used to access the information from the various information centres.
2. It is also observed that research scholars are satisfied with the automated information retrieval services provided in the library as the individuals are provided computer, networking, Internet and OPAC facilities in their own departments.
3. It is also observed that the research scholars access information from various channels equally as the seminars, conference, symposia provides information on current topics. It is also found that traditional sources and electronic sources are used equally.
4. It is observed that users of VNIT library face little problem as they are aware of electronic sources and services provided in the library as they have the knowledge of handling the electronic sources.

7. Conclusion

The library/Information centre is considered to be the backbone of any research organization as it provides its user the literature and information through electronic sources and services in order to carry out their academic activity.

Hence the hypotheses of the study proves that VNIT library provides all students, researchers, teachers and other users to access the latest scientific literature and enables them to keep pace with the developments taking place in the scientific world and helps to make a positive impact on the quality of research.

8. References

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