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# Information Literacy among the women teaching faculty members working in Research and Academic institutions affiliated by Bharathiar University, Coimbatore

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*Information Literacy among the women teaching faculty members working in  
Research and Academic institutions affiliated by Bharathiar University,  
Coimbatore. A case Study*

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## **Abstract**

Information literacy is an art of learning skills in identifying defining and the information and its needs, approaches to locate the information and the behavior in accessing and evaluating the information in order to make use of the information for the perceived need. Hence, the study aims at covering the various types of information required by the women teaching faculty members particularly, in academic and research environment, the awareness on information access techniques and tools, behavior of scientists in access and use of information-resources, the techniques need to be imparted, the impact of information literacy on improving the productivity of women faculties/scientists were studied in detail. The study is limited to women teaching faculty working in the colleges, universities, and research institutions situated in Coimbatore, Erode, Tripur and Nilgiris. The respondent was selected by 'simple random sampling techniques' Data were collected from 440 respondents out of the total population of 2800 from the surveyed institution in the study area. 600 copies of the questionnaire were distributed to the identified respondents and 450 filled in questionnaires were received among them 10 questionnaires were incomplete hence; the response of the sample size is 73 percent.

## **Introduction**

Information is the most crucial component in all walks of human life. Over the centuries they know how to locate and use of information for various purposes, particularly, in achieving the desire has been regarded as the most important quality for human kind even from the Stone Age. The successful men folk who were leading the society possessed thorough understanding and perception on various types of information and determining the information needs at various moments. This has been gaining momentum when human civilization was transformed from agrarian to industrial society. The 20<sup>th</sup> century has evidence that information society in the society

reflection political, social, economical, cultural and behavioral aspects of human life. The use of technology in information processing, storing, organizing and disseminating has completely changed the dimensions of information in to complex and multifarious forms. This has been evidenced a great impact in bringing economical and social value of information explicitly during the end of the twentieth century and the beginning of this millennium. Identification of information needs, locating and communicating the information, which is customized as to the specific needs and affordable. This has paved the way for a number of developing countries and third world countries in improving the economic condition. Many Asian countries including India have become potential nations to compete with developed European and American nations as they have used information technology in all major services such as medicine, education, consumer industry, agriculture, governance and so on.

As the web has become more pervasive medium, particularly, during the last decade, has changed the internet as technology to culture. It has made a great number of opportunities for all sects of people in performing their responsibilities and services towards achieving the immediate and long term desires. Higher education industry has become the major stakeholder in contributing to, benefiting as well from the web base information and knowledge resources. This also has contributed the same level of complexities, issues and limitations for faculty, students, researchers and other stake holders to have the right perception, techniques, skills in identifying their information needs, defining them and in locating, evaluating, accessing and using the information. Hence, the significance of information literacy that emerged in achieving the actual benefits of the information and technology to the large public towards transforming the information society in to knowledge society.

### **Objectives of the study:**

- To identify and asses various types of information needs and information sources used by Women faculty in the surveyed institutions.
- To study the Information Seeking Behavior pattern of the scientists in the research institutions of the study area.
- To find the designation wise distribution
- To know the usage of full text database by the respondents
- To find out the use of open access resources

## Methodology:

The foremost activity of any researcher is to design the research plan with the relevant search methods and process to be carried out towards achieving set objectives and giving solutions to the problem chosen for the study. The methodology chosen for the study mainly depends on the problem of the research and the environment where the investigation is carried out. Among the different types of research methodology, the present study is a case study of normative survey and the research design is descriptive in nature.

## Tools of the analysis:

SPSS (Statistical Package for Social Sciences) version 14.0 software was used for analyzing the collected data. The following statistical tools were employed for analyzing the data to meet the objectives of the study.

- i) Average Analysis
- ii) Chi-square Analysis
- iii) Anova Test

## Data Analysis

**Table 1 Designation Wise Distribution**

Sl .no	Designation	No. of respondents	Percentage %
1	Scientist	39	8.2
2	Professor	91	19.23
3	Associate Professor	82	17.34
4	Assistant Professor	101	21.83
5	Research Scholar	160	33.83
	<b>Total</b>	<b>473</b>	<b>100.00</b>

The above table1 reveals that the designation wise respondents of women scientist, Research Scholar 160 (33.83%) followed by Assistant Professor 101 (21.83%), Professor 91(19.23%) then Associate Professor 82 (17.34%) and the Scientist 39(8.2%). Majority of the women scientist having the designation of Assistant Professor or Research scholar than Scientist.

**Table 2 Distributions of Respondents Based On Information Needs of the Women Scientist**

<b>Sl .No</b>	<b>Information Needs</b>	<b>Faculty N=274</b>	<b>Research scientist N=39</b>	<b>Research Scholar N=160</b>	<b>Total N=473</b>
1	Academic Information	164 (59.85%)	31 (79.48%)	132 (82.5%)	327 (69.13%)
2	Writing a research articles	121 (44.16%)	22 (56.41%)	125 (78.12%)	268 (56.65%)
3	Procedural Information	18 (6.56%)	9 (23.07%)	11 (6.87%)	38 (8.03%)
4	Product Information	10 (3.64%)	12 (30.76%)	16 (10%)	38 (8.03%)
5	Factual and Statistical Information	131 (47.81%)	21 (53.84%)	96 (60%)	248 (52.43%)
6	Preparing New Project	27 (9.85%)	21 (53.84%)	36 (22.5%)	84 (17.75%)
7	Administrative Progress	20 (7.29%)	9 (23.07%)	4 (2.5%)	33 (6.97%)
8	Special Lectures and Academic Activities	74 (27%)	24 (6).53%	31 (19.37%)	129 (27.27%)

It is quite interesting to find that only 69.13 percent (327) respondents preferred academic information as their information need, while the next major group of the scientist 56.65 percentage (268) preferred the information require for the writing Research Articles. The third majority 52.48 percent (248) of the respondents preferred factual statistical information, which is followed by the information needed for special lecture and academic activities by 27.27 percent (129) of the respondents. Between the different categories of the respondents research scholars dominating in terms of academic and research information needs and factual and statistical information with 82.5 percent, 78.12 percent, 60 percent respectively. While the research scientist were dominate with regard to procedural information needs 23.07 percent information needs for preparing new projects 53.84 percent, product information 30.76 percent and information needs for delivering special lecture 61.53 percent. The faculty, scientist working in

colleges and universities preferred all type of information with less numbers when compare to others group of research scientist and research scholars.

**Table 3 Information Seeking Behaviors of the Respondents**

<b>S. No</b>	<b>Approach to Information</b>	<b>Faculty N=274</b>	<b>Research Scientist N=39</b>	<b>Research Scholar N=160</b>	<b>Total N=473</b>
1	Through Scanning Literature	189 (68.97%)	24 (61.53%)	122 (76.25%)	335 (70.82%)
2	Attending Conference/Seminars/Symposium	194 (70.80%)	21 (53.84%)	110 (68.75%)	325 (68.71%)
3	Visiting Library	172 (62.77%)	26 (66.66%)	121 (75.62%)	319 (67.44%)
4	Reading e journals	167 (60.94%)	24 (61.53%)	132 (82.50%)	323 (68.28%)
5	Discussion with colleagues	132 (48.17%)	19 (48.71)	106 (66.25%)	257 (54.33%)
6	Visiting exhibition	104 (37.95%)	12 (30.76%)	97 (60.62%)	213 (45.03%)
7	Conversation with librarian/experts/scientist	177 (64.59%)	27 (69.23%)	116 (72.50%)	320 (67.65%)
8	Browsing internet	212 (77.37)	34 (87.17%)	149 (93.12%)	395 (83.50)
9	Subscribe mail forums & social networks	117 (42.70%)	27 (69.23%)	101 (63.12%)	245 (51.79%)
10	Field trips	109 (39.78%)	12 (30.76%)	110 (68.75%)	231 (48.83%)
11	Foreign Trip	64 (23.35%)	30 (76.92%)	25 (15.62%)	119 (25.155)
12	Inter library loan	52 (18.97%)	18 (46.15%)	62 (38.75%)	132 (27.90%)
13	Through telephone and fax	47 (17.15%)	11 (28.20)	24 (15%)	82 (17.33%)

The above table 3 shows, Majority of the women scientist seeking information by browsing internet (83.50) percentage through scanning literature (70.82) percentage attending by conference/seminars and symposium (68.71) percent by reading e journals (68.28) percent, by communicating with experts/scientist/librarian (67.65%) and by visiting libraries (67.44%).

Within these categories the research scholars were dominant in almost all approaches to information than other groups, while they were behind the terms in seeking information through

foreign trips/Inter library loan and through telephone communication. Research scientist were dominating the faculty members by seeking information through foreign trips (76.92%) interlibrary loan making (46.15%) use of telephone (20.20%) browsing internet (87.17%) and by visiting libraries (66.66%).

**Table 4 Usage of Full Text Databases by the Respondents**

<b>Sl.no</b>	<b>Databases</b>	<b>Faculty N=274</b>	<b>Research scientist N=39</b>	<b>Research scholar N=160</b>	<b>Total N=473</b>
1	Springer	243 (88.68%)	34 (87.17%)	55 (34.37%)	332 (70.19%)
2	Science Direct	232 (84.67%)	36 (92.30%)	43 (26.87%)	311 (65.75%)
3	Taylor/Francis	101 (36.86%)	30 (76.92%)	80 (50%)	211 (44.60%)
4	Inter science	121 (44.16%)	22 (56.41%)	36 (22.5%)	179 (37.84%)
5	Proquest	76 (27.73%)	12 (30.76%)	34 (21.25%)	122 (28.79%)
6	Emerald	64 (23.35%)	16 (41.02%)	71 (44.37%)	151 (31.92%)
7	Cambridge	72 (26.27%)	10 (25.64%)	24 (15%)	106 (22.41%)
8	EBSCO	134 (48.90%)	19 (48.71%)	121 (75.62%)	274 (57.92%)
9	IEEE	70 (25.54%)	11 (28.20%)	65 (40.62%)	146 (30.86%)
10	Inspec	67 (24.45%)	9 (23.07%)	43 (26.87%)	119 (25.15%)
11	ASCE	22 (8.02%)	14 (35.89%)	36 (22.5%)	72 (15.22%)
12	ASME	87 (31.75%)	18 (46.15%)	32 (20%)	137 (28.96%)
13	Sage	123 (44.89%)	21 (53.84%)	67 (41.87%)	211 (44.60%)
14	JSTOR	141 (51.54%)	26 (66.66%)	85 (53.12%)	252 (53.27%)
15	OUP	121 (44.16%)	24 (61.53%)	101 (63.12%)	246 (52%)
16	American Chemical Society	202 (7.72%)	29 (74.35%)	122 (76.25%)	353 (74.63%)
17	OALSTER	96 (35.05%)	11 (28.20%)	87 (54.37%)	194 (41.01%)

18	ACM DL	67 (24.45%)	10 (25.64%)	56 (35%)	133 (28.11%)
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The above given table 4 shows , among the online full text and bibliographies American chemical society (74.63%), Springer (70.19%), and science Direct (65.75%) were used by a large number of respondents, while EBSCO (57.92%), JSTOR (53.27%), OUP (52%), and Sage (44.60%) were also preferred majorly by the surveyed scientist. It is quite interesting to know that, the scientists accessed engineering databases like IEEE, ASCE, and ASME, INSPEC etc.

**Table 5 Use of Open Access Resources**

Sl.no	Databases	Faculty N=274	Research scientist N=39	Research scholar N=160	Total N=473
1	DOAR	127 (46.35%)	17 (43.58%)	145 (90.62%)	289 (61.09%)
2	DOAJ	167 (60.94%)	21 (53.84%)	147 (91.87%)	335 (70.82%)
3	Open J gate	141 (51.45%)	17 (43.28%)	126 (78.75%)	284 (60.04%)
4	Pubmed	136 (49.63%)	27 (69.23%)	80 (50%)	243 (51.37%)
5	1000 biology	107 (39.05%)	16 (41.02%)	67 (41.87%)	190 (40.16%)
6	1000 physics	101 (36.86%)	11 (28.20%)	72 (45%)	184 (387.90%)
7	Biomed central	121 (44.16%)	13 (33.33%)	104 (65%)	238 (50.31%)
8	OUP	141 (51.45%)	17 (43.58%)	80 (50%)	247 (52.21%)
9	CUP	162 (59.12%)	13 (33.33%)	67 (41.87%)	242 (51.16%)
10	SPARC	141 (51.45%)	17 (43.58%)	88 (55%)	246 (52%)

The above given table 5 shows that ,the data reveals that the scientists were using considerably all the major open access data bases a major group of scientist were familiar and used open access databases such as DOAR (61.09%), DOAJ (70.82%), open J gate (60.04%), Pub med (51.37%), Biomed central (50.31%), OUP (52.21%) and CUP (51.16%).



**Designation and Usage Level of Library (TWO-WAY TABLE)**

S.No	Designation	Usage level			Total
1	Faculty	50 (18.2%)	156 (56.9%)	68 (24.8%)	274
2	Scientist	17 (43.6%)	15 (38.5%)	7 (17.9%)	39
3	Research Scholar	30 (18.8%)	99 (61.9%)	31 (19.4%)	160

It could be noted from the above given table that the percentage of high usage level of library among the women scientists was the highest (24.8%) among the faculty and the same was lowest (17.9%) among the scientists. The percentage of medium level of usage among the women scientists was the highest (61.9%) among the research scholars and the same was the lowest (38.5%) among the scientists. The percentage of low level of usage of library was the highest (43.6%) among the scientists and the same was the lowest (18.2%) among the faculty. In order to find the relationship between the designation of the women scientists and their level of usage of library, the following null hypothesis was framed and tested with the help of Chi-square test and the result is shown in the following table.

H<sub>0</sub>: There is no significant relationship between designation of women scientists and their usage level of library.

**Designation and Usage Level of Library (CHI-SQUARE TEST)**

Factor	Calculated $\chi^2$ Value	Table Value	D.F	Remarks
Designation	15.782	13.277	4	Significant at 1% level

It is inferred from the above given table that the calculated chi-square value is greater than the table value and the result is significant at 1% level. Hence the hypothesis, “Designation of the respondents and their usage level of library are not associated” does not hold good. From the

analysis, it is found that there is a close significant relationship between the designation of the women scientists and their usage level of library affiliated in Bharathiar University.

**Designation and Level of Awareness towards Literacy Information of Library (ANOVA)**

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Sig.
Between Groups	1.291	2	.645	.749	Not Significant
Within Groups	405.233	470	.862		

It is divulged from the above table that the calculated F value is lesser than the table value and the result is not significant at 1% and 5% level. Hence the hypothesis is accepted. From the analysis, it is found that all the women scientists based on their designation is not having the same level of awareness about the library information.

**CONCLUSION**

There is a need for the libraries in the study area to intensify the awareness and use of open access scholarly resources and the web technologies information for teaching and learning process. The library and information environments in the study area is found to be with minimum infrastructural requirements and application of ICT including automation but e-resources access in colleges need to be improved and also there is a divide between the colleges in terms of acquiring resources and facilities in the study area. The faculty surveyed is accessing a range of information sources and systems and the information seeking behavior is at optimum level with different approaches to information, accordingly, the productivity of the faculty also is considerably good. The study could conclude that the libraries need to design a range of Information Literacy programmes both online and hands on training at regular intervals to make aware and familiarize the use of scholarly information resources among the faculty and researchers. Librarians working in these institutions need to update the latest developments on scholarly publishing in different subject’s areas to enable and enhance the library and information environment in the study area.

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