

# Use and Awareness of E-journals by the Faculty and Research Scholars of Veer Surendra Sai University of Technology

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## ABSTRACT

The present study aims to analyse the use and awareness of e-journals by the faculty members and research scholars of Veer Surendra Sai University of Technology (VSSUT). The study also intends to determine the purpose of using of e-journals, access place for searching e-journals, preferred format for accessing it and suggestions for promoting the use of e-journals. Questionnaire method was adopted to elicit data from faculty and research scholars of VSSUT. Total one hundred fifteen respondents participated in the survey from which 56 are faculty members and 59 are research scholars. The study reveals that faculty and research scholars are aware about e-journals and online database subscribed by their library. Majority of faculty and research scholars using e-journals for research purpose and Department is the most preferred location for accessing e-journals.

**Keywords:** E-journals, e-resources, online database, research scholars, VSSUT

## 1. INTRODUCTION

The recent developments of information technology has brought of drastic changes in the information scenario which reflects the information is available at one's fingertip. The impact of internet and current technology has brought a great change in the library services and access of information resources. The electronic information resources have taken a major role in the academic libraries as it enhances the learning, teaching and research activities. For that reason the libraries are procuring more number of online resources to satisfy the varying needs of students, research scholars and teachers. The faculty and research scholars are predominantly dependent on online journals for teaching and research work. It is inevitable to make a study on the different aspects of e-journals and issues relating to use of e-journals.

Most of previous studies focus on use of E-journals by either the research scholars or faculty members. However, few studies focus on both categories such as research scholars and faculty members. Looking towards the importance of the e-journals, the present study try to analyse the use and awareness of online journals by the faculty and research scholars of VSSUT and find out the problems and constraints faced by the users for accessing it and make recommendations for its proper use. This study is probably one of its kinds in the university.

## 2. VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY

The Veer Surendra Sai University of Technology<sup>1</sup> (VSSUT) Odisha was formed by Orissa Act 9 of 2009 by converting University College of Engineering (UCE), Burla to a non-affiliating Unitary University and came

into force by issue of notification by the Industries Department, Government of Odisha from 1<sup>st</sup> day of July 2009. The University is empowered to award degrees as specified by the UGC under section 22 of the UGC Act 1. There are total 14 departments covering engineering and Science. The academic programmes such as BTech, BArch, MTech, MSc, MCA, MPhil, PhD are provided by the university.

The University Library is the oldest technical library of the State. The new Library building has come up with the assistance from UGC and State Govt. and the library has started functioning in its newly constructed building since July, 1997.

The total collection of the Library is 67,365 volumes including books and bound journals and also collection includes e-books from different publishers. The Library is fully automated. The Library subscribes 74 nos. of print journals including both Foreign and Indian. The Library is subscribing Elsevier's Science Direct and SCOPUS database by spending 66.00 lakhs and accessing 12 nos. of e-resources from e-ShodhSindhu consortium of INFLIBNET. The Library is accessing total 3605 E-Journals and 8 Databases.

## 3. LITERATURE REVIEW

Several studies concerning e-journals have been carried out by the students, research scholars, and faculty members of various Universities and Institutions throughout the world. Few relevant studies on the topic have been reviewed and presented as follows:

Nisha & Ali<sup>2</sup> carried out a study and reveals that, awareness of e-journals among the users is very appreciating. They are using the e-journals for updating knowledge

and also retrieving relevant materials for their study and research. They are consulting these e-journals for research work, publishing papers, preparing assignments, presentations, seminars, etc.

Thanuskodi & Ravi<sup>3</sup> examined the utilisation of digital resources by faculty and research scholars of Manonmaniam Sundaranar University, Tirunelveli. The result shows that the digital resources were familiar among 67.14% of the faculty and they are using digital resources for research purpose. The majority of the faculty members required skill through self-study for using digital resources.

Satpathy & Rout<sup>4</sup> conducted a study which aims to assess and evaluate the use of e-resources by the faculty members of C.V. Raman College of Engineering (CVRCE), Bhubaneswar. The study indicated that faculty members are satisfactorily using the available e-resources, e-database, and e-journals. It recommends for subscription of more number of e-resources with high internet speed for accessing these resources by the Central Library.

Islam Khan<sup>5</sup> made a study among the students and research scholars of Department of Botany, AMU regarding the usage of e-journals. As revealed in the study results, the students and research scholars accessing e-journals in their concerned departmental computer lab and library. They are searching articles through search engine and adopting PDF format for reading articles for study and research. Internet was recognised as primary source for providing information about e-journals. Some of the barriers found in the study are lack of training, difficulty to read from screen, unavailability of full text, etc.

Shukla & Mishra<sup>6</sup> investigated in their study of making use of e-resources by the research scholars of Institute of Technology, BHU and highlighted the problems faced by them. It examined their views on usefulness of e-resources compared to print resources and the preferred place for accessing e-resources. The Research scholars prefer e-resources against print resources because of its various good features for their research progress and are looking in future to have more e-resource access within university campus with better internet connectivity.

Kumar & Reddy<sup>7</sup> reported in their study about availability of e-journals in University libraries of Andhra Pradesh, they are UGC-INFONET journals, open access journals that subscribed by the libraries. The researchers investigated use of e-journals by Research Scholars in 3 University libraries, i.e., SVU, AU and UH. The study reveals that a less number of research scholars visited the library for accessing e-journals. Majority of research scholars refer print journal for their research work as well as using UGC-INFONET e-journals. Due to slow internet connectivity they were facing problem for accessing the e-journals.

Liu<sup>8</sup> made a study the extent to which graduate students in a metropolitan university setting use print and electronic resources. The result shows that, 51.9% of respondents search online information resources i.e.

e-journals. Moreover, 84.2% of respondents use electronic resources 'all the time' compared to 54.2% who use printed sources 'all the time'.

A survey on awareness and use of e-journals among the research scholars and faculty members of Banasthali University, Rajasthan has been conducted by Singh & Kataria<sup>9</sup>. The study reflects that, majority of research scholars and Faculty members were aware about e-journals, and they access e-journals for research and development work.

Swamy & Kumar<sup>10</sup> conducted a study awareness and usage of E-Journals and E-Books by the students and research scholars of the University of Mysore and reveals that, 75% of research scholars and 84.3% of students are using e-journals and e-books. Moreover, 77.78% of research scholars and 80.56% students opine that e-journals and e-books are important for their academic and research endeavour.

Tamrakar & Garg<sup>11</sup> carried out a study and the findings shows that most of the users are aware about the e-journals offered by the library concerned to their subject and the e-journals are more popular than print journals. The library continuously provided information alert services to their users.

Jamal & Khan<sup>12</sup> investigated regarding the use of e-journals by the scientists of CSIR-Institute of Genomics and Integrative Biology (IGIB) and the findings reveals that the scientists are more fascinated towards e-journals especially on those provided by CSIR-NISCAIR Consortia & NKRC. The result shows that almost all the scientists are consulting e-journals for research purposes and to update their own knowledge. The infrastructure to use e-journals are tremendous and there is no technological problem specially hardware and software support with high bandwidth of Internet speed.

#### 4. AIM AND OBJECTIVES

The aim of this study is to investigate the use and awareness of the e-journals by the faculty members and research scholars of Veer Surendra Sai University of Technology. The objectives of the study are to:

- (a) Assess the awareness and use of e-journals among the faculties and research scholars about the availability of resources
- (b) Analyse the frequency and purpose of using of e-journals among faculties and research scholars
- (c) Identify the access place for searching e-journals and delineate the search technique adopted for searching articles
- (d) Ascertain preferred format (print or electronic) for accessing e-journals
- (e) Find out the different factors which make obstruction for accessing the e-journals
- (f) Examine frequently used databases of the publishers or aggregators of e-journals

(g) Recommend different strategies to improve the use of e-journals by faculties and research scholars.

**5. METHODOLOGY**

The author has adopted the Survey method for which a structured questionnaire was designed and distributed among the faculty members and research scholars in different departments of Veer Surendra Sai University of Technology. Some questionnaires were personally distributed and some were sent through e-mail to the faculty members and research scholars. Personal interviews were conducted wherever required. Total 148 questionnaires were distributed and 115 questionnaires have collected giving a response rate of 77.7%.

**6. DATA ANALYSIS & INTERPRETATION**

Out of 148 questionnaires, 115 filled in questionnaires received from 14 Departments of VSSUT. The questionnaires were edited as per the requirement.

In 2016, the E-ShodhSindhu consortium formed by merging of three consortiums such as: UGC- Infonet Digital Library Consortium, INDEST-AICTE consortium and NLIST by MHRD. The author has conducted an interview includes some faculty and research scholars regarding the knowledge of e-ShodhSindhu consortium and found that there is a very meager number of respondents having knowledge about this consortium, for which the author reframed the questionnaire with former consortium like

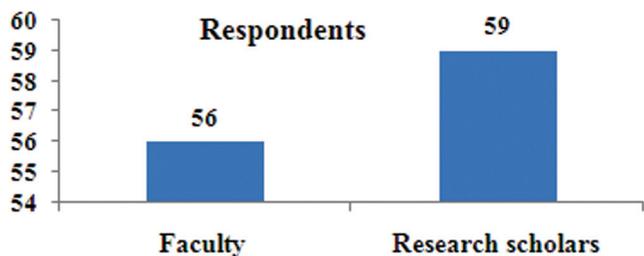


Figure 1. Distribution of respondents.

UGC Infonet consortium and INDEST consortium. The data collected from the respondents through questionnaire was tabulated and analysed in Fig. 1.

**6.1. Awareness of E-journals**

Due to changing pattern of research, the research community need intellectual thought and information collection for their area of research. E-Journals have become major resource for the researcher doing scholarly research. For this, libraries are acquiring a number of e-journals to fulfil their user need for research work and ultimately development of the Institution. It is utmost important that whether the users are aware about the e-journals subscribed by their libraries.

Table 1 shows that 98.21% faculty members and 100% research scholars were aware of e-journals

The Table 2 reveals that, 92.85% of Faculty and 84.74% research scholars are known about the online database subscribed by their library. Table 1 and Table 2

**Table 1. Awareness of electronic journals**

S. No.	Awareness	Faculty members (%)	Research scholars (%)
1.	Yes	55 (98.21)	59 (100)
2.	No	1 (1.79)	0
<b>Total</b>		<b>56</b>	<b>59</b>

**Table2. Awareness of online database subscribed by the library**

S. No.	Awareness	Faculty members (%)	Research scholars (%)
1.	Yes	52 (92.85)	50 (84.74)
2.	No	4 (7.15)	9 (15.26)
<b>Total</b>		<b>56</b>	<b>59</b>

reflects that a majority of faculty and research scholars are aware of electronic journals and online database procured by their library.

**6.2. Frequency of use of E-journals**

The respondents were asked regarding frequency of access of e-journals. Table 3 clearly indicates that, most of the research scholars (54.23%) were accessing e-journals daily in comparison to faculty, i.e., (51.78%). The analysed data reveals that majority of faculty and research scholars were using the e-journals on daily basis. The remaining 26.78% of faculty and 28.81% research scholars were using e-journals on weekly basis,

**Table 3. Frequency of access of e-journals**

S. No.	Frequency	Faculty members (%)	Research scholars (%)
1.	Daily	29 (51.78)	32 (54.23)
2.	Weekly	15 (26.78)	17 (28.81)
3.	Monthly	7 (12.5)	8 (13.55)
4.	Rarely	5 (8.93)	2 (3.38)
<b>Total</b>		<b>56 (100)</b>	<b>59 (100)</b>

12.5% of faculty and 13.55% of research scholars were using it on monthly basis, and only 8.93% of faculty and 3.38% of research scholars were using e-journals when it is required.

**6.3. Purpose of using E-journals**

The purpose of accessing e-journals among the faculty members and research scholars in VSSUT is as shown in Table 4. It is evident from above table that, highest respondents i.e. 73.21% of faculty and 83.05% of research scholars were using e-journals for research work. It reflects that the e-journals subscribed by the Library are effectively used for research work of the university. Among the respondents 67.85% faculty members and 76.27% of research scholars used e-journals for Writing articles and Conference paper, followed by 55.35% faculty and 52.54% research scholars used for updating their subject information. Whereas 42.85% faculty and least

**Table 4. For which purpose e-journals used**

S. No.	Purpose	Faculty members (%)	Research scholars (%)
1.	Teaching assignment	24 (42.85)	13 (22.03)
2.	Research work	41 (73.21)	49 (83.05)
3.	Writing articles/ conference paper	38 (67.85)	45 (76.27)
4.	Update subject information	31 (55.35)	31 (52.54)
5.	Career development	19 (33.92)	27 (45.76)

no. of research scholars (22.03%) used it for teaching assignment and least no. of faculty (33.92%) and 45.76% research scholars used it for career development.

**6.4. Location for Accessing E-journal**

Depending on the convenience of the user the e-journals can be accessed in different places in the university campus through IP address. Table 5 shows that a highest proportion of faculty members 82.14% and research scholars 64.4% accessed e-resources from their respective departments.

Further, the remaining 14.28% and 3.57% faculty members accessed e-journals in the Central library and computer centre respectively. Moreover, 20.33% of research scholars accessed e-journals in the central library followed by 11.86% in their hostel and 3.38% in the computer lab.

**Table 5. Access place for e-journal**

S. No.	Access place	Faculty members (%)	Research scholars (%)
1.	Department	46 (82.14)	38 (64.40)
2.	Central library	8 (14.28)	12 (20.33)
3.	Hostel	0	07 (11.86)
4.	Computer centre/ Lab	02 (3.57)	02 (3.38)
<b>Total</b>		<b>56</b>	<b>59</b>

**6.5. Sources of Information on E-journals**

The question intends to know, from which source the faculty members and research scholars were getting information about e-journals available in the library. Table 6 reveals that, the main source of information for the faculty members 58.92% were the library professionals and for the research scholars 76.27% were teachers/guide. Next highest source is Internet was used by both faculty members as 55.35% and research scholars as 72.88%. The other source used by the faculty members such as 23.21% from teachers/guide, 37.5% from Library website and 19.64% from print journals. Similarly the research scholars used other sources like 52.54% from library professionals, 55.93% from library website and 22.03% from print journals.

**Table 6. Sources of information on e-journals**

S. No.	Sources	Faculty members (%)	Research scholars (%)
1.	Library professionals	33 (58.92)	31 (52.54)
2.	Teachers/guide	13 (23.21)	45 (76.27)
3.	Library website	21 (37.5)	33 (55.93)
4.	Internet	31 (55.35)	43 (72.88)
5.	Print journals	11 (19.64)	13 (22.03)

**6.6. Preferred Format of Journals**

Despite of the popularity and speed of access of e-journals, the requirement of print journals remains inevitable. The data from Table 7 reflects that, majority of faculty members (46.42%) used Print format as well as electronic format of journals and most of the research scholars 52.54% used electronic format in comparison to faculty members. 32.14% faculty used electronic journals. 32.20% of research scholar used both print and electronic journals for their research work. 21.42% faculty and 15.25% research scholar opined that the print journals are very important although the presence of e-journals for the research work.

**Table 7. Preferred format of journals**

S. No.	Format	Faculty members (%)	Research scholars (%)
1.	Electronic	18 (32.14)	31 (52.54)
2.	Print	12 (21.42)	09 (15.25)
3.	Both	26 (46.42)	19 (32.20)
<b>Total</b>		<b>56</b>	<b>59</b>

**6.7. Search Technique used for Accessing E-journals**

The faculty members and research scholars adopted a variety of search strategy for accessing the required information. Reflects that the respondents used more than one search method.

The analysis of data in Table 8 shows that, ‘Keyword’ search is the most popular search among both faculty members (69.64%) and research scholars (69.49%) for searching information. ‘Subject’ search strategy preferred by 37.5% of faculty members and 55.93% of research scholars. 50% of faculty members and 59.32% of research scholars used ‘Author’ search method. ‘Journal Title’ search was mostly used by faculty members (57.14%), but not eye catching in case of research scholars (32.20%). ‘Abstract’ search was the least preferred search method used by 10.71% faculty members and 13.55% research scholars.

**6.8. Barriers in Accessing E-journals**

The present study intends to query about the barriers or obstacles faced by the faculty and research scholars for accessing e-journals. The response received from

**Table 8. Access point for searching article**

S. No.	Search by	Faculty members (%)	Research scholars (%)
1.	Keyword	39 (69.64)	41 (69.49)
2.	Subject	21 (37.5)	33 (55.93)
3.	Author	28 (50)	35 (59.32)
4.	Journal title	32 (57.14)	19 (32.20)
5.	Abstract	6 (10.71)	8 (13.55)

\*Multiple response were received.

the faculty members and research scholars are varying. Table 9 reveals that, majority of faculty members (58.92%) facing problem in slow downloading, whereas majority of research scholars (64.40%) opined they are not satisfied with available information. 55.35% of faculty responded they are not satisfied with available information and 47.45% of research scholars admitted for facing problem in slow downloading. The other barriers like ‘Unfamiliar in searching e-journal’ replied by 23.21% faculty and 20.33% research scholars. ‘Lack of training’ replied by 8.92% of faculty and 32.20% of research scholars. Further the barrier ‘limited access to computers’ answered by 46.42% of faculty and 52.54% of research scholars. The analysed data clearly shows that the respondents facing different problems for accessing information.

**Table 9. Barriers in accessing e-journals**

S. No.	Barriers	Faculty members (%)	Research scholars (%)
1.	Unfamiliar in searching e-journal	13 (23.21)	12 (20.33)
2.	Lack of training	5 (8.92)	19 (32.20)
3.	Not satisfied with available information	31 (55.35)	38 (64.40)
4.	Limited access to computers	26 (46.42)	31 (52.54)
5.	Slow downloading	33 (58.92)	28 (47.45)

**6.9. Consortia Approach for Accessing E-journals**

Due to serials crises, most of the university or Institution libraries have been discontinuing the subscription of e-journals. For this reason ‘Consortium’ approach is rise up and providing a large array of e-journals in various disciplines to fulfil the information need of different community. In 2016, the e-Sodh Sindu consortium formed with merging of 3 existing consortiums such as UGC-Infonet, INDEST and NLIST. In the present study the respondents having insufficient knowledge about e-Sodh Sindu consortium, for which the question reframed as earlier consortiums.

Table 10 reveals that, UGC-Infonet consortium is most familiar among faculty members (85.71%) and research scholars (74.57%) followed by INDEST consortium as 62.5% of faculty members and 62.71% of research scholars. Only 3.57% of faculty members

**Table 10. Knowledge about e-journal consortium**

S. No.	Consortium	Faculty members (%)	Research scholars (%)
1.	UGC-Infonet	48 (85.71)	44 (74.57)
2.	INDEST	35 (62.5)	37 (62.71)
3.	Other	2 (3.57)	0

replied they have knowledge about other consortium. The above data clearly indicates that the faculty and research scholars having enough knowledge regarding the e-journal consortium.

**6.10. Publisher wise Accessing E-journals**

Table 11 inferred that highest percentage of faculty members (91.07%) and research scholars (89.83%) searching for science Direct. Then followed by 76.78% faculty and 69.49% research scholars searching for ‘Springer Link’, 51.78% faculty and 49.15% research scholars searching ‘Taylor Francis’. 50% of faculty and 47.45% research scholars searching IEEE, whereas less than 40% response received from faculty and research scholars searching for rest of the e-journals publishers mentioned in the Table as these are subject specific and society journals.

**Table 11. Searching for e-journal publishers**

S. No.	Publishers	Faculty members (%)	Research scholars (%)
1.	Elsevier’s Science Direct	51 (91.07)	53 (89.83)
2.	Springer	43 (76.78)	41 (69.49)
3.	Taylor francis	29 (51.78)	29 (49.15)
4.	American Institute of Physics	5 (8.92)	4 (6.77)
5.	American Chemical Society	6 (10.71)	7 (11.86)
6.	Royal Society of Chemistry	6 (10.71)	7 (11.86)
7.	IEEE	28 (50)	28 (47.45)
8.	ASCE	12 (21.42)	7 (11.86)
9.	ASME	13 (23.21)	15 (25.42)
10.	JCCC	19 (33.92)	13 (22.03)
11.	Economic Political Weekly	2 (3.57)	0

**7. FINDINGS**

- (a) The response received from the respondents regarding awareness of e-journals shows that almost all the faculty and research scholars were aware about the e-journals and majority of faculty and research scholars (more than 80%) were aware about online databases subscribed by the library
- (b) About 54.23% of research scholars and 51.78% of faculty members were accessing the e-journals on daily basis

- (c) Majority of faculty members (73.21%) and research scholars (83.05%) were using e-journals for research purpose followed by (67.85%) faculty members and (76.27%) of research scholars used e-journals for Writing articles and Conference papers
- (d) Majority of faculty members (82.14%) and research scholars (64.4%) preferred Department for accessing e-journals
- (e) Majority of the faculty members (58.92%) were getting information about e-journals from Library professionals and majority of research scholars (76.27%) were getting information through teachers/guide
- (f) A major portion of faculty members (46.42%) preferred both print format and electronic format of journals, whereas (52.54%) research scholars preferred online form of journals
- (g) A majority of faculty members and research scholars adopted keyword searching
- (h) Slow downloading is the major barrier for faculty members (58.92%) whereas 64.40% of research scholars opined that they were not satisfied with available information
- (i) Majority of faculty members and research scholars were searching for Science Direct.

## 8. RECOMMENDATIONS

Based on the findings, the study recommends the following:

- (a) Awareness regarding use of e-journals should be developed to achieve current information for academic and research purpose. Information regarding available e-journals should be updated in the library website on regular interval and provide information about consortium subscription
- (b) The installation of computer terminals should be increased in the Department and central library for accessing e-journals effectively and efficiently
- (c) High speed internet connection should be provided for quick access of full text e-journals
- (d) The study clearly indicates that the subscription of online journals should be increased to fulfill the user needs
- (e) The library professionals should be trained and skilled who will provide awareness to the users for accessing of e-journals
- (f) It is essential that the Central Library should conduct hands on training and orientation programme for the research scholars and faculty members for the optimum use of online journals
- (g) Remote access to all the e-resources should be provided by the library

- (h) The library should adopt the tools like e-mail alert message and RSS feeds for promotion of online journals

## 9. CONCLUSIONS

Electronic resources predominantly represent an important component of the collection building activities in the library. With the availability of electronic networked resources and access tools, the Libraries of Academic organisation and playing an important role to provide e-resources and services to its users. Hence, the library users of the Academic organisation should be aware of the availability of e-resources and have adequate knowledge in accessing these resources for their academic and research purpose. The earlier literature reviews provide an overview of awareness and use of e-resources among the users is very appreciating and the e-journals are more popular among the users than print resources and they use it for their research work.

The study reveals that the faculty members and research scholars of VSSUT mostly rely on e-journals for research purpose and publishing articles. They are using the available e-journals satisfactorily. The library professionals tried their best for promotion, assistance and guidance in accessing e-journals. The increase in e-journals subscription indicates that the library has gone drastic changes in e-journals collection and services. The library has to employ different strategies for effective use of available online resources. The Central Library also develops the infrastructural facility for accessing online journals. The Central Library has to conduct the workshops and training programme for the best use of e-journals.

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