

User Awareness on Electronic Resources and Services by Faculty and Students of NIFT Ranked Universities of Andhra Pradesh

Munugala Srinivasulu

Research Scholar, Dept. of Library Information Science,
Sri Krishnadevaraya University, Anantapuramu-515003, Andhra Pradesh
srinu.edu752@gmail.com

Dasharadhi Ravinder

Professor, Dept. of Library Information Science,
Sri Krishnadevaraya University, Anantapuramu-515003, Andhra Pradesh
headlibraryinfscsescu@gmail.com

Article Info

Page Number: 4456 - 4469

Publication Issue:

Vol 71 No. 4 (2022)

Article History

Article Received: 25 March 2022

Revised: 30 April 2022

Accepted: 15 June 2022

Publication: 19 August 2022

Abstract

The efficiency of electronic resources and services at certain university campuses of the Andhra Pradesh, which are NIRF ranked from 2016, is assessed based on user satisfaction. This study was conducted using a survey methodology. In the user survey, the researcher picked seven university libraries in Andhra Pradesh. To collect information about the use of electronic resources and services, 180 well-structured questionnaires were administered. Students and faculty members received a total of 161 completed questionnaires, which were then analyzed, categorized, and tabulated using elementary statistical procedures. The research shows that most people who use the libraries are aware of the latest trends in electronic resources, services, and the appropriate use of these tools in the domains of education and research. The results showed that users are becoming more interested in e-resources and that slow downloading and blocking of websites make it harder for them to be used effectively. The poll also shows that most of the people who answered know how to use e-resources and services.

Keywords: NIRF; Andhra Pradesh; Library Services; Library Resources

INTRODUCTION

In recent years, the electronic resources and services provided by libraries have drastically altered the usage habits of academicians and researchers. In terms of communication, technology has played an important role in education, disseminating both knowledge and local wisdom to the academic community. In the present context, e-resources and services are seen as an essential component of the information sources in order to offer information searchers with efficient services. In an effort to establish the importance of academic libraries to the dissemination of knowledge in higher education, Maidabino¹ conducted the following research. Libraries are expected to gather, conserve, store, alter, and transmit information resources that will meet the demands of both existing and scholarly community as well as future users. Library teaching includes things like "information literacy," "orientation and training for the use of library resources," and "training for the use of library databases," as stated by Majid and Abazova² studied that the library's e-resources are to be used efficiently and effectively, then user orientation must be intensified and expanded. It is vital to bear in mind that the capacity of library professionals to stay updated is essential, and hence training for them is also essential. Skaggs, Poe, and Stevens state that the word "electronic resource" is simple and ubiquitous and may refer to anything from a PDF of a government report to a compiled database. According to Makri el⁴ studied that an electronic information resource is "any interactive website, system, or application that assists its users in accessing, understanding, distributing, and/or exploiting electronic information". According to Dadzie⁵ in the 21st century, library services and e-resources are regarded as key components of information sources in order to give effective services to information searchers. Electronic sources of information are helpful study tools that go well with the printed sources of information that most libraries offer.

E-resources are becoming more significant since they are more contemporary and accessed anywhere in the globe. These resources enhance the value of R&D endeavors. So, this topic was chosen to look into the different e-resources and figure out how useful and effective they are in helping faculty and students in libraries.

LITERATURE REVIEW

Modern libraries rely heavily on electronic resources and services, and one way to measure how well they're doing is by looking at how satisfied their users. It is necessary and advantageous to

evaluate the library's resources, services, and user satisfaction since the success of a library is contingent on how effectively a service meets the needs of library users. Consequently, standard services are the ultimate objective of libraries as service organizations. Students, faculty, and scientists from many institutions throughout the globe have conducted research on the usage of e-resources and services.

Erens⁶ studied how contemporary advancements in university libraries impact research and how academics utilize e-resources and services. The majority of academic staff was satisfied with e-resources and services, and university library services had vastly improved over the last decade. Khan and Bhatt⁷ performed research to better understand how students at Pakistan's Islamic University in Bahawalpur felt about using the web for educational purposes. Based on the study, respondents were dissatisfied with the internet service offered by their institution, the poor connection of the internet, and the insufficient number of computers in their computer lab. The goal of Nwalo⁸ is to look at how well a good library works, which is often judged by how well it meets the needs and wants of its users in relation to the libraries goals and objectives. According to Ababio⁹ the library users must review and evaluate their libraries throughout time. Several studies, like those by Eager and Oppenheim indicate that a user-based evaluation may offer libraries important information for reorienting their collections, services, and activities to successfully satisfy users' information requirements. Higher education institutions are concerned with the views of the academic community and quality of services to recruit students, meet their requirements, and retain them, according to Nadiri and Mayboudi¹¹. Libraries emphasized that the secret to surviving today's fierce competition is to provide great service, which will ultimately result in satisfied users.

According to Kassim, the fundamental purpose of academic libraries has been to comprehend the reasons for user discontent in order to enhance the service performance they provide and to meet the expectations of users. New students arrive at the university each year with varying requirements and expectations. Over two decades, several competitors to university libraries have emerged, including electronic information providers, document delivery services, remote learning, multimedia goods, and more. These difficulties were first identified by White and Abels¹³ and Hernon and Altman¹⁴. As a consequence of the growth of digital resources, both the current role of academic libraries and the needs and expectations of their clients have undergone significant transformations. Therefore, in order to improve and extend their services, university libraries must regularly survey their patrons and assess the quality of their current services. Tyagi¹⁵

found that almost all scientists and associates at the Indian Pharmacopoeia Commission used up-to-date versions of online journals (100%), online databases (100%), CD-ROM databases (100%), topic-specific information website (100%), and electronic books(79%). Additionally, the author said that certain researchers (30.77%) and colleagues (37.50%) prefer print versions of publications over digital ones. Many students still prefer to carry hard copies rather than read them on their phones or other mobile devices. Sohail and Alvi¹⁶ conducted a study at the JN medical Institution at AMU Aligarh and discovered that all of the students there were familiar with and made use of e-resources, such as those available in cybercafés and via personal contacts, to get access to knowledge quickly. They were satisfied with the college's online services.

SCOPE AND LIMITATIONS OF THE STUDY

Electronic resources and services play a key part in university library activity. Libraries spend a substantial amount on the spent of electronic resources. The purpose of the research is to determine the adoption of e-resources and services in the university libraries, as well as their benefits, performance, user satisfaction, and hurdles encountered during their usage. The purpose of this research is to determine what users believe about how e-resources and services are used at NIFT ranked libraries on various campuses of Andhra Pradesh state government funded universities.

OBJECTIVES

The purpose of the study, titled "User Awareness on Electronic Resources and Services by faculty members and Students of NIFT Ranked Universities of Andhra Pradesh" is to determine the extent to which e-resources and services are used. Electronic services include Internet access, OPAC, virtual/electronic reference services, Use digital tools like CD-ROM databases, online databases, e-mail, the Current Awareness Service (CAS), and other ways to communicate and store information electronically . The following are the study's objectives:

- (a) To investigate faculty and student perceptions, usage, and perceived relevance of e-resources.
- (b) To examine the motivations for which faculty and students use e-resources.
- (c) To determine the extent to which e-resources are used.
- (d) To determine the level of satisfaction with electronic resources and services.
- (e) To recognize the benefits of electronic resources over traditional papers.

- (f) To identify the challenges faced by students and faculty members while accessing and using e-resources and services.

METHODOLOGY

The university library is essential to the teaching and learning process. Investigator-selected Andhra Pradesh universities, which are got national rankings; as such, it plays a crucial role in conducting the survey. A total of seven university libraries, taken as a population The survey was conducted in April 2022 with the goal of getting useful input from library patrons and delivering a high quality, responsive one-stop service. This report discusses these surveys, including the conclusions and proposed enhancements. User survey responses give immensely valuable information for enhancing the library's services. The study's demographics are comprised of NIFT ranked universities. To collect the primary data, self administered, open-ended questionnaires were physically distributed to students and faculty members at the several university libraries. Respondents were selected at random from many university departments while sitting in the library. Due to the vastness of the library user population, it was difficult to survey and conduct an in-depth study on the whole library user population. Consequently, suitable, controllable, and applicable samples are selected at random from the seven main libraries with the biggest student enrollment. 161 out of the 200 surveys returned were completed. 80.5 percent of people responded. Among the 161 respondents, 105 were students (65.21%) and 56 were faculty (34.78%).

DATA ANALYSIS

Library Users Participated in the Survey

Table 1. Institution wise library users participations

S. No	Name of the university	NIFT Ranked Year	Faculty (%)	Student(%)	Total (%)
1	Andhra University, Visakhapatnam	EOY(2016)	9(16.07)	16(15.24)	25(15.53)
2	Jawaharlal Nehru Technological University, Kakinada	TY(2016,2017)	7(12.50)	14(13.33)	21(13.04)
3	Sri Krishnadevaraya University,	OY(2017)	9(16.07)	17(16.19)	26(16.51)

	Ananthapuramu				
4	Sri Venkateswara University, Tirupati	AY	9(16.07)	16(15.24)	25(15.53)
5	Yogi Vemana University, Kadapa	OY(2016)	6(10.71)	11(10.48)	17(10.56)
6	Sri Venkateswara Institute of Medical Sciences	TY(2018,2019)	7(12.50)	16(15.24)	23(14.29)
7	Sri Venkateswara Veterinary University	OY(2017)	9(16.07)	15(14.29)	24(14.91)
Total			56	105	161

AY-All the Years; EOY-Except One Year; OY- One Year; TY-Two Years

Table 1 shows that most respondents (26 out of 161) were from Sri Krishnadevaraya University, Ananthapuramu, followed by Sri Venkateswara University, Tirupati and Andhra University, Visakhapatnam with 25(15.53), Sri Venkateswara Veterinary University with 24(14.91), Sri Venkateswara Institute of Medical Sciences with 23(14.29), Jawaharlal Nehru Technological University, Kakinada, with 21(13.04%), Yogi Vemana University, Kadapa, 17(10.56%) being the least number of respondents are recorded.

Frequency of Use of E-Resources

Table 2: Frequency distribution of E-Resources

S. No	Frequency	Faculty(%)	Students(%)	Total(%)
1	Daily	25(44.64)	55(52.38)	80(49.69)
2	Two to three times a week	8(14.29)	12(11.43)	20(12.42)
3	Weekly	7(12.50)	8(7.62)	15(9.32)
4	Monthly	8(14.29)	16(15.24)	24(14.91)
5	Occasionally	8(14.29)	14(13.33)	22(13.66)
	Total	56	105	161

Percentages do not always equal 100 due to rounding n=161

This is the most significant and fundamental part of the evaluation and utility of e-resources. As a result, an attempt is made to quantify the regularity with which electronic resources are accessed. 25 (44.64%) faculty members went to the library every day, another 8 (14.29%) went two or three times a week, and another 7 (12.50%) used the resources once a week. In addition, 8 (14.29%) of faculty came monthly and 8(14.29%)occasionally. Of the remaining students, 55 (52.38%) went to the library at least once a day, 12 (11.43%) went between twice and thrice a week, and 8 (7.52%) went once a week, while 16 (15.24%) went at least once a month. Only 14 (13.3%) of the students stated they went to the library less than once a month. Consequently, the majority of 80 library users (49.69%) visited the library daily, while the lowest 15 library users (9.32%) went on weekly basis.

Descriptive Statistics of Users' Awareness of E-resources

Table 3. Descriptive statistics of e-resources

S. No	Electronic resource	Faculty (%)	Students (%)	Total (%)
1	E- library	29 (86)	79(86)	108 (67.1)
2	Moodle	38(95)	79 (88)	117 (72.7)
3	Online research Tool	48(95)	100(96)	148 (91.9)
4	E-book	38 (98)	96 (89)	134 (83.2)
5	E-database	52 (97)	102 (98)	154 (95.7)
6	E-dictionary	56 (100)	98 (96)	158 (98.1)
7	E-quick reference	38 (72)	98 (98)	136 (84.5)
8	Online public access catalogue	56 (100)	105(100)	161 (100)

Percentages do not always equal 100 due to rounding n=161

Students' and faculty members' familiarity with electronic resources is summarized in Table 3. According to the survey, 29 (86%) faculty were responsive to the e-library, 38 (95%) were acquainted with Moodle, 48 (95%) were associated with the online research tool, 38 (98%) faculty members were familiar with the e-book, and 56 (100%) were aware of the e-dictionary. 38 faculty

(72%) knew E-Quick Reference and 56(100%) associated with OPAC. Table 3 shows that 79 (86%) of the students were acquainted with e-library knowledge, and 79(88%) of the students were acquainted with Moodle and OPAC. The Online Research Tool was made available to 100 (96%) students, while the E-book was made available to 96 (89%) students, the E-database was made available to 102 (98%) students, the E-dictionary was made accessible to 98 (96%) students, and the E-quick Reference was made available to 98 (98%) students. 105(100) are OPAC-savvy. All poll respondents knew about the online public access catalogue (161 out of 100), but only 108 (67.1%) knew about E-library.

Electronic Services in Library: User Satisfaction Statistics

Table 4. User Satisfaction on Electronic Services

S. N.	Electronic Services	N	Mean	SD
1	Information literacy Training Programmes	96	3.62	1.28
2	Internet Enabled Workstations	109	3.20	1.2
3	Electronic / Virtual Reference	128	3.52	1.23
4	Current Awareness Services (CAS)	130	3.50	1.09
5	Selective Dissemination of Information (SFI)	96	3.08	1.28

Likert Scale used: 5=Extremely Satisfied, 4=Very satisfied, 3=Satisfied, 2=Slightly satisfied, 1=

Dissatisfied (Respondent are allowed multiple answers)

The statistical method was used to assess library user satisfaction with electronic services. The result suggests that there is a substantial disparity in the perspectives of the library patrons in this sample about their level of satisfaction with the electronic services offered in their university libraries. According to the descriptive data in Table4, respondents were very satisfied with training Programme on information literacy and electronic or virtual reference services (Mean=3.62 and 3.52 respectively). The mean ratings for current awareness service, internet-enabled workstations and selective distribution of information service were 3.50, 3.20, and 3.08, respectively. Respondents did not provide any negative responses.

The Objective of Utilizing E-Resources

Table 5: Purpose of using E-Resources

S. No	Purpose	Faculty(%)	Students(%)	Total(%)
1	Research Purpose(Thesis/Dissertation/Project Work)	52 (98)	102 (96)	154 (95.65)
2	Finding significant information in the area of specialization	42 (94)	98 (91.26)	140 (86.96)
3	Keeping upto date Subject information	47 (94)	100 (97.77)	147(91.30)
4	Getting Current Information	49 (92)	89 (86.66)	138 (85.71)
5	Teaching Purpose	55 (96)	-	55 (34.16)
6	Preparing assignment	-	102 (98.16)	102 (63.35)
7	Study purpose	45 (91.25)	103 (92.58)	148 (91.93)
8	Publishing articles/books	48 (96)	25 (39.85)	73 (45.34)

Percentages do not always equal 100 due to rounding n=161

According to Table 5, the majority of faculty members 52(98%), as well as students 102(96%), utilize electronic resources for research. Whereas 42(94%) of faculty members and 98(91.26%) of students reported using e-resources to locate significant material in their field of study, 47(94%) of faculty members and 100(97.77%) of students reported using e-resources to stay current on topic knowledge. 49(92%) of faculty members and 89(86.66%) of students utilize it to get current information, while 55(96%) of faculty members use e-resources for teaching and 102(98.16%) of students use it for assignment preparation. It is interesting to note that 95.65% of the people who answered the survey use the library's e-resources for research purpose in their field. 45(9.25) faculty members, 103(92.58) students reported study purpose and 48(96) faculty members, 25(39.85) supported to publishing articles purpose.

Search Options Used

Table 6. Search options used

S. No	Search Technique	Faculty(%)	Student(%)	Total(%)
1	Boolean operators (AND/OR/NOT)	48(95.25)	95(91.52)	143(88.82)

2	Weighted term search	45(96.58)	96(98.56)	141(87.58)
3	Subject term (truncated) search	49(98.25)	82(93.65)	131(81.37)
4	Full text search	51(97.86)	98(95.25)	149(92.55)

Percentages do not always equal 100 due to rounding n=161

To search for e-resources, 48(95.25%) of faculty members and 95(91.52%) of students used Boolean logic, 45(96.58%) of faculty members and 96(98.56%) of students used weighted term searching, 49(98.25%) of faculty members and 82(93.65%) of students used subject term (truncated) searches, and 51(97.86%) of faculty members and 98(93.25%) of students preferred full-text searching. The research shows that most of the people who answered the survey know how to search for e-resources. The majority of responders, 149 (92.55%), use a full text search approach.

Benefits of E-Resources Over the Conventional Documents

Table 7. Benefits of E-Resources Over the Conventional Documents

S.No	Benefits of E-Resources Over the Conventional Documents	Faculty(%)	Students(%)	Total(%)
1	Time Saving	48(96.52)	98(97.56)	146(90.68)
2	Easy to use	45(97.56)	97(92.56)	142(88.20)
3	More Informative	50(95.56)	99(92.58)	149(92.55)
4	More useful	48(98.26)	102(96.52)	150(93.17)
5	More preferred	51(97.54)	101(98.56)	152(94.41)

Percentages do not always equal 100 due to rounding n=161

Electronic publication, accessibility, subscriptions, and delivery systems have experienced a revolution as a result of the emergence of digital and electronic technologies and the recent globalization of electronic publish. There are several reasons why electronic resources have quickly become the most popular and rapidly expanding section of digital collections in many libraries. Table 7 depicts a selection of the most important benefits of e-resources as indicated by respondents. 48 (96.52%) of faculty and 98 (97.56%) of students reported that e-resources save time. 45 (97.56%) faculty and 97 (92.56%) students stated that e-resources are easy. 50(95.56%) of the faculty and 99(92.58%) of the students believed they were more informative. A total of 48

teachers (98.26%) and 102 students (96.52%) responded that they found e-resources to be more useful, while 51 faculty (97.54%) and 101 students (98.56%) responded that they preferred e-resources over printed ones. The results indicate that 152 participants (94.41%) feel that electronic resources are superior than conventional documents.

Problems of Using E-resources and Services

Table 8. Problems of Using E-resources and Services

S. No	Problems Faced	Faculty(%)	Students(%)	Total(%)
1	IT Infrastructure is not good	18(32.56)	42(33.52)	60(37.27)
2	Electronic resources are not adequate for needs	21(31.52)	48(35.52)	69(42.86)
3	Blockade of websites	36(56.25)	85(62.53)	121(75.16)
4	Slow downloading	32(18.56)	29(18.52)	61(37.89)
5	Library timing is not suitable	6(11)	8(15.23)	14(8.70)
6	Library staff is not co-operative	5(7)	2(1.36)	7(4.35)

Percentages do not always equal 100 due to rounding n=161

Table 8 comprises the replies of respondents to a call for information on any difficulties experienced while using e-resources and services. 18 (32.56%) faculty members and 42 (33.52%) students stated that IT is insufficient. 21(31.52) staff members and 48(35.52) students felt technological resources didn't suit their needs. According to 36 (56.25%) staff members and 85 (62.53%) students, the library restricts access to some helpful websites. Sluggish downloads have been reported by 32 (18.56%) staff members and 29 (18.52%) students when utilising the internet. 6 (11%) teachers and 8(15.23%) student library users complained about awkward hours. 5(7%) faculty and 2(1.36) students are reported non-cooperation of library staff

Overall Satisfaction Level of E-Resources and Services

Table 9. Overall Satisfaction Level of E-Resources and Services

S. No	Satisfaction Level	Faculty(%)	Students(%)	Total(%)
1	Dissatisfied	8(7.25)	2(5.25)	10(6.21%)
2	Slightly satisfied	15(10.58)	18(8.25)	33(20.50)

3	Satisfied	45(89.25)	101(96.58)	146(90.68)
4	Very satisfied	48(91.25)	92(98.25)	140(86.96)
5	Extremely satisfied	52(96.58)	95(92.35)	147(91.30)

Percentages do not always equal 100 due to rounding n=161

Respondents were asked about satisfaction level with e-resources and services. Among the faculty members, 8(7.25% were) "Dissatisfied," whereas 15(10.58%) were "Slightly Satisfied," and 45(89.25%) were "Satisfied". 48(91.25)% were "Very Satisfied". 52 (96.58%) faculty members were "Extremely Satisfied". Whereas 2(5.25%) students were "Dissatisfied," whereas 18(8.25%) students were "Slightly Satisfied," and 101(96.58%) were "Satisfied". While 92(98.25%) students were "very satisfied" with e-resources and services. 95(92.35%) student were "Extremely Satisfied".

DISCUSSION

The study shows that e-resources and services offered by universities libraries are becoming more and more important to research at Andhra Pradesh. Modern e-resources are important, but staff and students also need to have easy access to a lot of electronic backup. With the evolution of the educational paradigm, electronic resources have achieved worldwide recognized. The availability of the most recent technology, infrastructure, and services at a library would make better and more efficient information management more viable. Users may only maximize their use of e-resources in an atmosphere that is encouraging and helpful.

CONCLUSIONS

Modern society values e-resources and services. Libraries offer crucial e-resources and services to academic institutions. Effectively utilize these technological resources and services. The success of an educational institution depends on how well its online resources and services work for its students. Keeping in mind the ever-changing needs of library users, management-based library services must be continuously updated. The need for an abundance of current resources, creative library services, basic information literacy, and skills in using existing sources has grown urgent.

Several main implications may be derived from the outcomes of this study, which demonstrate that the majority of the goals of this study of a relatively small sample and the

expertise of its researchers have been realized. This research also indicates its influence on the library users knowledge and efficient use of accessible resources, subject to a few limitations. The study reveals that staff and students who responded to the campus library survey had a significant interest in using e-resources and services. the survey also shows that most respondents are aware of the search options for e-resources. Findings from studies on user adoption of e-resources and services highlight a number of barriers, including inadequate IT infrastructure and website blockages. In addition, library users cited a lack of skills for accessing e-resources and services and a discouraging attitude from library staff. More research with a broader scope or cluster and stratified sample might help us understand more.

REFERENCES

1. Maidabino, A.A. Collection security issues in Malaysian academic libraries: An exploratory survey. *Lib. Philo. Pract.*, annual volume, 2010. <http://unllib.unl.edu/LPP/maidabino-ngah.htm>.
2. Majid, S. & Abazova, A.F. Computer literacy and use of electronic information sources by academics: A case study of International Islamic University, Malaysia. *Asian Libraries*, 1998, **8**(4), 100-11.
3. Skaggs, B.L.; Poe, J.W. & Stevens, K.W. One-stop shopping: A perspective on the evolution of e-resources management. *OCLC Sys. Ser.: Intern. Dig. Lib. Pers.*, 2006, **22**(3), 192-206.
4. Makri, S.; Cox, A. & Warwick, C. Evaluating the information behavior methods: Formative evaluations of two methods for assessing the functionality and usability of electronic information resources'. *Inter. J. Human Com. Stud.*, 2011, **69**(7), 455-82.
5. Dadzie, P.S. E-resources: Access and usage at Ashesi University College. *Cam. Wide Info. Sys.*, 2005, **22**(5), 290-97.
6. Erens, B. How recent developments in university libraries affect research, *Lib. Manag.*, 1996, **17**(8), 5-16.
7. Khan, S.A.; Khan, A.A. & Bhatt. R. Use of ICT by students: A survey of faculty of education at IUB, *Lib. Philo. Pract.* annual volume, 2011 <http://www.webpages.uidaho.edu/~mbolin/khan-bhatti-khan.htm>.
8. Nwalo, K.I.N. Fundamentals of library practice: A manual on library outlines, StirlingHorden, Ibadan Nigeria, 2003.

9. Ababio, C.A.; Aidoo, E.N.; Korankye, T. & Saeed, B.I.I. Modeling student's satisfaction with library services in a tertiary institution: Evidence from Kumasi Polytechnic. *Info. Knowl. Manag.*, 2012, 2(6), 85-94.
10. Eager, C. & Oppenheim, C. An observational method for undertaking user needs studies, *J. Lib. Info. Sci.*, 1996, 28(1) 15-22.
11. Nadiri, H. & Mayboudi, S. M. A. Diagnosing university students' zone of tolerance from university library services, *Malaysian J. Lib. Info. Sci.*, 2010, 15(1), 1-21.
12. Kassim, N.A. Evaluating users' satisfaction on academic library performance. *Malaysian J. Lib. Info. Sci.*, 2009, 14(2), 101-15.
13. White, M.D. & Abels, E.G. Measuring service quality in special libraries: Lessons learned from marketing. *Special Libraries*, 1995, 86(4), 36-45.
14. Herson, P., & Altman, E. *Service quality in academic libraries*, Ablex Publishing, Norwood, NJ, 1996.
15. Tyagi, Sunil. Use of electronic information resources at the Indian Pharmacopoeia Commission. *DESIDOC J. Lib. Info. Tech.*, 2012, 32(2), 171-78.
16. Sohail, Md. & Alvi, Andleeb. Use of web resources by Medical Science Students of Aligarh Muslim University. *DESIDOC J. Lib. Info. Tech.*, 2014, 34(2), 125-30.
17. Md. Sohail, Shakil Ahmad Use of electronic resources and services by faculty members and students of Fiji National University. *DESIDOC Journal of Library & Information Technology*, 37(3), 165–171 <https://doi.org/10.14429/djlit.37.3.10567>.
18. Moe, National Institute Ranking Framework (Nirf), n.d. (Accessed on April 13th)