

## Use of E-Resources in Mizoram with Special Reference to National Institute of Technology (NIT): An Assessment

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### Abstract

*Every individual in an academic setup acknowledges the beingness of e-resources in the present age of information technology. The latest trends in e-resources are ought to be studied. Recent advances in the field of information technology contribute significantly to improve the services in libraries. E-resources are very common in libraries but their maximum use and management is a matter of concern today. The paper primarily focuses on e-resources available in the library, discusses the types of e-resources and the dependence on e-resources by the students of NIT which will help in strengthening the services and facilities of the library.*

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**Keywords:** E-Resources, Information Technology, NIT.

### 1. Introduction

The advent of Information Technology has brought revolutionary changes in the functions of libraries with variety of applications. Rapid and continuing innovation in web based technology has not only immense impact on libraries' operations and collections but also enhance the expectation of end-users (Bala *et al.*, 2012). The role and responsibilities of libraries are also changing because of the proliferations of information resources in digital forms and support sophisticated information and communication technology and its extensive use by the community. These drive compels library and information professionals to keep pace by remoulding the storage and dissemination of information and knowledge.

#### 1.1 E-Resources

E-resources are the electronic products delivering a collection of data through various means such as full-text, e-journals, image collections including other multimedia products, whether numerical or graphical where the products are being marketed by the vendors, publishers and others on internet platform. Worldwide libraries have been exploring new technologies for providing better and faster access to vast information resources and efficient information services to their users. Information Technology has offered better solutions to achieve greater level of efficiency, productivity and excellence services in libraries. The value and use of e-resources have been incremental with time. Electronic learning materials have increasingly become the focus of research and development of any institution in the recent years. Libraries have gradually been changed with the emergence and application of information technology (Das *et al.*, 2014). There are various types of e-resources such as: e-book, e-journal, e-encyclopaedias, e-mail, e-zine, e-newsletter, e-newspaper, e-reference tool, e-report, e-dissertation & e-theses (ETD), CD-ROM, databases, etc.

## 1.2 National Institute of Technology (NIT), Mizoram

The National Institutes of Technology (NITs), the autonomous institutes happen to be a group of premier engineering institutions publicly available in India for providing engineering and technical educations irrespective of the subjects to contribute factors for national building. Out of 31 NITs in India, NIT Mizoram which was established in the year 2011 offers 5 UG courses, viz., Electrical & Electronics Engineering, Electronics & Communication Engineering and Computer Science & Engineering; and since 2014, Civil Engineering and Mechanical Engineering (shown in Table 1.2). The institute follows a credit based system for academic evaluation. It offers industrial training and project as part of the education system.

Table 1.2: Name of the Department with Students

Sl.No.	Name of the Department	Total No. of Students
1.	Computer Science & Engineering	63
2.	Electrical and Electronics Engineering	59
3.	Electronics and Communication Engineering	64
4.	Mechanical Engineering	59
5.	Civil Engineering	46
	Total	291

(Source: Central Library, NIT)

Discussing about the library of NIT, Mizoram, it acts as a centre of interaction of ideas for sustainable growth and development of education, research and the state as a whole in the field of science, technology, economy. It acts as a dynamic knowledge centre committed to develop the society by providing resources to the patrons.

It goes without saying that, Information and Communication Technology opened new multiple vistas for the library to conglomerate intellectual wealth both in tacit and explicit form so as to extend wide range of services to the patrons. This also has become imminent on the part of the NIT library under study due to growth of literature and awareness among the users. Adaptability of Information Technology in Libraries altered the complexion of present library scenario. NIT Library, Mizoram has no longer been regarded as a store house of knowledge but became an effective platform to disseminate information in electronic form.

## 2. Objectives of the Study

The objectives of the present research problem are to:

- Ascertain the types of e-resources available in the Central Library NIT, Mizoram.
- Find out the usage of e-resources by the students.
- Identify the problems encountered while accessing e-resources.
- Suggest mechanism to make use of e-resources.

## 3. Research Methodology

### i.) Data Sources

The study is based on primary sources. The primary data was collected through structured questionnaires distributed among the students of NIT Mizoram. Out of 291 students, a sample size of 173 (59%) was selected. Out of 173 (59%) a total of 141 (82%) responded to the questionnaire. Care was taken to cover the respondents from all subject areas.

## ii.) Data Analysis and Interpretation

The analysis and interpretation was based on the feedback from the students through structured questionnaires distributed among 173 students. The primary data collected were analyzed and interpreted with the help of Microsoft Excel Software. Simple analysis tools such as mean scores, median scores and standard deviation were used so as to derive appropriate statistical measures and findings.

## iii) Limitations of the Study

The study relies principally on primary data, where the questionnaire is designed to obtain relevant and updated data on the use of e-resources by the students of NIT Mizoram and depends on the authenticity of responses received from the questions presented before them. Generally, there is a risk of getting different answers from the same individual when ask queries regarding their extent of use of e-resources in the NIT Central Library. The primary data acquired from this particular study may not be free from the risk of manipulation and therefore, making it possible to receive a biased views which may crop up from the effect of the present external environmental factors or the mood of the respondents.

## 4. Analysis and Interpretation of Data

### 4.1 Gender Analysis

Gender analysis is important for knowing the interest of the students constituting both girls and boys while using the library and accessing the resources of the library. The scholar in Table 4.1 has discussed below the data relating to gender for analysis.

Table 4.1: Analysis by Gender (n=141)

Sl. No.	Gender	No. of respondents	% of respondents
1.	Male	125	89
2.	Female	16	11
	Total	141	100

The data given in Table 4.1 revealed that out of 141 respondents, majority constitute male which comes to 125 (89%) while the remaining 16 (11%) consists of female respondents. This shows that the male members of the library are more prone to use the library compared to the girls which may be due to multiple factors.

### 4.2 Frequency of Library Visit

The frequency of visits to the library helps in finding out information regarding the use of library and use of library resources. Data relating to the component obtained through the questionnaire has been placed below in Table 4.2.

Table 4.2: Frequency of Library Visit (n= 141)

Sl.No.	Frequency	Students	Percentage (%)
1.	Daily	37	26
2.	2-3 times a week	43	30
3.	Weekly	50	35
4.	Never	11	8
	Total	141	100

Table 4.2(A): Values of Respondents

Students	Mean value	Median value	Standard Deviation
	35.25	40	17.01715

The frequency of library visits depends partially on the nature of library collections, services and the resources provided in the library. The data analyzed in Table 4.2 depicts the opinion of the users who responded to the question relating to the frequency of their Central Library visit to which maximum students constituting 50 (35%) of the students visit the library weekly followed by 43 (30%) who visit 2-3 times a week, 37 (26%) daily while, the remaining 11 (8%) of students never visit the library. The study shows that half of the students visit the library weekly which may be due to several reasons such as time constraint and system limitations in the library.

### 4.3 Preference of source of information

The users visit the library in order to acquire their information needs whether from printed documents or other e-resources in the library. The present study requires the users to indicate the different types of e-resources they prefer to use given in the questionnaire. Data relating to the component has been placed below in Table 4.3 for analysis.

Table 4.3: Preference of source of information (n= 141)

S.N.	Source of information	Students	Percentage (%)
1.	Printed materials	63	45
2.	Online sources	45	32
3.	Web sources	27	19
4.	CD-ROM	2	1
5.	Audio-Visual tapes	4	3
	Total	141	100

The data given in the above table revealed that 63 (45%) number of students prefer to use print materials followed by 45 (32%) students who prefer to use online sources and 27 (19%) who prefer to use web sources respectively. Moreover, 4 (3%) of the users use audio-visual tapes while 2 (1%) use CD-ROM. This otherwise means that, the most preferred form of document is the print compared to other form of resources. This may be due to strategic location of the state and getting e-resources through Internet may result in difficulties due to the connectivity problem.

### 4.4 Frequency of e-resources use

Frequency of use of e-resources in the library helps to analyze the dependency of students, faculties and research scholars on e-resources which will determine the perceived impact of the resources on their academic efficiency. The data analyzed in Table 4.4 represents the frequency of use of e-resources by the users of Central Library, NIT.

Table 4.4: Frequency of e-resources use (n=141)

S.N.	Frequency of E-resources use	Students	Percentage (%)
1.	Daily	13	9
2.	Weekly	19	13
3.	Monthly	6	4
4.	Rarely	19	13
5.	Never	84	60
	Total	141	100

Table 4.4(A): Values of Respondents

Students	Mean Value	Median Value	Standard Deviation
	28.2	19	31.64964

Based on the study, it is surprising to find out that majority of the respondents constituting 84 (60%) of the respondents are not using the e-resources of the library followed by total 19 (13%) using the e-resources weekly and those using rarely, while the remaining minority 13 (9%) and 6 (4%) use the e-resources of the library daily and monthly. It is unfortunate to reveal that more than half of the students constituting total 84 (60%) never use the e-resources of the library which may either be due to lack of awareness and training, insufficient amount of resources, slow internet speed while some may also not understand the process of accessing e-resources in the library. The scholar in the study has found out the mean value of the respondents as 28.2 whereas median value comes to 19 respectively.

#### 4.5 Purpose of use of e-resources

The respondents were asked to indicate the purpose of use of e-resources in the library which varies from one user to another. The main purpose of the use of e-resources was presented in the questionnaire circulated which formed the quantitative study indicating the core purpose of e-resources used by the users of Central Library. The data analyzed in Table 4.5 shows the purpose of use of e-resources by the users of the library.

Table 4.5: Purpose of use of e-resources (n=141)

S.N.	Purpose	Students	Percentage (%)
1.	Writing an article/paper	2	1
2.	Writing a book	0	0
3.	Preparing notes	54	38
4.	To update knowledge	85	60
5.	Support academic research work	0	0
	Total	141	100

Data given in Table 4.6 revealed that the majority of students 85 (60%) use the e-resources of the library to update their knowledge while others use it for preparing notes that constitute 54 (38%) and 2 (1%) to write their articles. Moreover, none of the users use the e-resources of the library for the purpose of research or for writing a book. The study shows that students are keen to upgrade and enhance their knowledge and have interest in the advancement of information technology that keeps growing at high pace.

#### 4.6 Preference of e-resources by the users

Data represented in Table 4.6 placed below revealed the e-resources that are frequently used by the users at Central Library, NIT. In order to analyze the frequently used electronic resources available in the library, the e-resources have been classified into 6 categories as shown in Table 4.6.

Table 4.6: Preference of e-resources by the users (n=141)

S.N.	E-resources	Students	Percentage (%)
1.	E-book	104	23
2.	E-journal	93	20
3.	E-mail	127	28
4.	Online Databases	98	21
5.	CD-ROM	24	5
6.	Discussion Groups	14	3
	Total	460	100

Out of 141 respondents, majority constituting 127 (28%) of them prefer to use their E-mail followed by 104 (23%) and 98 (21%) using E-book and Online databases; and 93 (20%) prefer to use E-journal. Moreover, 24 (5%) of the users are using CD-ROM to acquire their needs while 14 (3%) of students make use of discussion groups as a platform to retrieve information. The study shows that E-mail being most preferably used by the users is inevitable since it takes only a few minutes for mail to arrive at its destination resulting in less time consumption. E-book, E-journal and Online databases play a pivotal role in the present information technology age where they provide automatic link, using hypertext to related information and can be accessed by several users simultaneously.

#### 4.7 Provision of e-resources

Information about providing e-resources in the library was obtained by the scholar and data for the same is placed below in Table 4.7 for analysis.

Table 4.7: Provision of e-resources (n=141)

S.N.	Provision of e-resources	Students	Percentage (%)
1.	Yes	17	12
2.	No	124	88
	Total	141	100

Even if there is constraint in providing e-resources in the library, the professionals are taking effort in many ways to satisfy the need of the users by providing e-resources. Data given in Table 4.7 revealed a rather surprising feedback where out of 141 respondents, 17 (12%) felt that adequate amount of e-resources are provided while 124 (88%) felt that required e-resources are not provided in the library. This shows that the institution has yet to acquire new e-resources which will have effective and efficient impact on the academic career of the students.

#### 4.8 Rate of satisfaction with regard to e-resources

The rate of satisfaction is an important factor to measure the standard and accuracy of library services. In this study, the scholar measured the satisfaction rate according to the scale of excellent, good, moderate and poor obtained through the questionnaire. Data given in Table 4.8 on analysis shows the rate of satisfaction of the users in using the e-resources of the library.

Table 4.8: Rate of satisfaction of e-resources (n=141)

S.N.	Rate	Students	Percentage (%)
1.	Excellent	6	4
2.	Good	37	26
3.	Moderate	70	50
4.	Poor	28	20
	Total	141	100

While analyzing the above data with regard to rate of satisfaction of e-resources by the users of the library under study could be found that 70 numbers of users which comes to 50% viewed their opinion as moderate, followed by 37 (26%) who viewed good and 28 (20%) users opined poor. However, 6 (4%) viewed their opinion as excellent. On an average, it could be found that the library provides services where the users rate their satisfaction as moderate.

#### 4.9 Awareness approach about e-resources

The scholar in Table 4.9 provides a question to ascertain the source for use of e-resources through 5 categories.

Table 4.9: Awareness approach about e-resources (n=141)

S.N.	Awareness Source	Students	Percentage (%)
1.	Membership	14	10
2.	Information brochures of the library	25	18
3.	Colleagues	26	18
4.	Library website	41	29
5.	Library staff	35	25
	Total	141	100

The above table indicated that among the respondents, 41 (29%) number of users noted the availability of e-resources through the library website, followed by 35 (25%) number of users who found out through the library staffs, 26 (18%) number of users through their colleagues, 25 (18%) respondents through information brochures of the library and the least i.e., 14 (10%) respondents knew about the e-resources through membership. Most of the respondents became aware of the e-resources available in the library through the concerned library website. The study also revealed the skill of the professionals of the library who use to provide the information about the availability of e-resources in the library.

#### 4.10 Use of OPAC

An OPAC allows online access of the user to search and retrieve records of any document available in the library. The Central library under study uses Libman library software where OPAC can be accessed throughout different administrative blocks of the institution. The scholar has put forth below Table 4.10 data relating to the use of OPAC in the library for analysis.

Table 4.10: Use of OPAC (n= 141)

S.N.	Use of OPAC	Students	Percentage (%)
1.	Yes	97	69
2.	No	44	31
	Total	141	100

According to the data analyzed in Table 4.10, it could be revealed that out of 141 respondents, 97 (69%) are using the OPAC service of the library to find out their information needs and whether it is available in the premises or not followed by 44 (31%) users that are not accessing the library software due to many reasons such as lack of computer skills, technical issues and search techniques. This inevitably shows that students have the competency to use the computers in the library as a medium for retrieving their source of information.

#### 4.11 Problems in accessing e-resources

The study is designed to find out the main problems encountered by the users while accessing the e-resources in the library. In order to minimise the problems faced by the users of the library, the problems are categorised into 5 different categories as shown in Table 4.11 for analysis.

Table 4.11: Problems in accessing e-resources (n= 141)

S.N.	Problems	Students	Percentage (%)
1.	Inadequate systems	41	29
2.	Insufficient resources	32	23
3.	Ignorant of the process	3	2
4.	Slow internet speed	45	32
5.	Information is not up-to-date	6	4
6.	No problem	14	10
	Total	141	100

The scholar obtained the view of the users through Yes or No in the questionnaire while accessing internet. From the above Table 4.11 it can be identified that 45 (32%) are complaining about slow internet speed, 41 (29%) and 32 (23%) respondents have issues regarding the limited availability of computer systems in the library and insufficient resources while 6 (4%) of them feel that the information is not up-to-date. Moreover, it could be observed that 3 (2%) are ignorant of the process. This shows that the users need to be more technically oriented for using the internet along with other software i.e., the newly developed e-resources of the Central Library. There is a requirement of the execution of more orientations and training programmes as the information age today is becoming more innovative and developed. As witnessed in this particular study, the library needs more systems to acquaint the users for more access of e-resources in the library and most importantly need to come up with a solution involving the upgrade of the bandwidth for quick and speedy access of information in the Central Library, NIT.

#### 4.12 Suggestions from the users

The scholar obtained suggestions from the respondents for the development of e-resources and improvement of library services in the Central Library NIT, Mizoram which has been tabulated in Table 4.12 along with suggestions obtained from the respondents have been grouped under headings respectively.

Table 4.12: Suggestions from the users (N= 141, n=645)

S.N.	Suggestions	Students	Percentage (%)
1.	Awareness of e-resources	92	14
2.	Improvement of library service	65	10
3.	Increase of Bandwidth/ Internet Speed	128	20
4.	Increase of e-books	67	10
5.	Increase of e-journals	45	7
6.	Provide e-resource training programs	52	8
7.	Sufficient Infrastructure/ Systems	102	16
8.	To update content	94	15
	Total	645	100

The total number of users i.e. 128 (22%) opt for increase in bandwidth followed by 102 (16%) users who viewed for increase in computer systems in the library, 94 (15%) number of users lay emphasis towards updating the content of the resources while 92 (14%) of respondents opined for awareness of e-resources in the library. The other respondents, however, have emphasized for increase in the number of e-books constituting 67 (10%) of the users whereas 65 (10%) opted for improvement of library services. Other suggestions by the respondents 52 (8%) include imparting e-resource training programs and 45 (7%) to increase



the number of e-journals in the Central Library. The data analyzed in Table 4.12 represents the fact that internet connectivity/ bandwidth has to be speeded up in order for the users to have quick and on the spot access of resources in the library. Space limitation for printed materials and insufficient amount of systems seems to be an inevitable problem for the users based on analysis provided by the scholar. This clearly indicates that the users are keen towards the use of e-resources in the library.

## 5. Major Findings

After analyzing the questionnaires placed in the NIT, Mizoram with the help of tables to represent them, the scholar has come up with the following major findings:

1. A total number of 173 questionnaires were circulated to the students of NIT where total 141 responded constituting 82% of the sample size.
2. The frequency of library visit is weekly among the users which may be due to time constraint and system limitation in the library.
3. The users of the NIT Library preferred print document over other forms of resources available in the library.
4. Majority of the users constituting 84 (60%) of students never use the e-resources provided by the library. This may be partially due to slow internet connectivity and inadequate computer systems in the library.
5. Users make use of the e-resources in the library as a means of updating their knowledge and for preparing notes.
6. 127 (28%) of students use e-mail constituting the first rank respectively. E-mail is preferably used by the respondents since it is proven to be most convenient with less time consumption.
7. 17 (12%) of the users feel that the amount of e-resources provided in the library as sufficient while 124 (88%) feel that the adequate amount of e-resources are not provided by the library. The library has to take measures regarding the provision of e-resources to acquaint the students with the latest trends in technology.
8. Considering the rate of satisfaction of the use of e-resources, it has been discovered that majority of respondents constituting 70 (50%) expressed their views as moderate.
9. The study indicated that most of the users are aware of the e-resources available in the library through the concerned library website which reveals the activeness, competencies and efficiency of the library professionals in providing the required information about the availability of e-resources in the library.
10. OPAC being the gateway to library's collection has been used by students in the library as a medium for information retrieval.
11. The users need to be more of a technical literate for accessing the internet along with other newly developed e-resources further recommending orientation and training programs in the library.
12. Total number of users 128 (20%) have suggested to increase the bandwidth and download speed of the internet; 102 (16%) opined for increasing the number of computer systems and space limitations in the library followed by 94 (15%) and 92 (14%) number of users requesting for more updated content of materials and to publicize the availability of e-resources in the library. The study shows that the internet connectivity of the library has to be faster so that the users can have maximum access to the resources and retrieve their information needs at a higher speed in the most limited time for most effective and efficient use.

## 6. Conclusions

E-resources have become imminent in the present environment in NIT Library as electronic resources are gaining momentum among the students. The e-resources are having equal importance in the collection development in libraries due to its update; instant, wide coverage etc. and prosperous collection of e-resources regardless of media reflect the academic priorities in the technical education level resulting to a high productive value in teaching and research. From the various aspects of library services provided by NIT Mizoram, it is progressing well and venturing to new ideas, innovations for better and effective services in spite of lack of manpower, inadequate budget, absence of a permanent building etc. The library, however, is making all efforts to the development of education and research.

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