Use of E-Resources at National Institute of Technology-Karnataka: An Exploratory Study

Rekha[1], Sanjeeva N.[2].

[1]*Library Assistant, Central Library NITK, Surathkal, Mangaluru*
[2]*Research Scholar,Department of LIS,Mangalore University*

Abstract:
The study was conducted to determine the use of electronic resources by the students and research scholars at the library of National Institute of Technology Karnataka. The major objectives of the study were to determine the awareness of e-resources, source of awareness, rating of e-resources, factors of motivation, features of e-resources and preference of resources. The data were collected through survey by using questionnaire distributed to the undergraduate students, post-graduate students and research scholars. A total of 150 questionnaires were distributed out of which 144 questionnaires received back with 96% of response. The data were tabulated with simple calculation. The findings of the study reveals that, out of the 144 respondents, 90(62.5%) are male and 44(37.5%) are female. Majority of the respondents are Research Scholars 52 (36.11 %) followed by Graduate students 48 (33.33 %) and Post Graduate Students 44 (30.55%). Out of the total 144 respondents, majority of the respondents 124 (86.11 %) aware of e-resources and 24 (16.66 %) of them do not aware. With regard to source of awareness, 88 (61.11%) of the respondents, came to know out about e-Resources through Library Website and 78 (54.16%) of users from their friends. Majority of the respondents opined that the collection of e-resources in the library is excellent. The respondents strongly agree that unlimited access to e-resources attracts to use it.
Keywords: E resources, User awareness, Central Library, NITK.

I. INTRODUCTION

Libraries are the collection of information sources available for lending or reference purposes. They are a hub of sources of knowledge and therefore a central and integral part of academic life (Rao, 2011). The first library consisting of clay tablets dates back nearly 5000 years. This gradually has been replaced by paper and printed books (Bothma et al., 2014). Today, library is part of any educational institution, which is the hub for teaching and learning activities where students, educators and researchers access the information they need according to their needs. For conventional libraries, users have to spend much more time looking for a specific piece of information and have to rely primarily on the professional library.

With gadgets and equipment used to access information, modern day libraries have both print and non-print documents (Kumar, 2016). Some of the equipment includes: computers, digitizing machines, CD-ROMs, scanners, printers, and the internet that have made a significant contribution to the progress of library transformation (Dar et al., 2017). The recent drastic technological change has changed the way in which data is processed, stored and disseminated. This means that libraries are moving in the digital environment by overcoming the conventional barriers of time and space, making it easier for advances in technology and e-publishing, and access to information on a local, regional, national and international basis. Therefore, in many higher academic institutions around the world, digital services are widely available and can be accessed anywhere and at the same time by many people or users, making it very easy to use.

II. NITK AND ITS LIBRARY

National Institute of Technology Karnataka (NITK) is one of the premier technological institutions in India and has retained tenth rank in Engineering category and 27th in overall category in the National Institutional Ranking Framework (NIRF) in 2022. NITK library has 1,35,069 Books, 15,199 Bound Volumes, 9603 e-Books, 12045 e-Journals and 23 databases. The library is also subscribes 204 Print journals of all the disciplines. The present study aims to understand the motive and usage patterns of NITK library by its users.

III. LITERATURE REVIEW

Kwakuet. et.al. (2021) delved the vacuity of Electronic Information Resources (EIRs) that support postgraduate pupil learning to establish their relationship, as the advancement of technology is making learning fun. In turn, the study was prompted to investigate whether the availability of EIRs predicts postgraduate students' learning. The study is sustained by the prolixity of invention proposition and espoused a descriptive check design. The intentional slice fashion was used to elect 215 postgraduate scholars from the University of Cape Coast and structured questionnaire was used as the main instrument for data collection. The study concluded that the vacuity of EIRs, similar as electronic journal papers, online databases, online compositions and theses, digital libraries, and electronic books, support pupil literacy. The experimenters recommend that the Government of Ghana should encourage and produce programs to international donors and non-governmental organizations to invest in EIR projects in various university libraries.

Ananda. et.al. (2017) explained the use and awareness of Electronic Information Resources (EIR) among UG &PG scholars of T. John College. 81% opined that they are apprehensive of electronic information resources and 19%opined that they aren't apprehensive of electronic information resources,74.07% of the scholars used electronic coffers for design work,64.19% are used for preparing class notes,56.79% scholars use EIR for social networking,55.55% for preparing assignments and43.02% for entertainment purpose.

Hosaini (2017) conducted on use and effect of electronic assets of two academic libraries. Findings of this review are most of the users of all the college libraries are liked to use electronic journals. Maximum users use e-resources in most days which are a decent sign, a large portion of the users use e-resources for learning and research purpose. The users are profoundly benefited by utilizing electronic resources since they get current data and the information can be recovered rapidly, a large portion of the clients get it challenging to track down significant data, which is a significant issue of utilizing e-resources however a few libraries give direction program, greatest users expected to get show of various assets and IT preparing. Larger part of the users consider that e-assets set aside their time and cash and they get modern data which is an incredible effect of utilizing e-resources. Larger part of the users showed that they have an elevated degree of outcome in research/scholarly work for utilizing e-resources; the majority of the users feel great to utilize e-resources.

Singh & Srivastava (2018) investigated the use of e-resources at private universities and institutions, their purpose and frequency of use, the factors influencing resource use, and the effects of e-resources and services on the academic work of the users. It demonstrates how widely used electronic resources are among users. Most of these users rely on electronic resources to obtain the necessary and pertinent information. Just a small number of colleges and institutions have the necessary electronic resources for the ongoing courses, but their practical usage falls short of the value of the expenditures made by their administrators in acquiring these resources. Programs for orientation and training should be conducted by library personnel in accordance with the needs of the user community and make maximum utilisation of the available e-resources in these libraries.

Akuffo & Stephen (2019) revealed that the majority of respondents had poor search skills due to lack of training, despite having high awareness levels, appropriate computer abilities, the ability to derive various advantages, and usage of electronic resources for academic reasons. Access issues, search and retrieval issues, and personnel issues were barriers to using electronic resources. The findings revealed that postgraduate students had a strong awareness of the electronic resources available through ACI subscribed e-resources, from which they benefited in several ways and frequently used for academic purposes. As a result, the level of knowledge and the breadth of usage of electronic resources were both reflected in the benefits.

Girakaduwa (2019) investigated that 62.2% of library users used the electronic resources and services that the library offered, and 72.7% of users were aware of them. The majority of respondents—62.2%, 60.9%, and 57.8% of the users used the previous test paper downloading service, OPAC, and library websites. Additionally, it was found that 46% of respondents used the digital repository system and e-books. The use of the email service and databases was relatively minimal in comparison to the other services. According to a study, almost 37.8% of respondents had never used online tools or services. 62.2% of participants found the use of electronic tools and services to be helpful and satisfying. Based on the results, there is less use of electronic tools and services due to a lack of infrastructure, a lack of user instruction and awareness initiatives, barriers related to the English language, and a lack of IT abilities. To make the most of technological tools and services, additional study advises that curriculums be revised to include more practical lessons and set up email or mobile alert update services.

Ramesh & Jayaprakash (2019) made an attempt to investigate how and what effect e-resources, especially e-journals, had. In order to satisfy the information requirements of its users, including faculty members, postgraduate students, and research researchers, Periyar University Central Library subscribes to a number of e-journals. The findings showed that, with 58.33% of the female responses, made up the majority of the sample while men made up the least amount. The age range of 21 to 30 has the largest amount of participants. Postgraduate students made up 40.38% of respondents, placing them first. 19.87% of respondents chose to read print journals, compared to 47.44% who preferred electronic journals.

Salau (2014) explains how college students at the Federal University of Technology in Minna, Nigeria, use eBooks. According to the poll, the majority of participants were conscious of eBooks and favoured them over print novels mainly due to their portability and durability. Additionally, they used electronic texts from Google rather than those from the university library.

Ankrah & Atuase (2018) found that every area of interest in institutional libraries has been significantly affected by trends in information and communication technology (ICT). The ever-changing landscape of information delivery from print to digital has fought for a great part in boosting library utilisation.

Use of e-resources in academic library is increasing day-by-day. The above reviews reveal that the use of e-resources is becoming popular in this Information Communication Technology era. As the academic libraries are mainly used by the teachers, researchers and students, e-resources have a great impact to their academic and research work.

IV. OBJECTIVES

The study is an attempt to find out the awareness and use of e- resources by the users of NITK Library. The study is designed and conducted to achieve the following objectives

1. To know the awareness and use of electronic e-resources among the users and level of satisfaction on current e-resources subscribed at NITK.
2. To find out the impact of usage on the collection of print journals as well as electronic journals.
3. To identity the satisfaction and problems in utilisation of e-resources among users
4. To find out the problems, prospects and measures for improving the usage of e-resources in NITK Library.

V. NEED OF THE STUDY

E-resource initiative helps to make available to the learners community learning resources through a single-window to achieve the concept 'information for all' and to maximise the usage of e-resources available on their fingertips at anytime and anywhere.

VI. METHODOLOGY

The present study is adopted survey method. A well-structured questionnaire has been designed to determine the required data and achieve objectives of the study. Questionnaire was distributed to research scholars, postgraduate students and undergraduate students. Total 150 questionnaires have been distributed, out of that 144 filled questionnaires were received with response rate 96%. The data has been tabulated and analysed with simple statistical calculations

VII. ANALYSIS AND INTERPRETATION OF DATA

Data analysis and interpretation is an important work in the any research activity. An attempt has been made to analyse and interpret the collected data.

Gender	Response of Students	Percentage
Male	90	62.5%
Female	54	37.5%
Total	144	100%

Table 1: Gender wise Respondents

Table 1 gives the gender-wise break up of respondents. It is observed that out of 144 respondents, 62.5% are male and 37.5% are female.

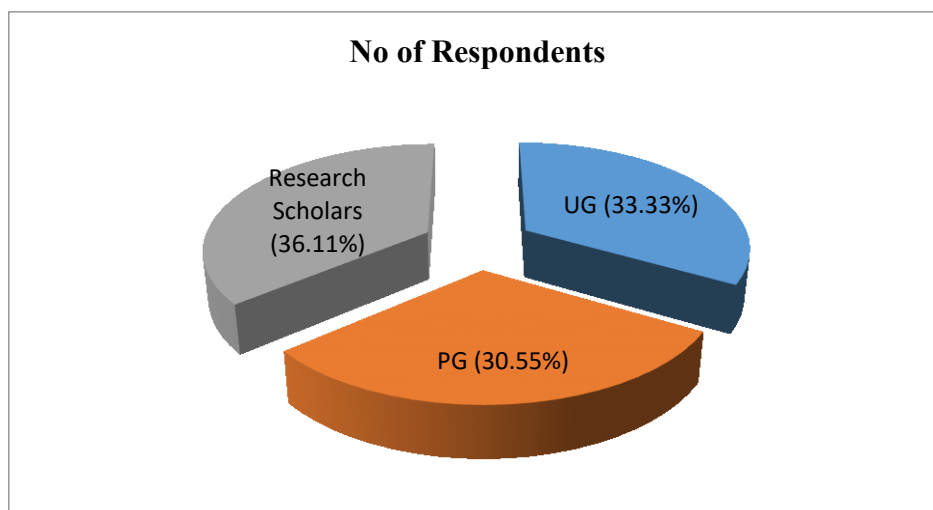| Category	No of Respondents	Percentage
UG	48	33.33%
PG	44	30.55%
Research Scholar	52	36.11%
	144	100%

Table 2: Category-wise respondents

Figure 1: Category-wise respondents

The above figure indicates category-wise distribution of respondents. Out of 144 respondents surveyed majority of the respondents are research scholars 36.11% followed by graduate students 33.33% and post graduate students 30.55%.

Awareness of E- Resources

Nowadays usage of e-resources have revolutionized in the academic environment. The impact of e-resources can be seen in every research. Without e-resources the users are not in a position to get access to the latest information in their subject. So e-resources are important for their day to day learning activities.

Respondents	Yes	No
	124	24
144	86.11%	16.66%

Table 3: Awareness of E- Resources

Table 3 indicates the awareness of e-resources among the respondents. Out of 144 respondents 86.11% are aware about the e-resources and 16.66% respondents are not aware of e-resources.

Source of Awareness

Sources	Respondents	Percentage
Library Staff	68	47.22%
Teacher/Guide	70	48.61%
Library Website	88	61.11%
Mails/ Facebook	70	48.61%
Notice Board	65	45.13%
From friends	78	54.16%

Table 4: Source of Awareness

Table 3 shows the sources of awareness of the e-resources. Total61.11% of library users find out about e-resources through library website and 54.16% are from their friends. 48.61% of the users form mails/facebook. 47.22% of the users form library staff and 45.13% are from college/library notice board.

Rating of e-resources

	Excellent (%)	Good (%)	Fair (%)	Poor (%)	Very Poor (%)
Access Engineering	40 (27.77)	54 (37.5)	35 (24.30)	5 (3.47)	10 (6.94)
Institute of Physics (IOP) :	52 (36.11)	40 (27.77)	30 (20.83)	15 (10.41)	7 (4.86)
American Physical Society	47 (32.63)	45 (31.25)	28 (19.44)	14 (9.72)	10 (6.94)
ASTM Journals and Standards	46 (31.94)	49 (64.02)	28 (19.44)	12 (8.33)	9 (6.25)
EBSCO: Business Source	52 (36.11)	48 (33.33)	22 (15.27)	13 (9.02)	7 (4.86)

Elite plus					
IEEE Explore Digital Library	56 (38.88)	38 (26.38)	25 (17.36)	17 (11.80)	8 (5.55)
Oxford University Press	38 (26.38)	40 (27.77)	32 (22.22)	16 (11.11)	18 (12.5)
Royal Society of Chemistry	34 (23.61)	40 (27.77)	27 (18.75)	15 (10.41)	14 (9.72)
Science Direct	59 (40.97)	43 (29.9)	39 (27.08)	-	3 (2.08)
Springer Link :550 Journals	46 (31.94)	38 (26.38)	29 (20.13)	12 (8.33)	3 (2.08)
Sage Journals	38 (26.38)	32 (22.22)	27 (18.75)	15 (10.41)	14 (9.72)
Emerald	36 (25%)	28 (19.44)	27 (18.75)	22 (15.27)	18 (12.5)
Taylor and Francis	46 (31.94)	31 (21.52)	29 (20.13)	13 (9.02)	16 (11.11)
JSTOR	38 (26.38)	27 (18.75)	28 (19.44)	19 (13.94)	15 (10.41)
SCOPUS	46 (31.94)	56 (38.88)	28 (19.44)	10 (6.94)	4 (2.77)
J-Gate	36 (25%)	39 (27.08)	28 (19.44)	21 (14.58)	13 (9.02)
Web of Science	42 (29.16)	45 (31.25)	35 (24.30)	18 (12.5)	4 (2.77)
MathScieNet	36 (25%)	39 (27.08)	25 (17.36)	15 (10.41)	13 (9.02)

Table 5: Ratings of Usage of E-Resources

Table 5 indicates the usages of different types of e-resources. It is found that Science Direct has excellent usage of 40.97% followed by IEEE Explore Digital Library 38.88%.Institute of Physics has 36.31% and 36.11% EBSCO: Business Source Elite Plus. American Physical Society usage is 32.63%, 31.94% is ASTM Journals and Standards, usage of Springer Link: 550 Journals, Taylor and Francis and SCOPUS are31.94%. Use of Web of Science is 29.16%, Access Engineering is 27.77%. Oxford University Press, Sage Journals and JSTOR are 26.38%. Usage of Emerald J-Gate and MathSciNet are 25% and Royal Society of Chemistry 23.61%. The respondents are also opined 38.88% SCOPUS, 37.5% Access Engineering, 34.02% ASTM Journals and Standards, 33.33% EBSCO: Business Source Elite plus,31.25%American Physical Society and Web of Science, 29.9%Science Direct, 27.77% Institute of Physics, Oxford University Press and Royal Society of Chemistry, 27.08% J-Gate and MathSciNet, 26.38%Springer Link and IEEE explore Digital Library, 22.22% Sage Journals, 21.52%Taylor and Francis, 19.44% Emerald, 18.75% J-STOR usages are good. Very few of them expressed that the usage of e-resources as mentioned in the above table is poor.

Factor to motivate the e-resource usage

Sl. No	Factors	Strongly Agree (%)	Agree (%)	NotSure (%)	Disagree (%)	Strongly Disagree (%)
1.	Archival access	42 (29.16)	67 (46.52)	20 (13.88)	8 (5.55)	7 (4.86)
2.	Core journals are available	47 (32.63)	62 (43.05)	22 (15.27)	9 (6.25)	3 (2.08)
3.	Wide range of Online Database / E- Journals are being provided	41 (28.47)	70 (48.61)	15 (10.41)	11 (7.63)	7 (4.86)
4.	To obtain reprints	35 (24.30)	54 (37.5)	26 (18.05)	18 (12.5)	9 (6.25)
5.	Easy to use	46 (31.94)	68 (47.22)	15 (10.41)	9 (6.25)	5 (3.47)
6.	Expert assistance by library staff	42 (29.16)	63 (43.75)	22 (15.27)	12 (8.33)	8 (5.55)
7.	24 * 7	43 (29.9)	65 (45.13)	18 (12.5)	11 (7.63)	7 (4.86)

Table 6: Motivate to use of E-Resources

The factors which motivate the users to use of e-resources are availability of core journals 32.63%, easy to use with 31.94%, 24x7 with 29.9%,archival access and expert assistance by library staff with 29.16%, wide range of online database/e-Journals are being provided with 28.74% and to obtain reprints with 24.30%.The respondents agree with the factors which motivate to use e-resources are wide range of online database/e-journals are being provided with 48.61%, Easy to use with 47.22%, archival

access with 46.52%, 24x7 with 45.13%, expert assistance by library staff with 43.75%, core journals are available 43.05% and to obtain reprints with 37.5%respectively.

The respondents not sure with the factors which are motivate to use e-resources are to obtain reprints with 18.05%, core journals are available and expert assistance by library staff 15.27%,archival access 13.88%, 24x7 with 12.5%, wide range of online database/e-Journals are being provided and easy to use 10.41%.

The respondents disagree with the factors which are motivate them to use e-resources are to obtain reprints 12.5%, expert assistance by library staff8.33%, wide range of online database/e-Journals are being provided and 24x7 with 7.63%, core journals are available and easy to use 6.25% and archival access 5.55%.

The respondents strongly disagree with the factors which are motivate them to use e-resources are to obtain reprints with 6.25%, expert assistance by library staff with5.55%, wide range of online database/e-Journals are being provided, archival access and 24x7 with 4.86%, easy to use with 3.47% and core journals are available with 2.08%.

E-Resource features which attracts the users

Factors	Strongly Agree (%)	Agree (%)	Not Sure (%)	Disagree (%)	Strongly Disagree (%)
24x7 access from hostel or Dept. or Library	75 (52.08)	45(31.25)	15 (10.41)	9 (6.25)	00.00
Searching across the e- resources	70 (48.61)	43 (29.9)	13 (9.02)	11 (7.63)	7 (4.86)
Searching across a database	62 (43.05)	42 (29.16)	23 (15.97)	13(9.02)	4 (2.77)
Copying and pasting	48 (33.33)	63 (43.75)	15 (10.41)	11 (7.63)	7 (4.86)
Easy online referencing	67 (46.52)	48 (33.33)	15 (10.41)	13 (9.02)	1 (0.69)

Table 7: Features of E-Resources

Table 7 depicts the data about the features which attracts the user to use e-resources. It reveals that 52.08% of the respondents are strongly agree with the factors that motivate to use e-resources 24x7 access from hostel or department or library. Searching across the e-resources is one more preferred feature of e-resources with 48.61% and easy online referencing is another preferred feature of e-resources with 46.52% and searching across a database of e-resources respectively 43.05% and 33.33% copying and pasting is less preferred feature by library users.

The 43.75% of the respondents are agree with the factors that motivate to use e-resources are copying and pasting option, easy online referencing is one more preferred feature of e-resources with 33.33%, 24x7 access from hostel or department or library with25%, searching across the e-resources is one more preferred feature of e-resources with29.9% and searching across a database of e-resources with 29.16% respectively.

The respondents are not sure the factors that motivate them to use e-resources are searching across a database of e-resources with 15.97%, 10.41% are access 24x7 from hostel or department or library, copying and pasting and easy online referencing and searching across the e-resources with 9.02%.

The respondents are disagree with the factors that motivate them to use e-resources are easy online referencing and searching across database with 9.02%, searching across the e-resources and copying and pasting with 7.63% and 24x7 access from hostel or department or library 6.25% respectively.

The respondents are strongly disagree with the factors that motivate them to use e-resources are searching across the e-resources and copying and pasting with 4.86%, searching across database with 2.77% and easy online referencing with 0.69%.

Orientation Programme/Training Programme

Response	Respondents	Percentage
Yes	66	45.83%
No	78	54.17%
Total	*144*	*100%*

Table 8: Participation in Orientation Programme

A question was asked to know how many of the respondent's undergone orientation programme/training programme conducted by NITK. The table shows that majority of 54.17% respondents have not undergone any orientation programme, whereas 45.83% of the respondents have undergone in orientation programmes conducted by the NITK.

E-resources/ Print resources

Response	Respondents	Percentage
Yes	111	67.68%
No	53	32.31%
Total	164	100%

Table 9: Opinion about e-resources and print resources

A question was asked to know how many respondents agree with the point of e-resources are better than print resources. 88.88% of them are satisfied with e-resources and 11.11% respondents are not satisfied.

VIII. CONCLUSION

This study provides information on how different user groups use electronic resources and how satisfied they are with them. According to the research, offering friendly, competent library services and giving support would go a long way towards fostering student satisfaction. The research also emphasised the need to speed up internet access so consumers can conduct efficient searches. It is also necessary to diversify and provide full-text libraries and periodicals that are more extensive. Many respondents recommended installing cubicle setup in the library rather than using library rooms because it can give users personal space and increase their level of focus.

The present study gives the insights on the use of e-resource by various categories of users and their satisfaction level. The study has revealed that providing professionalized library services friendly and extending support would help a long way to promote students satisfaction. The study also highlighted to increase the speed of the internet facility to enable the users for effective search. Diversification of more voluminous in terms of provision of full-text databases and journals are also needed. Many respondents have suggested having cubicle setup in the library rather than library halls, as it can provide personal space and improve the concentration level of the users.

According to few other responses, a cafeteria and audio-visual rooms could be located close to the library. Overall, students who frequent the library have made a plea for features of informal areas where students can talk freely. To develop, expand, and maintain library services through effective and evolving mechanistic methods, the library system must occasionally reflect on overall performance. There is a huge need for more research into the various user segments, user behaviours, and attitudes related to information seeking.

References:

[1]. Akuffo, M. N. & Budu, S. (2019). Use of Electronic Resources by Students in a Premier Postgraduate Theological University in Ghana. South African Journal of Information Management, 21(1), 1-9.

[2]. Ananda, S. K. et al. (2017). Use and Awareness of Electronic Information Resources among UG & PG students of T John College, Bangalore: A Study. International Journal of Library and Information Studies, 7(1), 20-25.

[3]. Angadi, M. & Koganuramath M. (2004). Access to E-resources at TISS: A Case Study, Paper presented at CALIBER, New Delhi.

[4]. Ankrah, E. & Atuase, D. (2018).The Use of Electronic Resources Postgraduate students of the University of Cape Coast & Library Philosophy and Practice (e-journal), 1-38.

[5]. Borchert, M. et al. (2009).A study on student and staff awareness, acceptance and usage of e-books at two Queensland universities. Paper presented at the 14th ALIA Information Online Conference & Exhibition, Sydney.

[6]. Dar, T. H. et al. (2017). Use of ICT in IIT and IIM Libraries of India. International Journal of Library & Information Science 6(1), 1–10.

[7]. Girakaduwa, S. (2019). Usage of Electronic Resources, Services and Challenges faced by the Library Users in University of the Visual and Performing Arts (UVPA), Sri Lanka, People: International Journal of Social Sciences, 5(2), 34-43.

[8]. Hosaini, S. B. (2017). Use and Impact of Electronic Resources: A study on Two Selected Academic Libraries, International Journal of Law, Humanities & Social Science, 1(1), 23-59.

[9]. Khan, J. (2016).Awareness and use of Digital Resources and services in IIT Delhi Library. International Journal of Research – Granthalaya, 4(6), 64-71.

[10]. Krishnan, R. & Jayaprakash, M. (2019).Use and Impact of Electronic Journals among the Users of Periyar University, Salem, Tamilnadu, India. Library Philosophy and Practice, 1-19.

[11]. Kumar, J. (2016). Webometric and Technology Analysis of Journal of Inequalities and Applications. International Journal of Library & Information Science, 5(2), 79–80.

[12]. Kwaku, B.et. al. (2021).Availability of Electronic Information Resources that Support Student Learning: A Case at the University of Cape Coast. The International Journal of Technology, Knowledge, and Society 17 (2), 1-10.

[13]. Rao, Y. S. (2011). Correlation among Library Facilities: An Analytical Study. Library Philosophy and Practice, 1-10.

[14]. Sadiat, A. S. (2014). An Evaluation of Undergraduates Use of E-Books: A Case of Federal University of Technology, Minna, Nigeria. International Research, Journal of Library & Information Science, 4(4), 495-506.

[15]. Shettar, I. M. (2017).Electronic Books (eBooks): Acceptance and Usage at NITK, Surathkal. Paper presented at National Conference on Library Innovations for Excellence-2017, IISER, Pune.

[16]. Singh, M. & Srivastava, R. (2018).Use and Impact of E-Resources by the Users of Private Universities and Institutions. International Research: Journal of Library and Information Science, 8(3), 400-410.