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Utilization of e-ShodhSindhu consortium by faculty members of private autonomous engineering colleges in Andhra Pradesh: A study

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Abstract
Availability of resources is now measured more appropriate than collection building. The consortium facilitated the libraries to get the benefit of wider access to electronic resources at an affordable cost and the best term of licenses. The collective strength of resources of various institutions available to it is in a better position to address and resolve the problem of managing, organizing, and archiving the electronic resources. Increase in the habit of reading, thrust for knowledge and rise in the information through sharing, with economical and cheaper with print resources. To face the challenge of global changes in technical education and to reach by the Autonomous engineering colleges, India is not far behind in providing its academic community and private engineering colleges also. To cater the needs e ShodhSindhu a national consortium by providing e-journals and e-databases to all Indian community and using the same by Private Autonomous colleges is being focused.

1. Introduction
"Consortia" is a plural form of "consortium" but is often used in a singular form. The consortium is derived from the Latin word "consort" which means "Partnership". A library consortium is a group of Libraries that come together to satisfy their Information needs co-operation and the sharing of resources. Library Consortium mainly deals with resource sharing in digital or electronic. The main aim of the Consortia is to achieve what the members of the group cannot access individually. In India the latest era of ICT and High-speed Internet, the Knowledge is most powerful tool to access the much-needed information. As libraries plays an important role in any education system and in our country is not far behind and stood first in catering the information needs particularly in Technical education. Research & Development, Educational needs are relying on the latest information and its costliest affair to access the latest and needed information, special in the case of developed countries and India is of no exception. In the pre independent era, there are 500 colleges after indepence the no. is 25,000. 500 Universities and more in the country seeking information which is costliest by any single university context. Keeping in mind the Government of India is always to provide information with very less cost and less time. e-ShodhSindhu is one the greatest one find solution in catering the information needs.
In the post Covid 19 period and now, the rise in access to e resources by the knowledge seeking community had increased and increasing in normal situation as well. The role of eSS in catering the faculty members in Private Autonomous engineering colleges yields many results and the study had resulted in many cases in our country. The role of eSS consortium with the cooperation of all technical educational institutions is catering the information needs through easy and cheaper rates and acting as one stop solution in providing information under one agency.

2. Literature Review
A Complete review of literature has become an essential part of any investigation as it identifies the problems and gaps in the area of research and also provides a basis for the theoretical framework of the study and interpretation of the findings.

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An attempt is made to review briefly the available literature on the information facility for higher education and research in general and in India in particular and not claim the full works on the subject published.

Gupta, Sobhagyawati (2017) Noted that the university libraries in India are actively engaged in incorporating electronic information resources and services. Escalating prices of journal have forced institutions to resort to alternatives like consortia for resource sharing that offer access to electronic resources, bibliographic databases and services through Internet and World Wide Web. UGC had initiated with a great effort UGC Infonet E-journals Consortium. Recently MHRD formed e-Shod Sindhu merging three consortia, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. Banasthali University library in Rajasthan is providing access to e-ShodhSindhu E-journals Consortium to its research community.

Suresh KumarP.K. (2018) Studied that the University of Kerala has been availing the facilities of the UGC-Infonet Digital Library Consortium (UGCIDLC) even from the first phase of its inception. The E-ShodhSindhu consortium was launched in December 2015 by merging three consortia namely UGCIDLC, N-LIST and INDEST-AICTE functioning under the Ministry of Human Resources Development, Government of India. The University continues to have access to the e-resources in the E-ShodhSindhu consortium in the University Library, Kariavattom Campus Library and the teaching and research departments and the research scholars and faculty make use of it for their academic activities. This paper is a study about the use of the E-ShodhSindhu by the research scholars.

Kishore Kumar &Anjaiah M. (2018) Emphasis on the use of UGC-Infonet e-journals by faculty members and research scholars of University of Hyderabad, Hyderabad. It also explores for what purpose users are using UGC-Infonet e-journals. It shows the problem faced by the users while accessing e-journals. It is a survey based research article a well-structured questionnaire was designed and distributed among 160 members, in this 135 filled questionnaires are received.

Esh, Manash (2019) Studied INFLIBNET under its e-Shodhsindhu consortium scheme by the users of University of North Bengal with the e-journal facility. The e-journal facility provided under INFLIBNET has brought another opportunity for university libraries to serve their users with high-quality content. The change needs to be further evaluated to identify the actual usage picture. The study identifies the trend of e-use of e-journal resources during 2012-2018 with the help of INFISTATS (usage statistics portal for e-Resource). The maximum use of e-journal, identified the maximum and minimum use of e-journals is found in using J-STOR & Science Direct has the maximum use of 55%. The author studied the highest percentage of use (91%) indicating the extensive use of e-journal facilities by the user community of the University of North Bengal.

Punit Kumar & B. K. Singh (2019) Noticed that the Document Delivery Service is an important library service which plays a vital role not only in procurement, organization, and preservation of resources for in-house academic community but also to provide access to the outside research scholars. E-DDS is the electronic form of document delivery service which facilitates the delivery of e-resources/scanned copies to the end-users through electronic mail. J-Gate@e-ShodhSindhu is a platform for providing web-based E-DDS throughout the universities and institutions in India which is a joint venture of INFLIBNET, Gandhi Nagar and Informatics (India), New Delhi. This study explains the importance of E-DDS om acade,oc environment and the role of J-Gate @ e-ShodhSindhu including the analysis of the services provided by Sayaji Rao Gaekwad Library of Banaras Hindu University, Varanasi.

Chanchinmawia, F& Manoj Kumar Verma (2019) Evaluated and found that the user awareness and uses of e-ShodhSindhu Digital Library Consortium by Faculty Members and Research Scholars of Mizoram University. A Well-structured questionnaire had designed and randomly distributed to 502 respondents for data collection, out of which 311 (61.95%) filled questionnaire from respondents which constituted 136(47.7%) Faculty Members and 175(56.27%) Research Scholars was received for data analysis. The study examines the awareness, utilization and satisfaction with e-ShodhSindhu Digital Library Consortium resources by Faculty and Research Scholars and, found that 236 (76%) respondents are aware and use digital library consortium but there is a need to conduct more awareness/training program for enhancing the use of e-ShodhSindhu Digital Library Consortium.

Singh, Sukhbir Neha Garg & Chetan Sharma (2020) Found that the E-ShodhSindhu consortium is backbone of research in higher education system in India. EShodhSindhu consortium provides full text and bibliographical journal databases to higher education institutions at subscription cost. The current study is an effort to find out the use of E-ShodhSindhu consortium by the Research Scholars of Kurukshetra University and Maharshi Dayanand University. The Study indicates that more than 55% Research Scholars including both the universities are aware about E-ShodhSindhu consortium and they use it mainly for research work.

3. e-Consortium in different areas of Information Needs:
3.1. Use of Consortiums of University Libraries.
The Impact of e-journals on university libraries in terms of resources, staffing, space, technical services and equipment had been traced with well-structured questionnaire for data collection of the study. A well covered survey of the literature was done to examine the findings of the past studies. and the result of the survey reveals that the impact of e-journals on subscription to e-journals, infrastructure etc. and noted implications of the study for information creators, publishers, libraries, scholars and researchers and listed some implications and suggestions to be adopted in future. Kaur, Amritpal (2011).

3.2. Consortiums in College and Special Libraries.
The present paper explains about National Knowledge Resource Consortium and examined awareness and use of the consortium by the users of NISCAIR. 70 questionnaires were distributed to the users and 63 questionnaires were received back for analysis the data. The results of the survey reveal that majority of the respondents were aware of the consortium whereas only 4.76% were not aware of the consortium. 52.38% respondents were moderately satisfied with the consortium and 23.80% were using for writing research articles. Some problems were highlighted while accessing the consortium. Providing training to its users will

make maximum use of the consortium and reduce the problems faced by the users. Sakshi & *et al.*, (2012).

3.3. Use of Consortiums in Technical and Engineering Libraries.

Found that the present study was carried out at e-ShodhSindhu consortium for higher educational institution such as University, CFTIs, and Technical Colleges to access the e resources for academic purpose. In the age of dubious and costly information access, e-resources play aimportant role solution to the problem now in the age of information explosion, e resources play a vital role and only it is the solution in higher education for distribution of skills in the present situation. e-ShodhSindhu electronic resources consortium discussion about this study regarding its services, available e resources like e journal, e books, e database and e resources for higher education (University, Technical colleges, CFTIs-). The study foundthat the present time total 358 Higher educational institutions are registered with e-ShodhSindhu from, all the state and UT of India such as only 221 University, 66 CFTIs and 72 Technical colleges which can access electronic resources subscribed by the e ShodhSindhu consortium for higher education. Karan Singh (2017)

3.4. Study of Consortiums in Agricultural and Medical Libraries.

Focused on use of ERMED consortium facilities by faculty of Stanley Medical College (SMC) Chennai, Tamil Nadu. A total number of 63 users are taken into account for the study through a questionnaire-based survey method. The collected data were classified, analyzed, and tabulated by using simple statistical methods. This study covers the impact of ERMED consortium resources on users in the library. The major findings are majority of the respondents, 57 of them (90.476%) were female and the remaining 6 respondents (9.523%) were male. Majority of the respondents are satisfied with availability of online e-resources available in the library and also indicating that majority of the users are Assistant professors and are in a good opinion about the e-resources provided by the publishers. J. Selvamani & Kotti Thavamani (2017)

3.5. Usage of Consortiums in Foreign Academic and Special Libraries

Detailed Study on the operationalization of a library consortium's electronic resources assessment and reporting plan, including the implementation of procedures to collect and archive usage data, and the development of a sustainable annual reporting process. Despite that finding of implementing a practical e-resources assessment plan for a consortium is possible with limited available human resources, Significant challenges related to data collection continue to limit the ability of library consortia to undertake more holistic assessments of the overall value of their procured e-resources. Randall A. Lowe, (2021)

4. Analysis and Data interpretation

Table A: Qualification wise distribution of the Faculty

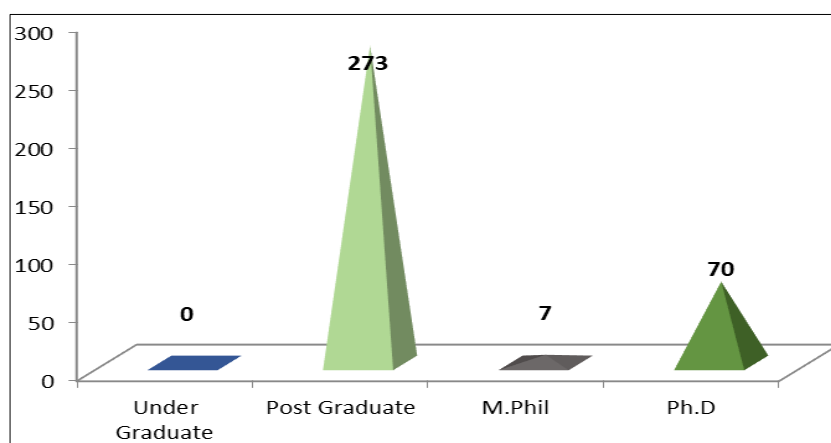| Qualification	Count	Percentage
Under Graduate	0	0
Post Graduate	273	78.0%
M.Phil	7	2.0%
Ph.D	70	20.0%
Grand Total	350	100.00%

Fig A: Qualification wise distribution of the Faculty

Table A. shows the qualification wise distribution of the Faculty. There are 70 (20.0%) faculty who had completed Ph.D followed by 7 (2.0%) faculty who had completed M.Phil program, 273 (78.0%) who had completed Post Graduate program.

Table B: Awareness of e-ShodhSindhu Consortium

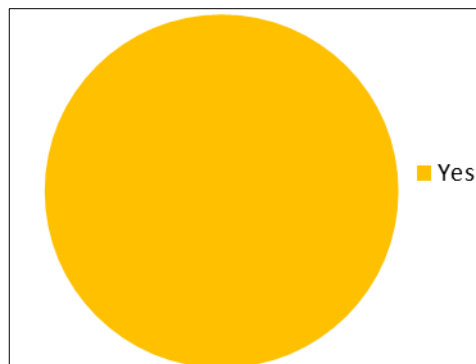| Sl. No	Aware of e-ShodhSindhu Consortium	Total (N=10)%
1	Yes	350
2	No	0
	Grand Total	350

Fig B: Awareness of e-ShodhSindhu Consortium

Table B. describes the awareness of the faculty about the e-ShodhSindhu Consortium. It is evident that all the faculty members are aware of the e-ShodhSindhu Consortium and are utilizing the same to meet their academic and research activities

Table C: Designation Vs Source of Awareness of e-ShodhSindhu Consortium

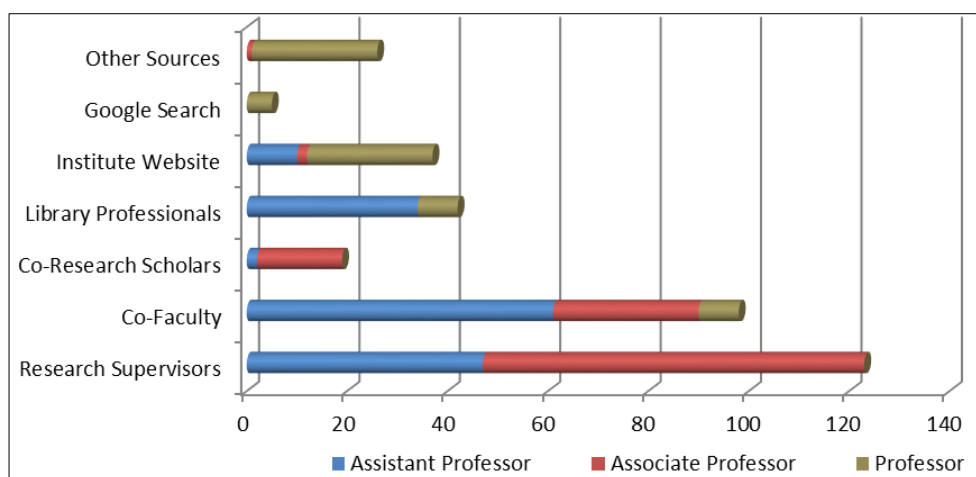| Awareness of eSS		Assistant Professor	Associate Professor	Professor
Source of Awareness of e-ShodhSindhu Consortium	Research Supervisors	47 (13.43%)	76 (21.71%)	0
	Co-Faculty	61 (17.43%)	29 (8.29%)	8 (2.29%)
	Co-Research Scholars	2 (0.57%)	17 (4.86%)	0
	Library Professionals	34 (9.71%)	0	8 (2.29%)
	Institute Website	10 (2.86%)	2 (0.57%)	25 (7.14%)
	Google Search	0	0	5 (1.43%)
	Other Sources	0	1 (0.29%)	25 (7.14%)
	Total	154 (44%)	125 (35.71%)	71 (20.29%)

Fig C: Designation Vs Source of Awareness of e-ShodhSindhu Consortium

Table C. describes the sources through which the faculty is aware of the e-ShodhSindhu Consortium. Among the Assistant Professors, 61 (17.43%) knew through Co-Faculty, 47 (13.43%) through Research Supervisors, 34 (9.71%) through Library Professionals, 10 (2.86%) through Institute Website and 2 (0.57%) from Co-Research Scholars. Among the Associate Professors, 76 (21.71%) knew through their Research Supervisors, 29 (8.29%) through Co-Faculty, 17(4.86%) through Co-Research Scholars and 2 (0.57%) through Institute Website. Among the Professors, 25 (7.14%) each came to know through Institute Website and Other Sources while 8 (2.29%) each through Co-Faculty and Library Professionals and the remaining 5 (1.43%) through Google Search.

Table D: Designation Vs Purpose for Usage of e-ShodhSindhu Consortium

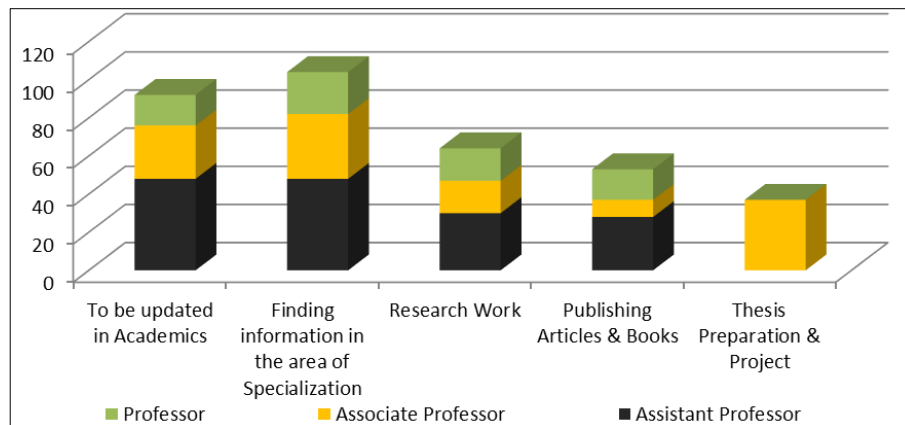| Purpose of Using eSS		Assistant Professor	Associate Professor	Professor
Purpose for usage of e-ShodhSindhu Consortium	To be updated in Academics	48 (13.71%)	28 (8%)	16 (4.57%)
	Finding information in the area of Specialization	48 (13.71%)	34 (9.71%)	22 (6.29%)
	Research Work	30 (8.57%)	17 (4.86%)	17 (4.86%)
	Publishing Articles & Books	28 (8%)	37 (10.57%)	16 (4.57%)
	Thesis Preparation & Project	0 (0%)	9 (2.57%)	0 (0%)
	TOTAL	154 (44%)	125 (35.71%)	71 (20.29%)

Fig D: Designation Vs Purpose for Usage of e-ShodhSindhu Consortium

Table D. describes the purpose of usage of the e-ShodhSindhu Consortium by the faculty. Among the Assistant Professors, 48 (13.71%) each are using to be updated in Academics and for Finding Information in the area of Specialization, 30 (8.57%) are using for their Research Work and the remaining 28 (8.0%) are using for Publishing Articles & Books. Among the Associate Professors, 37 (10.57%) are using for Publishing Articles &

Books, 34 (13.71%) for Finding Information in the area of Specialization, 28 (8.0%) want To be Updated in Academics, 17 (4.86%) for Research Work and the remaining 9 (2.57%) for Thesis Preparation & Project. Among the Professors, 22 (6.29%) use for Finding information in the area of Specialization, 17 (4.86%) for Research Work and finally 16 (4.57%) each for Publishing Articles & Books, and to be Updated in Academics.

Table E: Designation Vs Search Techniques used for surfing e-ShodhSindhu Consortium

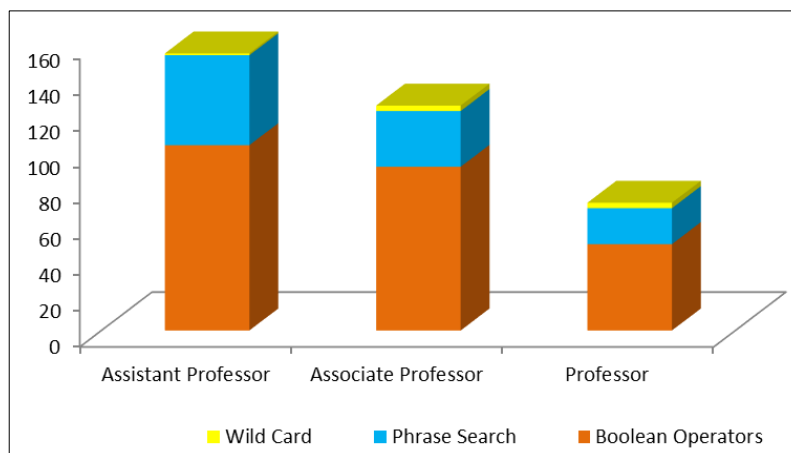| Search Techniques used to search e-ShodhSindhu Consortium	Assistant Professor	Associate Professor	Professor
Boolean Operators	103 (29.43%)	91 (26%)	48 (13.71%)
Phrase Search	50 (14.29%)	31 (8.86%)	20 (5.71%)
Wild Card	1 (0.29%)	3 (0.86%)	3 (0.86%)
TOTAL	**154 (44%)**	**125 (35.71%)**	**71 (20.29%)**

Fig E: Designation Vs Search Techniques used for surfing e-ShodhSindhu Consortium

Table E. Describes the Search Techniques used by the faculty to search e-ShodhSindhu Consortium. Among the Assistant Professors, 103 (29.43%) are using the Boolean Operators technique faculty to search e-ShodhSindhu Consortium followed by 50 (14.29%) use Phrase Search and 1 (0.29%) using the Wild Card technique. Among the Associate Professors, 91 (26.0%) are using the Boolean

Operators technique faculty to search e-ShodhSindhu Consortium followed by 31 (8.86%) use Phrase Search and 3 (0.86%) using the Wild Card technique. Among the Professors, 48 (13.71%) are using the Boolean Operators technique faculty to search e-ShodhSindhu Consortium followed by 20 (5.71%) use Phrase Search and 3 (0.86%) using the Wild Card technique.

Table F: Designation Vs Influence of e-ShodhSindhu Consortium on Academic Efficiency

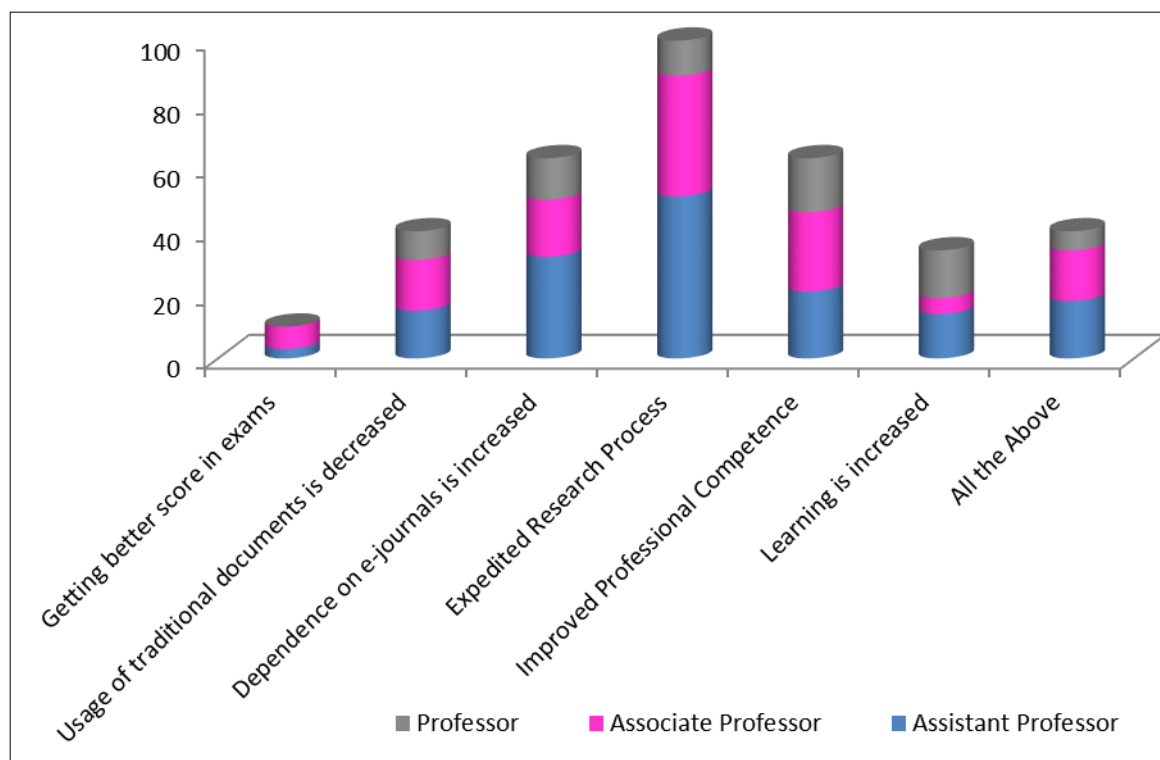| Influence of e-ShodhSindhu Consortium on Academic Efficiency	Assistant Professor	Associate Professor	Professor
Getting better score in exams	7 (2%)	3 (0.86%)	**71 (20.29%)**
Usage of traditional documents is decreased	15 (4.29%)	16 (4.57%)	9 (2.57%)
Dependence on e-journals is increased	32 (9.14%)	18 (5.14%)	13 (3.71%)
Expedited Research Process	51 (14.57%)	38 (10.86%)	11 (3.14%)
Improved Professional Competence	21 (6%)	25 (7.14%)	17 (4.86%)
Learning is increased	14 (4%)	5 (1.43%)	15 (4.29%)
All the Above	18 (5.14%)	16 (4.57%)	6 (1.71%)
TOTAL	154 (44%)	125 (35.71%)	71 (20.29%)

Fig F: Designation Vs Influence of e-ShodhSindhu Consortium on Academic Efficiency

Table F. describes the influence of e-ShodhSindhu Consortium on the academic efficiency of the faculty members. 7 (2%) Assistant Professors and 3 (0.86%) Associate Professors opined that e-ShodhSindhu Consortium help in Getting Better Score in Exams. 15 (4.29%) Assistant Professors, 16 (4.57%) Associate Professors and 9 (2.57%) Professors opined that e-ShodhSindhu Consortium Decreased the Usage of Traditional Documents. 32 (9.14%) Assistant Professors, 18 (5.14%) Associate Professors and 13 (3.71%) Professors opined that e-ShodhSindhu Consortium Increased the Dependence on e-journals. 51 (14.57%) Assistant Professors, 38 (10.86%) Associate Professors and 11 (3.14%) Professors opined that e-ShodhSindhu Consortium helped in Expedited Research Process. 21 (6%) Assistant Professors, 25 (7.14%) Associate Professors and 17 (4.86%) Professors opined that e-ShodhSindhu Consortium Improved their Professional Competence. 14 (4%) Assistant Professors, 5 (1.43%) Associate Professors and 15 (4.29%) Professors opined that through e-ShodhSindhu Consortium Learning is Increased/Enhanced. 18 (5.14%) Assistant Professors, 16 (4.57%) Associate Professors and 6 (1.71%) Professors opined that e-ShodhSindhu Consortium helped them through all the mentioned factors.

Table G: Designation Vs Suggestions for improving e-ShodhSindhu Consortium

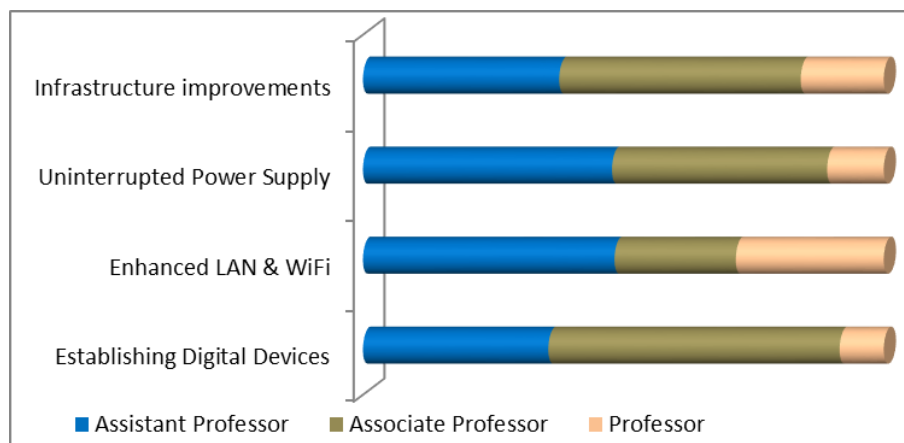| Suggestions for improving eSS	Assistant Professor	Associate Professor	Professor
Establishing Digital Devices	21 (6%)	33 (9.43%)	5 (1.43%)
Enhanced LAN &WiFi	85 (24.29%)	41 (11.71%)	50 (14.29%)
Uninterrupted Power Supply	22 (6.29%)	19 (5.43%)	5 (1.43%)
Infrastructure improvements	26 (7.43%)	32 (9.14%)	11 (3.14%)
TOTAL	154 (44%)	125 (35.71%)	71 (20.29%)

Fig G: Designation Vs Suggestions for improving e-ShodhSindhu Consortium

Table G describes the suggestions of the faculty for improving the usage of e-ShodhSindhu Consortium. 21 (6%) Assistant Professors, 33 (9.43%) Associate Professors and 5 (1.43%) Professors opined that Establishing Digital Devices will improve the usage of e-ShodhSindhu Consortium by the users. 85 (24.29%) Assistant Professors, 41 (11.71%) Associate Professors and 50 (14.29%) Professors opined that Enhanced LAN & WiFi will improve the usage of e-ShodhSindhu Consortium by the users. 22 (6.29%) Assistant Professors, 19 (5.43%) Associate Professors and 5 (1.43%) Professors opined that Uninterrupted Power Supply will improve the usage of e-ShodhSindhu Consortium by the users. 26 (7.43%) Assistant Professors, 32 (9.14%) Associate Professors and 11 (3.14%) Professors opined that Improvements in the Infrastructure will improve the usage of e-ShodhSindhu Consortium by the users.

5. Conclusion
The present study is conducted to ascertain the usage pattern of the e-ShodhSindhu Consortium by the faculty members of the selected autonomous colleges in the state of Andhra Pradesh. During the study, it is being observed that several factors play on the usage and their magnitude on accessing the e-resources which are part of the e-ShodhSindhu Consortium. Institutions are providing infrastructure as per the requirements of the statutory bodies. Despite these facilities it is being observed that most of the institutions are not disseminating the desired information to the users about the availability of the various e-resources in the library. It is essential for the institutions to continuously interact with the vendors so that there is an increase in the collection of the e-resources in the e-ShodhSindhu Consortium which are aimed at meeting the continuously changing information needs of the library users. There is need to provide adequate ICT infrastructure along with proper training to the library staff so that the e-Resources are properly handled and made easily accessible by the library professionals. The user orientation is also essential so that the vital and significant features of the e-ShodhSindhu Consortium are known to the user groups which will invturn benefit the academic community.

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