Use of E-resources by the Faculty Members of Pondicherry University and its Affiliated Colleges: An Analytical Study

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Abstract – **Libraries are an integral part of any academic system. Of late, they become vigorous and purposeful as the present period is a period of digital libraries, electronic libraries and virtual libraries. These changes demand development of modern skills to both library professionals as well as users. The information that is available in digital form requires IT enabled infrastructure facilities for its handling. With out adequate infrastructure facilities, Universities and colleges can not share their resources and the services provided by the University in an effective way to its users. This paper discusses the provision of infrastructure facilities extended to library users especially to the faculty members of Pondicherry University and the affiliated colleges to access the e-resources of the library of Pondicherry University.**

Keywords: **Electronic Resources, Infrastructure Facility**

I. Introduction

The teaching faculty members contribute towards the accomplishment of teaching, research, and community service and that is the main objective of faculty members. They are the one providing academic guidance to students and widen the knowledge in the specific field through research and publication. In order to provide the best user service, the academic libraries act as a reservoir of knowledge and also respond promptly to the demands of users. The purpose of the university library is to support the academic programs of the university. The library objectives must match with the needs and requirements of those involved in the learning, teaching, and research efforts of the university.

Since libraries acquire materials primarily to make them available and accessible to its users, the ultimate success of a collection shall be decided by measuring the best possible use. To measure the utility of collections, two basic approaches are recommended. These are user studies and use studies. Users can be surveyed to decide whether their needs and requirements are fulfilled with the available resources or not and the real success remain in meeting those needs. The resources which the library has, how readily they can accommodate user's requests can also be measured. User satisfaction is one of the important factors for measuring quality services. This study examines the satisfaction of faculty members of the Pondicherry University and its affiliated colleges with the services of the university library.

The following table shows the resources of the library of Pondicherry University. The details of which can be reached at pondiuni.edu.in. The total number of members in the University is more than 5000 of which the faculty alone on the roll is 413 in the University excluding the affiliated colleges.

To access the e-resources the University Library provides wifi enabled computers. To indicate the latest additions of e-resources to the library, e-circulars/e-alerts are posted, besides flash news on the library portal indicate the latest additions of e-resources is also periodically posted. Facilities are provided for the faculty to use the e-resources in their respective seat of the departments, computer center and in the library. Besides this anyone can access the e-resources of the library with the help of laptop or desktop anywhere in the campus of the University as it has wireless wifi connectivity.

II. Literature Review

French (1990) observes that the proliferation of information sources has made information provision a cumbersome task. He advocates for a speedy document delivery system and partnership with users to shape collections for maximum satisfaction.

Hewin (1990) emphasizes the need to design information provision mechanisms to increase use. Arif and Meadows (1994) observe that once users become aware of an information source, they tend to use it.

Singh (1981), Ajidahun (1990), and Ehikhamanor (1990) established that the information needs of academic staff were job-related, especially teaching, research, and publication. Asamoah-Hassan (1999) suggests a model library of the 21st century, befitting a university of science and technology in

sub-Saharan Africa, as necessary to ensure that the libraries remain relevant in the changing age of information, where libraries without walls are emerging and the time lag between demand and delivery of information has been greatly reduced.

Oketunji (2003) points out that the digital revolution has affected many aspects of our life. The philosophy of ownership of information has been challenged by a new philosophy of enhanced access to information, and has revolutionized the way librarians provide information to their users.

A lot of questions come to our mind when one looks at contemporary libraries, especially the area of digitization. One question is coming up in our mind as to whether librarians can cope with the digital environment and maintain quality service to their community of users. In the digital era, librarians can no longer be information providers. The ICT has changed the way of users who are able to access, retrieve, and use the information.

III. OBJECTIVES OF THE STUDY

The following objectives are framed for this study.

1. To determine how far the infrastructure provided by the Pondicherry library enables its faculty members and colleges which are affiliated to the University to utilize the e-resources maximum possible level;

2. To analysis for what purpose the faculty members are using the e-resources provided by the University library;

3. To ascertain the available e-resources are relevant to their field of specialization;

4. To find out their suitable and convenient time for browsing the e-resources;

5. To know the frequency of using the e-resources by the faculty members.

IV. METHODOLOGY

Survey research was used for this study. A questionnaire was distributed among 800 faculty members in the university and other colleges as well of which 625 were returned and found usable for the study. Stratified random sampling technique has been deployed for the selection of population for the study. For the present study, the investigator visited the faculty of Pondicherry University and approached the faculty to collect the necessary data. The data collected through questionnaires were organized and tabulated by using statistical methods. Personal interaction with the faculty has revealed many important hard facts and enabled the investigators in making some important suggestions for the overall improvement of the infrastructure facility and services of the Pondichery University Library.

V. DATA ANALYSIS AND INTERPRETATION

This table shows the utilization of e- resources by the faculty on the basis of their designation/ position.

The table discusses the improved benefits that the respondents feel and derive from the electronic information resource utilization. The table includes the benefits such as wider range of information, faster access to information, current information access, easy access of information and improving academic performance. The respondents were asked whether they get benefit of all the above stated factors or not. The data in the table clearly shows that the respondents are getting real benefit by using e-resources. The fluctuations of benefit ratio are as follows:

The benefits highly noted among the respondents are current information access, faster access to information and wider range of information.The respondents have categorized the benefit of improving academic performance at the less percentage compared to others.While analyzing the designation wise data the Professors are supporting the benefit of current information access as the prime most benefit of e-resources. Whereas the Associate Professors feel that the benefit of faster access information is highest benefit that they get by using e-resources. The Assistant Professors place the benefit of wider range of information to the first rank as far as they are concerned; yet, all the three categories rank the benefit of improving academic performance at the last rank.

From the above interpretation, it is deduced that the benefits that are highly credited by the faculty members are the current information access, faster information access and wider range of information. Yet, all the faculty members do not highly accept that the benefit of improving academic performance is possible only by using e-resources it may be one of the factors for it.

TABLE I UTILIZATION OF E-RESOURCES

Access Benefit	Professors			Associate Professors			Assistant Professors		
	Yes	No	Total	Yes	No	Total	Yes	No	Total
Wider range of information	231	19	250	170	11	181	187	07	194
Faster access to information	229	21	250	178	03	181	179	15	194
Current information access	232	18	250	164	17	181	181	13	194
Easy access of information	230	20	250	158	23	181	145	49	194
Improving Academic performance	210	40	250	155	26	181	142	52	194

TABLE II PURPOSE OF USING E-RESOURCES

Purposes	Professors		Associate Professors		Assistant Professors		Total	
	Respondents	%	Respondents	%	Respondents	%	Respondents	%
Searching information for research projects	97	38.8	12	6.62	55	28.35	164	26.24
Keeping up to date of one's own knowledge	68	27.2	23	12.7	32	16.49	123	19.68
For knowing current issues	69	27.6	15	8.29	37	19.07	121	19.36
Searching information for teaching	16	6.4	131	72.37	70	36.08	217	34.72
Total	250	40.0	181	28.96	194	31.04	625	100

Chi-square	Df	P-value
9.39	6	0.15 Not Significant

This table analysis the purpose of using e-resources on the basis of designation of respondents, the purposes take for analysis are `research purpose,' `updating knowledge,' `knowing current issues,'  and `teaching purpose,' Among these purposes the teaching purpose stands to be top in rank of order showing 34.72% by all the respondents. The next purpose that is ranked to second is for the `research purpose' it is accounted 26.24% the other purposes are equally recorded as 19.68%.

The designation-wise analysis put fourth the result that the Professors are found using e-resources with the major purpose of their research activities and guidance. It has recorded 59.15% among them.

The purpose of teaching is found very less only in Professors category reflecting a mere percentage of 7.37 while analyzing Associate Professors they have recorded 60.37%

of data for the purpose of teaching and the other purposes, are lag behind where as the Assistant Professors are using e-resources for the purpose of their own research activities which shows 33.54% yet, they equally access e-resources for the purpose of `teaching' and `knowing current issues" their percentages of purpose are more or less equal.

From the above discussions, we can bring out the findings that the major purpose found among overall population is teaching followed by the purpose of `research'. Professors are found with the top most purpose of research activities for using e-resources. Only this category has recorded very less percentage at the purpose of `teaching'.

On the contrary Associate Professors highly rely on e-resources for the purpose of teaching rather than other purposes whereas the Assistant Professors highly depend on e-resources for the purpose of research activities followed by teaching purposes.

The two-way anova test validates the above findings with calculated chi-square value of 9.39 and P-value is 0.15 which is found significant and it is greater than 0.05 therefore, the formulated null hypothesis of there is no association between the purpose of using e-resources on the basis of designation of respondents is proved which in result it is accepted.

An analysis is made to find out how well the respondents could find the key e-resources as much as suitable for their field of specialization. The data in the above table explains that the majority of respondents are found with the suitability of key words at the scale of 75%. Some 220 respondents have said that the key resources that they collect have the suitability of cent percent. Yet, 48 respondents have said that only 50% of key resources are found suitable to their field of specialization.

While analyzing designation-wise data, 71.82% of Associate Professors are contented with the key e-resources that they access as it is suitable cent percent to this category. Yet, 76.8% of Professors category have brought out the fact that the key e-resources that they collect are found suitable only at 75% it may be the reason that when the search is narrowed down the matching ratio is found decreasing it is supported by 56.7% of Assistant Professors as they also find the key e-resources suitable at 75%. The other scales of 50 and 25% suitability have secured very less percentages. It may be due to the reason that the search key words may not be appropriate.

By analyzing the above discussion it is inferred that the key e-resources that the respondents access have suitability of 75% at the maximum level followed by cent percent. It is clear that the key e-resources are highly suitable to the field of specialization of the respondents. Majority of the Professors (76.8%) are found with the suitability ratio of 75% and Associate Professors are with 71.82% at the cent percent suitability.

The calculated Chi-Square value is 0.01 which is found to be significant so the framed hypotheses of there is no association between the designation and the opinion about suitability of key e-resources in the field of specialization is rejected and alternate hypotheses is accepted.

TABLE III AVAILABILITY OF KEY E-RESOURCES IN THEIR FIELD OF SPECIALIZATION

Designation	Cent Percent Suitable	75% Suitable	50% Suitable	25% Suitable	Not at all Suitable	Total
Professor	40 (18.00)	192 (76.80)	15 (6.00)	0 (0.00)	3 (1.2)	250
Associate Professor	130(71.82)	40 (22.1)	7 (3.87)	1 (0.55)	3 (1.66)	181
Assistant Professor	50 (25.77)	110 (56.70)	26 (13.40)	1 (0.52)	7 (3.61)	194
Total	220	342	48	2	13	625

Chi-square	Df	P-value
30.64	8	0.001 Significant

TABLE IV OPINION ABOUT CONVENIENT TIME TO BROWSE FOR RETRIEVAL

Designation	In the Morning		During the Afternoon and Early Evening		Late at Night		Total	
	Respondents	%	Respondents	%	Respondents	%	Respondents	%
Professor	55	22.0	143	57.2	52	20.8	250	40.0
Associate Professor	11	6.07	86	47.5	84	46.4	181	28.9
Assistant Professor	34	17.5	74	38.1	86	44.3	194	31.0
Total	100	16.0	303	48.4	222	35.5	625	100

Chi-square	Df	P-value
17.55	4	0.001 Significant

Table IV analysis at what time the respondents of Pondicherry University and its affiliated colleges browse e-resources. The study scale includes the convenient times as `in the morning', `during afternoon,' early evening' and `late at night'. The timings are tabulated on the basis of designation of the respondents. The overall table brings out the fact that the majority of the respondents access the e-resources during the `afternoon and early evening'. It is calculated to 48.48% as it may be the reason that the respondents spend their most of the timings in the department for accessing e-resources. The next convenient time observed in the study is `late at night.' There are about 35.53% of respondents prefer late at night. Yet 16% of respondents are found with the habit of spending their time in the morning hours for accessing the e-resources.

While analyzing the designation of respondents' Professors and Associate Professors are highly found spending their time during the afternoon and early evening it is accounted 57.2 % and 47.5% respectively. Whereas the Assistant Professors access the e-resources `late at night' which is found high at the rate of 44.33% it may be due to the reason they may not find time at the working hours and their work load may be high.

The Associate Professors also record a considerable amount of data as the other convenient time `late at night' sharing 46.40% among them only a portion of 6.07% of respondents fall in the timings of `in the morning.' Out of these designations, Professors alone record 22% as the convenient time in the morning hours rather than `late at night.'

From the above discussion it is deduced that the most convenient time to browse e-resources among the respondents is `during the afternoon' and `early evening'. Yet, Assistant Professors' category is alone found accessing e-resources `late at night' at the maximum level. The least preferred timings among the respondents is in the morning hours', yet, Professors do not fit in these timings as their least preference of timings is `late at night'.

The calculated chi-square value supports above findings and significant level is noted to be 0.001 therefore, the stated null hypothesis of there is no association between designation of respondents and their convenient timings for accessing e-resources is rejected and disproved.

TABLE V FREQUENCY OF ACCESSING E-RESOURCES AMONG THE RESPONDENTS

Designation	Daily		Several Times in a Week		Once in a Week		Few times in a Month		Once in a Month		Total
	Respon dents	%	Respon dents	%	Respon dents	%	Respo ndents	%	Respond ents	%	Respond ents
Professor	22	12.2	129	71.2	15	8.2	9	4.9	6	3.31	181
Associate Professor	61	31.4	52	26.8	40	20.6	26	13.4	15	7.73	194
Assistant Professor	96	38.4	18	7.2	72	28.8	41	16.4	23	9.2	250
Total	179	29.0	199	31.8	127	20.3	76	12.1	44	7.04	625

Chi-square	Df	P-value
3.88	8	0.86 Not significant

Table V focuses on the frequency of accessing e-resources on the basis of designation of respondents. Having analyzed the data in table 5 it is clear that the majority of the respondents rely on e-resources. They are observed in the point scale `daily,' `several times in a week,' `once in a week', `few times in a month', and `once in a month'.

Out of 625 respondents, the majority of users browse e-resources with the frequency of `several times in a week' which is calculated to 31.84%. It is also recorded that the respondents have the habit of accessing e-resources `daily'

it comes in the second frequency among the respondents reflecting 29.3% the other frequencies fall behind. The designation wise analysis explains that the Professors are highly found using e-resources with a frequency of `once in a week' followed by `daily.' Professors are observed with high frequency of using e-resources `several times in a week' which is calculated to 71.27% whereas the other categories have not recorded appreciable data in this frequency. Assistant Professors are found highly using e-resources at the frequency of `daily.' It is observed that 38.4% of Assistant Professors get use of e-resources `daily.' The other frequencies noted at

levels of `once in a week' and `few times in a month' they are calculated to 28.8 and 16.4% respectively.

From the above discussions, it is concluded that the highest frequencies noted among the respondents are `several times in a week' and `daily'. Professors' categories are accessing e-resources at regular intervals yet, the frequency of `several times in a week' is remarkable among them. In the case of Associate Professors the top most frequency noted among them is `several times in a week.' The Assistant Professors alone show highest frequency of daily accessing e-resources.

The chi-square test proves the above findings the p-value of 0.86 which is greater that the 0.05 so the framed null hypothesis of there is no association between designation of respondents and their frequency of using e-resources is proved so that it is accepted.

VI. Suggestions And Conclusion

This study showed that the uses of e-resources are very common among the faculty members of Pondicherry University as well as to the faculty members who are in affiliated colleges. It is clear that majority of faculty members are dependent on e-resources to get desired and relevant information.

It is evident from the analysis that the availability of e-resources in the campus is almost sufficient for all the existing disciplines, the infrastructure to use the resources is also adequate and it is actually hampering the ability to meet the requirements of users both inside and out side users who are working in the colleges.In order to improve the facilities and services for effective use of electronic resources, in the Pondicherry University, the following suggestions are put forth for the effective use of e-resources of the library by the faculty who are in the campus and other colleges as well.

• The infrastructure provided by the institution should not hamper at the time of accessing of e-resources – the hardware and software being used by them are to be of easy to use.

• The requirement for the institutional governing body to integrate adequate information (technology) literacy content into the curriculum for lecturers and students in the University.

• Electronic resources users should be taught about advanced search strategies and the use of controlled vocabulary to make electronic search process much easier.

• The university management should allocate more funds for subscription to more electronic resources covering primary and secondary sources.

• The library personnel need to identify the non-users of electronic resources and proper steps should be taken to make them into potential users of the resources.

• Furthermore, since the users are experiencing problems in gathering information, the most suitable measures should be taken to overcome this, such as increasing the number of terminals and printers

• User training is essential for the better use of electronic resources in the library so as to use electronic literature on their own.

If the suggestions stated above are taken, then the situation with regard to usage of electronic resources by the faculty members of Pondicherry University and other affiliated academic institutions will considerably be improved.

References

[1] B.A. French, "User Needs and Library Services in Agricultural Science", *Library Trends,* Vol. 38, No.3, pp. 415-441, 1990.

[2] E.T. Hewins, " Information Need and Use Studies", *Annual Review of Information Science and Technology,* Vol. 25, pp.45-172, 1990.

[3] M. Arif, and A.K.J. Meadow, " The Provision of Information to Industry: A Comparative Study of Saudi Arabia and UK", *Journal of Librarianship and information Science,* Vol. 26, No.1, pp.29-34, 1994.

[4] B.E.Singh, " Information Needs of Engineering Scientists", *International Library Review,* Vol. 13, No.2, pp. 167-188, 1991.

[5] H. Asamoah, "A Library Ready for 21st Century Services: A Case of the University of Science and Technology Library, Kumasi, Ghana", IATUL Proceedings, 1999. Available: http://www.iatul.org/conference/pretpap/asamoah.html

[6] I. Oketunji, "Professional challenges in the digital age", *Lagos Journal of Library & Information Science,* Vol. 2, No.1, pp. 101-105, 2003.