
An Effectiveness of the E-Resources and Services in University Libraries of Tamil Nadu

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Abstract

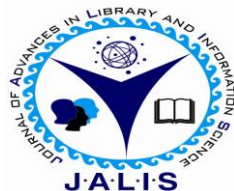
The present study examines the use of electronic information resources, place of access to e-resources, the extent of use of electronic information resources, in the University Libraries of Tamil Nadu. It found that the category of 'Research scholars', 10(1.15%) were used 'Rarely' and 292(33.56%) were used 'Frequently'.. It is identified the highest number of respondents 292(33.56%) were in the category of research scholars and they were 'Frequently' used the Electronic information resources. The various methods were categories as follows: 'Guidance from friends', 'Trial & Error Method/Self Instruction', 'Formal training', 'By Attending Courses', 'From teachers' and 'From Librarians'.It is identified highest number of respondents 128(14.71%) were in the category of Male and they were learnt 'from teachers' to the use of E-resources.

Keywords

E-Resources; ICT Literacy; ICT Literacy;
Competencies; University Libraries;

Electronic access

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1. Introduction

Generally, the library users may constitute various types of categories. Their demand for information varies according to their specific requirements. All library services such as collection building, processing, stacking and display of the materials, organizing, managing and other related activities are entirely geared to use and the library users. Therefore, it is essential to get a closer understanding of users needs for information. So, if the library has to justify its existence and to serve its purpose, it is essential to study and assess the needs of information of users systematically. User Study is the means for systematic examination of the characteristics and behavior of the users of the information systems and services. The user study is directly linked with the effectiveness of library and information services as they aim at satisfaction of user needs. The term user study mainly focuses on users to measure their information needs, information seeking behavior and usage pattern. User Education means educating, acquainting or familiarizing the library users with the various library tools, techniques and mechanical devices in the art of using library and this also includes familiarizing the library clientele with the various services offered by a library for saving their valuable time and energy in getting the material or information of their need without any loss of time as well as conserving research potential of scholars and research workers.

2. Review of Literatures

Liao et al. (2007) conducted a comparative study of the information needs and information seeking behaviour of international graduate students and American graduate students under title "Information-Seeking Behaviour of International Graduate Students vs. American Graduate Students. Study is based on the opinions collected through online survey. Fatima and Ahmad (2008) carried out a study to examine the information seeking behaviour of college students. 51.67% users were visiting libraries daily. Newspapers were the most used documents followed by use of books and journals. Carrier development was the most preferred response for seeking information. Ninety percent students agreed that students needed instruction on how to use information source in their subject area for the effective and efficient use of the information sources and services. Singh and Satija, (2008) executed a survey to find the information seeking behaviour of teachers and research scientists working in ICAR

institutions of Delhi and Punjab Agriculture University, Ludhiana. Users depended heavily on the computerized information search facility. The working culture of those who need information, facilities available for seeking information and knowledge about them, chances of getting the required information etc. affect the information seeking behaviour of the users.

Selvi, M., and S. Dhanavandan. (2015) Use pattern of E-Resources among the Women Academicians in Medical Sciences in Chennai (Faculty members working in Medical Colleges). Questionnaire method was adopted to collect the data. Out of 150 questionnaires only 117 (78%) were received from respondents. The highest number of women academicians 55(47.01%) were in the age frequency of 36-50. 45(38.46%) of the Women Academician were aware on E- Resources 6-9years. The highest number of Women Academician 43(36.75%) were used 4-6 yrs. 80(12.70%) of the Women Academician were spent 30-60 minutes per day. The maximum of the women academicians 97(15.40%) were accessed the E-Journals

3. Objectives Of The Study

1. To identify the purpose and frequency of visit to the library.
2. To know the type of electronic resources accessed by users
3. To study the time spent on access the electronic resources by the users
4. To identify the Methods to learn the use of E-resources

4. Methodology

Totally 1000 questionnaires were distributed to the Research Scholars in three major disciplines such as Humanities, Social Science and Science at seven Universities in Tamil Nadu Based on convenience sampling method (Alagappa Univeristy, Bharathiar University, Bharathidasan University, Madurai Kamaraj University, Manonmaniam Sundaranar University Mother Teresa Women's University and Periyar University). Based on convenience sampling method the questionnaires were distributed to the available research scholars at the time of data collections.

5. Analysis and Interpretation

5.1. Demographic Details of the respondents

The data was collected through the questionnaires and it has been analysed using statistical techniques and interpreted.

Table 1. Demographic Details of the respondents

Sl. No	Description	Category	Question -naires Distributed	%	Question -naires Received	%
1	Gender	Male	600	60.00	527	52.70
		Female	400	40.00	343	34.30
2	Age Category	Up to 30	200	20.00	170	17.00
		31-35	210	21.00	203	20.30
		36-40	210	21.00	197	19.70
		Above 40	380	38.00	300	30.00
3	Respondents Category	Research Scholars	600	60.00	533	53.30
		Faculty	400	40.00	337	33.70
		Total	1000	100.00	870	87.00

From the 1 shows Gender wise distribution of questionnaire to the users in University Libraries Tamil Nadu. From the 1000, 600(60.00%) questionnaire was issued to the male respondents and 400(40.00%) of the questionnaire was issued to the female respondents. Out of 1000, 870 replied after duly filled by the respondents which comprises 527(57.00%) were from male respondents and 343(34.30%) were from female respondents. The response rate is 87%.

The respondents were classified under their age frequency taken for the study. From the 1000, 200(20.00%) were distributed to the frequency of 'up to 30', 210(21.00%) were distributed to the frequency of '31-35', 210(21.00%) were distributed to the frequency of '36-40', and 380(38.00%) were distributed to the frequency of 'above 40'. 170(17.00%) were received back from the frequency of 'up to 30', 203(20.30%) were received from the frequency of '31-35', 197(19.70%) were received from the frequency of '36-40' and 300(30.00%) were received from the frequency of 'Above 40'. It is revealed that the highest number of responses 300(30.00%) was received from the age frequency of 'Above 40'. Further the respondents were classified under their respondent category. Among the 1000, 600(60.00%) of the questionnaires were distributed to the category of research scholars and 400(40.00%) of them were distributed to the category of faculty. From the 1000, 533(53.30%) were filled and returned

by the respondents in the category of research scholars and 337(33.70%) were received back from the category of faculty. It is studied from the table the highest numbers of respondents 533(53.30%) were in the age category of research scholars.

The frequency of visit to the libraries among the users in the university libraries has been analysed based on the opinion of the respondents and it is shown in the table 2.

5.2. Frequency of visit to the University library

Table 2. Frequency of visit to the University library

Sl. No	Description	Gender		Age Category				Respondent Category	
		Male	Female	Up to 30	31-35	36-40	Above 40	Research Scholars	Faculty
1	Daily	160 (18.39)	122 (14.02)	58 (6.67)	68 (7.82)	48 (5.52)	108 (12.41)	173 (19.89)	109 (12.53)
2	Twice a week	196 (22.53)	94 (10.8)	59 (6.78)	42 (4.83)	67 (7.7)	122 (14.02)	170 (19.54)	120 (13.79)
3	Weekly	125 (14.37)	105 (12.07)	40 (4.6)	81 (9.31)	58 (6.67)	51 (5.86)	139 (15.98)	91 (10.46)
4	Fortnightly	34 (3.91)	17 (1.95)	13 (1.49)	8 (0.92)	13 (1.49)	17 (1.95)	41 (4.71)	10 (1.15)
5	Monthly	12 (1.38)	5 (0.57)	0 (0)	4 (0.46)	11 (1.26)	2 (0.23)	10 (1.15)	7 (0.8)
Total		527 (60.57)	343 (39.43)	170 (19.54)	203 (23.33)	197 (22.64)	300 (34.48)	533 (61.26)	337 (38.74)

It is revealed from the table 2 shows that the frequency of visit to the libraries among the users in the university libraries with their category of the Gender. The frequency was categories as follows: 'Daily', 'Twice a week', 'Weekly', 'Fortnightly' and 'Monthly'. From the category of Male respondents, 160(18.39%) were visit 'Daily', 125(14.37%) were visit 'Weekly' and 34(3.91%) were visit 'Fortnightly'. In the case of female respondents, 122(14.02%) were visit 'Daily', 94(10.8%) were visit 'Twice a week', 105(12.07%) were visit 'Weekly' and 5(0.57%) were visit 'Monthly'. It is identified from the table the highest number of respondents were in the category of Male 196(22.53%) were visit the library 'Twice a week'.

(Figures in the parentheses denote percentage) visit 'Weekly' and 17(1.95%) of them visit 'fortnightly'. It is assessed from the table the highest numbers of respondents 122(14.02%) were in the age category of 'Above 40' were visit the library 'Twice a week'. Similarly, the frequency of visit to the libraries among the users in the university libraries analyzed with their respondent category. From the category of 'Research scholars', 173(19.89%) were visit 'Daily', 170(19.54%) were visit 'Twice a week' and 41(4.71%) were visit 'Fortnightly'. In the category of 'faculty', 120(13.79%) were visit 'Twice a week' and 7(0.8%) of them visit 'Monthly'. It is revealed from the table the highest numbers of respondents 137(15.75%) were in the age category of 'Social science' were visit the library 'Twice a week'.

Followed by, the frequency of visit to the libraries among the users in the university libraries analyzed with their age category. From the age category of 'Up to 30', 58(6.67%) were visit 'Daily', 59(6.78%) were visit 'Twice a week' and 13(1.49%) were visit 'Fortnightly'. In the age frequency of 31-35, 42(4.83%) were visit 'Twice a week' and 4(0.46%) of them visit 'Monthly'. In the frequency of 'Above 40' 108(12.41%) were visit 'Daily', 51(5.86%) were

5.3. Level of using the Electronic information resources

The Level of using the Electronic information resources among the users in the university libraries has been analysed based on the opinion of the respondents and it is shown in the table 3.

Table 3. Level of using the Electronic information resources

Sl. No	Description	Gender		Age Category				Respondents Category	
		Male	Female	Up to 30	31-35	36-40	Above 40	Research Scholars	Faculty
1	Beginner	45 (5.17)	20 (2.3)	11 (1.26)	14 (1.61)	17 (1.95)	23 (2.64)	45 (5.17)	20 (2.3)
2	Average	277 (31.84)	187 (21.49)	87 (10)	132 (15.17)	117 (13.45)	128 (14.71)	307 (35.29)	157 (18.05)
3	Expert	205 (23.56)	136 (15.63)	72 (8.28)	57 (6.55)	63 (7.24)	149 (17.13)	181 (20.8)	160 (18.39)

(Figures in the parentheses denote percentage)

It can be revealed from the table 3 shows that the Level of using the Electronic information resources among the users in the university libraries with their category of the Gender. The levels were categories as follows: 'Beginner', 'Average' and 'Expert'. From the category of Male respondents, 45(5.17%) were in the level of 'Beginner', 277(31.84%) were in the level of 'Average' and 205(23.56%) were in the level of 'Expert'. In the case of female respondents, 20(2.3%) were in the level of 'Beginner' and 187(21.49%) were in the level of 'Average'. It is identified from the table the highest number of respondents were in the category of Male 277(31.84%) were 'average' in the Level of using the Electronic information resources.

Followed by, the Level of using the Electronic information resources among the users in the university libraries with their age frequency. From age frequency of 'Up to 30', 11(1.26%) were in the level of 'Beginner', 87(10%) were in the level of 'Average' and 72(8.28%) were in the level of 'Expert'. In the case of 31-35, 14(1.61%) were in the level of 'Beginner' and 132(15.17%) were in the level of 'Average'.

In the age frequency of '36-40', 17(1.95%) were in the level of 'Beginner', 117(13.45%) were in the level of 'Average' and 63(7.24%) were in the level of 'Expert'. In the case of above 40, 23(2.64%) were in the level of 'Beginner' and 128(14.71%) were in the level of 'Average'. It is identified from the table

the highest number of respondents were in the age frequency of above 40, 149(17.13%) were 'average' in the Level of using the Electronic information resources.

Simultaneously, the Level of using the Electronic information resources among the users in the university libraries analysed with their respondents category. From the category of 'Research scholars', 45(5.17%) were in the level of 'Beginner', 307(35.29%) were in the level of 'Average' and 181(20.8%) were in the level of 'Expert'. In the case of 'faculty', 20(2.3%) were in the level of 'Beginner' and 160(18.39%) were in the level of 'Expert'. It is identified from the table the highest number of respondents 307(35.29%) were in the category of research scholars and they were 'average' in the Level of using the Electronic information resources.

5.4.Frequency of using the Electronic information resources

The Frequency of using the Electronic information resources among the users in the university libraries has been analyses based on the opinion of the respondents and it is shown in the table 4.

Table 4. Frequency of using the Electronic information resources

Sl. No	Description	Gender		Age Category				Respondents Category	
		Male	Female	Up to 30	31-35	36-40	Above 40	Research Scholars	Faculty
1	Rarely	17 (1.95)	8 (0.92)	4 (0.46)	8 (0.92)	3 (0.34)	10 (1.15)	10 (1.15)	15 (1.72)
2	Frequently	265 (30.46)	180 (20.69)	87 (10)	132 (15.17)	128 (14.71)	98 (11.26)	292 (33.56)	153 (17.59)
3	More frequently	245 (28.16)	155 (17.82)	79 (9.08)	63 (7.24)	66 (7.59)	192 (22.07)	231 (26.55)	169 (19.43)

(Figures in the parentheses denote percentage)

It can be revealed from the table 4, shows that the Frequency of using the Electronic information resources among the users in the university libraries with their category of the Gender. The levels were categories as follows: 'Rarely', 'Frequently' and 'More Frequently'. From the category of Male respondents, 17(1.95%) were used 'Rarely', 265(30.46%) were used 'Frequently' and 245(28.16%) were used 'More frequently'. In the case of female respondents, 8(0.92%) were used 'Rarely' and 180(20.69%) were used 'Frequently'. It is identified from the table the highest number of respondents were in the category of Male 265(30.46%) were 'Frequently' used the Electronic information resources.

Followed by, the Frequency of using the Electronic information resources among the users in the university libraries analysed with their age frequency. From age frequency of 'Up to 30', 4(0.46%) were used 'Rarely', 87(10%) were used 'Frequently' and 79(9.08%) were used 'More Frequently'. In the case of 31-35, 8(0.92%) were used 'Rarely' and 132(15.17%) were used 'Frequently'. In the age frequency of '36-40', 3(0.34%) were used 'Rarely', 128(14.71%) were used 'Frequently' and 66(7.59%) were used 'More Frequently'. In the case of above

40, 10(1.15%) were used 'Rarely' and 98(11.26%) were used 'Frequently'. It is identified from the table the highest number of respondents 192(22.07%) were in the age frequency of above 40 and they were 'Frequently' used the Electronic information resources.

Simultaneously, Frequency of using the Electronic information resources among the users in the university libraries analysed with their respondents category. From the category of 'Research scholars', 10(1.15%) were used 'Rarely', 292(33.56%) were used 'Frequently' and 231(26.55%) were used 'More Frequently'. In the case of 'faculty', 15(1.72%) were used 'Rarely' and 169(19.43%) were used 'More Frequently'. It is identified from the table the highest number of respondents 292(33.56%) were in the category of research scholars and they were 'Frequently' used the Electronic information resources.

5.5. Time spend for electronic information per day

The Time Spend for electronic information per day among the users in the university libraries has been analyses based on the opinion of the respondents and it is shown in the table 5.

Table 5.Time spend for electronic information per day

Sl. No	Description	Gender		Age Category				Respondents Category	
		Male	Female	Up to 30	31-35	36-40	Above 40	Research Scholars	Faculty
1	Below 30 minutes	19 (2.18)	12 (1.38)	4 (0.46)	7 (0.8)	8 (0.92)	12 (1.38)	19 (2.18)	12 (1.38)
2	30 Mts to 1hour	28 (3.22)	5 (0.57)	3 (0.34)	9 (1.03)	13 (1.49)	8 (0.92)	17 (1.95)	16 (1.84)
3	1 - 2 hours	89 (10.23)	52 (5.98)	30 (3.45)	34 (3.91)	39 (4.48)	38 (4.37)	101 (11.61)	40 (4.6)
4	2 - 3 hours	169 (19.43)	103 (11.84)	49 (5.63)	68 (7.82)	91 (10.46)	64 (7.36)	222 (25.52)	50 (5.75)
5	More than 3 hours	222 (25.52)	171 (19.66)	84 (9.66)	85 (9.77)	46 (5.29)	178 (20.46)	174 (20)	219 (25.17)

(Figures in the parentheses denote percentage)

It can be revealed from the table 5 shows that the time spent for electronic information per day among the users in the university libraries with their category of the Gender. The time frequency were categories as follows: 'Below 30 minutes', '30 mts to 1hour', '1 - 2 hours', '2 - 3 hours' and 'More than 3 hours'. From the category of Male respondents, 28(3.22%) were spent '30 mts to 1hour', 89(10.23%) were spent '1 - 2 hours' and 222(25.52%) were spent. It is identified from the table the highest number of respondents 222(25.52%) were in the category of Male and they were spent 'Below 30 minutes' per day for the electronic information.

Followed by, the time spent for electronic information per day among the users in the university libraries analyzed with their Age. From the age frequency of 'up to 30', 4(0.46%) were spent 'Below 30 minutes', 3(0.34%) were spent '30 mts to 1hour', 30(3.45%) were spent '1 - 2 hours' and 84(9.46%) were spent 'More than 3 hours'. In the age frequency of '31-35', 7(0.8%) were spent 'Below 30 minutes', 9(1.03%) were spent '30 mts to 1hour' and 68(7.82%) were spent '2 - 3 hours'. In the age

frequency of '36-40', 8(0.92%) were spent 'Below 30 minutes', 39(4.48%) were spent '1 - 2 hours' and 46(5.29%) were spent 'More than 3 hours'. In the age frequency of 'Above 40', 8(0.92%) were spent '30 mts to 1hour' and 64(7.36%) were spent '2 - 3 hours'. It is identified from the table the highest number of respondents 178(20.46%) were in the age frequency of 'Above 40' and they were 'More than 3 hours' for the electronic information.

Similarly, the time spent for electronic information per day among the users in the university libraries with their respondents' category. From the category of research scholars, 17(1.95%) were spent in '30 mts to 1hour', 101(11.61%) were from '1 - 2 hours' and 174(20%) were spent from 'More than 3 hours'.

5.6. Methods to learn the use of E- resources

The Methods to learn the use of E- resources among the users in the university libraries has been analyses based on the opinion of the respondents and it is shown in the table 6.

Table 6. Methods to learn the use of E- resources

Sl. No	Description	Gender		Age Category				Respondents Category	
		Male	Female	Up to 30	31-35	36-40	Above 40	Research Scholars	Faculty
1	Guidance from friends	77 (8.85)	50 (5.75)	31 (3.56)	27 (3.1)	22 (2.53)	47 (5.4)	70 (8.05)	57 (6.55)
2	Trial & Error Method/Self Instruction	92 (10.57)	79 (9.08)	32 (3.68)	54 (6.21)	31 (3.56)	54 (6.21)	103 (11.84)	68 (7.82)
3	Formal training	106 (12.18)	34 (3.91)	24 (2.76)	17 (1.95)	49 (5.63)	50 (5.75)	115 (13.22)	25 (2.87)
4	By Attending Courses	105 (12.07)	60 (6.9)	32 (3.68)	56 (6.44)	38 (4.37)	39 (4.48)	126 (14.48)	39 (4.48)

5	From teachers	128 (14.71)	113 (12.99)	49 (5.63)	44 (5.06)	50 (5.75)	98 (11.26)	106 (12.18)	135 (15.52)
6	From Librarians	19 (2.18)	7 (0.8)	2 (0.23)	5 (0.57)	7 (0.8)	12 (1.38)	13 (1.49)	13 (1.49)

(Figures in the parentheses denote percentage)

It can be revealed from the table 6 shows that the Methods to learn the use of E- resources among the users in the university libraries with their category of the Gender. The various methods were categories as follows: ‘Guidance from friends’, ‘Trial & Error Method/Self Instruction’, ‘Formal training’, ‘By Attending Courses’, ‘From teachers’ and ‘From Librarians’. In the case of female respondents, 50(5.75%) were learnt ‘Guidance from friends’, 79(9.08%) were learnt ‘Trial & Error Method/Self Instruction’. Followed by, the Methods to learn the use of E- resources among the users in the university libraries analysed with their category of the Age. From the age frequency of ‘Up to 30’, 31(3.56%) were learnt ‘Guidance from friends’, 32(3.68%) were learnt ‘Trial & Error Method/Self Instruction’, 24(2.76%) were learnt from ‘Formal training’ and 2(0.23%) were learnt ‘From Librarians’. In the age frequency of ‘36-40’, 49(5.63%) were learnt from ‘Formal training’ and 7(0.8%) were learnt ‘From Librarians’. In the case of ‘Above 40’, 47(5.4%) were

learnt ‘Guidance from friends’, 54(6.21%) were learnt ‘Trial & Error Method/Self Instruction’ and 38(4.37%) were learnt from ‘By Attending Courses’. It is identified from the table the highest number of respondents 98(11.26%) were in the category of Male and they were learnt ‘from teachers’ to the use of E-resources. It is identified from the table the highest number of respondents 126(14.48%) were in the category of research scholars and they were learnt ‘by attending courses’ to the use of E-resources.

5.7. Rating the features of Electronic information

The study has been analysed the Rating the features of Electronic information by the users in universities library. The five point scales of Poor, No comments, Satisfaction, Good, Very Good were used for the study. The Mean, Standard Deviation and their Rank for the features of Electronic information have been calculated and it is shown in the table 7.

Table 7. Rating the features of Electronic information

Sl. No	Description	Poor	No comments	Satisfaction	Good	Very Good	M	Std. Dev.	R
1	Uniqueness	28 (3.22)	49 (5.63)	41 (4.71)	236 (27.13)	516 (59.31)	4.34	1.021	4
2	Accessibility	25 (2.87)	58 (6.67)	43 (4.94)	232 (26.67)	512 (58.85)	4.32	1.031	5
3	Accuracy	27 (3.1)	55 (6.32)	54 (6.21)	235 (27.01)	499 (57.36)	4.29	1.041	7
4	Availability	25 (2.87)	58 (6.67)	28 (3.22)	155 (17.82)	604 (69.43)	4.44	1.028	2
5	Reliability	28 (3.22)	56 (6.44)	54 (6.21)	280 (32.18)	452 (51.95)	4.23	1.037	9
6	Flexibility	25 (2.87)	58 (6.67)	48 (5.52)	197 (22.64)	542 (62.3)	4.35	1.041	3
7	Stability	28 (3.22)	56 (6.44)	54 (6.21)	271 (31.15)	461 (52.99)	4.24	1.040	8
8	Timeliness	3 (0.34)	68 (7.82)	37 (4.25)	307 (35.29)	455 (52.3)	4.31	.901	6
9	Ease of use	3 (0.34)	46 (5.29)	26 (2.99)	243 (27.93)	552 (63.45)	4.49	.818	1

(Figures in the parentheses denote percentage)

5.8. Rating the features of Electronic Information Vs Gender

The study has been further extended to gender category for the Rating the features of Electronic information by the users in universities library. The Mean, Standard Deviation and their Rank for the features of the Electronic information resources have been calculated and it is shown in the table 5.27.

Table 8. Rating the features of Electronic Information Vs Gender

Sl. No	Description	Male			Female			Chi-Square
		M	Std. Dev.	R	M	Std. Dev.	R	
1	Uniqueness	4.20	1.124	5	4.55	.796	5	46.639
2	Accessibility	4.21	1.110	4	4.49	.868	7	53.687
3	Accuracy	4.05	1.132	8	4.66	.747	2	93.881
4	Availability	4.34	1.132	2	4.60	.821	4	35.940
5	Reliability	4.07	1.140	7	4.48	.798	8	62.815
6	Flexibility	4.16	1.129	6	4.64	.808	3	62.907
7	Stability	4.05	1.131	9	4.54	.797	6	67.769
8	Timeliness	4.21	.951	3	4.47	.794	9	18.806
9	Ease of use	4.35	.944	1	4.70	.509	1	40.301

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of Freedom: 4, Table Value – 9.488)

It can be identified from Table 8 that the male respondents have given first priority for the feature of

‘Ease of use’. ‘Availability’ and ‘Timeliness’ are the second and third preference given by the respondents. The least preference was given for the type of ‘Stability’. The mean value of all the variables ranges between 4.05 and 4.35. It can be inferred that all the nine variables lies on ‘Very Good’. The deviation of opinion ranges between .944 and 1.131.

In the case of female respondents have given first priority for the feature of ‘Ease of use’. ‘Accuracy’ and ‘Flexibility’ are the second and third preference given by the respondents. The least preference was given for the type of ‘Timeliness’. The mean value of all the variables ranges between 4.47 and 4.70. It can be inferred that all the nine variables lies on ‘Very Good’. The deviation of opinion ranges between .509 and .868.

5.9. Rating the features of Electronic Information Vs Age

The study has been further extended to gender category for the Rating the features of Electronic information by the users in universities library. The Mean, Standard Deviation and their Rank for the features of the Electronic information resources have been calculated and it is shown in the table 9

Table 9. Rating the features of Electronic Information Vs Age

Sl. No	Description	Up to 30			31-35			36-40			Above 40			Chi-Square
		M	Std. Dev.	R	M	Std. Dev.	R	M	Std. Dev.	R	M	Std. Dev.	R	
1	Uniqueness	4.36	1.001	4	4.47	.924	6	4.29	.982	7	4.26	1.112	3	56.340
2	Accessibility	4.34	.936	5	4.43	.959	8	4.44	.888	4	4.15	1.187	6	63.049
3	Accuracy	4.29	1.006	7	4.57	.884	1	4.36	1.008	5	4.07	1.131	7	85.406
4	Availability	4.50	.931	2	4.49	.903	4	4.51	.861	1	4.33	1.236	2	87.459
5	Reliability	4.26	1.000	8	4.50	.935	2	4.22	.978	9	4.04	1.121	9	76.152
6	Flexibility	4.45	.949	3	4.43	.938	7	4.46	.912	3	4.16	1.202	5	54.795
7	Stability	4.24	.994	9	4.49	.935	5	4.28	.994	8	4.05	1.126	8	72.303
8	Timeliness	4.32	.957	6	4.37	.736	9	4.34	.795	6	4.26	1.027	4	42.834
9	Ease of use	4.52	.837	1	4.50	.792	3	4.47	.759	2	4.48	.863	1	26.802

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of Freedom: 12, Table Value – 21.026)

It can be revealed from Table 9 that the respondents in the age frequency of ‘up to 30’ have given first priority for the feature of ‘Ease of use’. ‘Availability’ and ‘Flexibility’ are the second and third preference given by the respondents. The least preference was given for the type of ‘Stability’. The mean value of all the variables ranges between 4.24 and 4.52. It can be inferred that all the nine variables lies on ‘Very

Good’. The deviation of opinion ranges between .837 and 1.006. The respondents in the age frequency of ‘31-35’ have given first priority for the feature of ‘Accuracy’. ‘Reliability’ and ‘Ease of use’ are the second and third preference given by the respondents. The least preference was given for the type of ‘Timeliness’. The mean value of all the variables ranges between 4.37 and 4.57. It can be inferred that

all the nine variables lies on 'Very Good'. The deviation of opinion ranges between .736 and .959.

Similarly, in the age frequency of '36-40' have given first priority for the feature of 'Availability'. 'Ease of use' and 'Flexibility' are the second and third preference given by the respondents. The least preference was given for the type of 'Reliability'. The mean value of all the variables ranges between 4.22 and 4.51. It can be inferred that all the nine variables lies on 'Very Good'. The deviation of opinion ranges between .759 and 1.008. In the case of 'Above 40', the respondents have given first priority for the feature of 'Ease of use'. 'Availability' and 'Uniqueness' are the second and third preference given by the respondents. The least preference was

given for the type of 'Reliability'. The mean value of all the variables ranges between 4.04 and 4.48. It can be inferred that all the nine variables lies on 'Very Good'. The deviation of opinion ranges between .863 and 1.236.

5.10. Rating the features of Electronic Information Vs Respondents category

The study has been further extended to respondents category for the Rating the features of Electronic information by the users in universities library. The Mean, Standard Deviation and their Rank for the features of the Electronic information resources have been calculated and it is shown in the table 10.

Table 10. Rating the features of Electronic Information Vs Respondents category

Sl. No	Description	Research Scholars			Faculty			Chi-Square
		M	Std. Dev.	R	M	Std. Dev.	R	
1	Uniqueness	4.29	1.072	4	4.41	.931	5	32.252
2	Accessibility	4.24	1.039	7	4.45	1.005	4	30.870
3	Accuracy	4.23	1.087	8	4.39	.957	6	22.622
4	Availability	4.43	1.028	1	4.47	1.029	2	28.813
5	Reliability	4.26	1.109	6	4.19	.913	9	93.975
6	Flexibility	4.28	1.069	5	4.45	.987	3	37.555
7	Stability	4.19	1.091	9	4.33	.949	8	24.728
8	Timeliness	4.30	.848	3	4.33	.980	7	20.747
9	Ease of use	4.34	.930	2	4.72	.524	1	46.595

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of Freedom: 4, Table Value – 9.488)

It can be analysed from Table 10 that the respondents in the category of 'research scholar' have given first priority for the feature of 'Availability'. 'Ease of use' and 'Timeliness' are the second and third preference given by the respondents. The least preference was given for the type of 'Stability'. The mean value of all the variables ranges between 4.19 and 4.43. It can be inferred that all the nine variables lies on 'Very Good'. The deviation of opinion ranges between .848 and 1.109.

The respondents in the category of 'faculty' have given first priority for the feature of 'Ease of use'. 'Availability' and 'Flexibility' are the second and third preference given by the respondents. The least preference was given for the type of 'Reliability'. The mean value of all the variables ranges between 4.19 and 4.72. It can be inferred that all the nine variables

lies on 'Very Good'. The deviation of opinion ranges between .524 and 1.029.

6. Conclusion

The initial part of library visits consists of frequency of library visit and time spent by the respondents. Similarly Information Access Pattern comprises of three factors such as using of E-Resources and Preferences of E-Resources and Preferred documents. Library environment comprises of three factors such Collections, Infrastructures and Opinion & satisfaction. Library Resources and Services comprises of three factors such as traditional resources, Digital/E-Resources and Web Resources, Satisfaction environment level comprises of three factors such as Library Facilities, Services and Professionals support.

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