

MARKETING OF INFORMATION PRODUCTS  
& SERVICES IN THE SELECT LIBRARIES OF ICAR AND CSIR  
INSTITUTIONS IN INDIA: A STUDY



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**ABSTRACT:**

The present study has been undertaken to assess the Marketing of Information Products & Services in the select libraries of ICAR & CSIR Institutions in India. A well structured questionnaire was distributed among the Research Scholars and Scientists of ten Institutions viz, IARI, IASRI, NDRI, CSSRI, CIRB, NISCAIR, CRRI, NISTADS, IMT, CSIO following under

the ICAR & CSIR selected research Institutions. The responses were gathered from 599 users (315 Scientists and 284 Research Scholars). The findings of the survey reveal useful facts about the Marketing of Information Products & Services gender wise use the ICAR & CSIR selected libraries, in which male constituting 62.6% than female respondents which were 37.4%. Majority of 25.60% Research Scholars & Scientists were using the offline library weekly, 42.30% occasionally and 16.40% thrice in a week. In fact only 15.40% respondents were using the off-line library daily. More than 96.5% Research Scholars & Scientists were using the online library daily and 2.64% were weekly. In fact only 0.87% respondents were using the online library twice in a week. 47.40% respondents spend less than 30 minutes to 1 hour, 43% from 1 to 2 hours and 8.80% from 2 to 3 hours regarding off-line time in the library on a visit. In ICAR & CSIR respondents i.e. Scientists and Research Scholars were 84.9% who were using the library for the purpose of education work, 80.1% in Writing & Presenting paper and updating knowledge were the third purpose for which users were using the library i.e. 72.4%. The fourth purpose

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for using the library i.e. 40.7% respondents were doing for research work and 28.2% for teaching regarding which they were using the library by respondents on ICAR & CSIR institutions. On the basis of the findings, it was suggested that the ICAR & CSIR libraries should be made available by developing appropriate collections & services to serve its potential users & should use modern techniques. It should endeavor to nurture culture of customer service to enhance its image in the eyes of the users. Most of the respondents it was suggested that, the ICAR & CSIR libraries should adopt some of the marketing and promotional strategies including publications, programmers of events, media and effective presentation of information products and services through the library website. It was also suggested that, the price charged for developing library products & services should be reasonable. The motive of the library should not to earn profit but to provide value added & user oriented products & services on a nominal fee.

## KEYWORDS

*Information Products and Services, ICAR, CSIR, Library Services, Marketing, Products, use.*

## INTRODUCTION

In the knowledge based society & economy of the 21st century, users' expectations and engagement with knowledge & information have grown in sophistication. Recent decades have witnessed an explosion in the quantity of information being produced, which in turn has created vast opportunities for information-based businesses. The time has come for information to be treated as a unique product with goods & services.

Over the last few years, a number of information services have been experimenting with modern marketing methods or at least in certain aspects of marketing such as advertising and public relations. The marketing approach may profoundly modify the perspective of information products and services just as it transformed the business world some years ago. The application of information technology (IT) based marketing approach in information products and services would be quite radical and dynamic as it forces the organization to the competitive business world. Now-a-days, marketing acts as a driving force in achieving quality library and information products and services and maximizing users' satisfactions at the minimum producing and delivery cost. This fact is more important in case of Research libraries.

The Research Libraries in India have been reflected as social and non-profit service oriented organizations providing information to their members from a long time past. Over a period of time, due to change in the nature of demands by the users, libraries have extended their functions to include documentation and document delivery systems (Munshi, 2004). The libraries have also been initiated to make them as profit making organizations providing better information products and services to users.

## CONCEPT OF MARKETING

Basic to all of the marketing is the idea of "responsive organization" just described. Given an organization that is open to personal suggestions from its clients and that is flexible and creative enough to adapt itself or its services to meet the changing needs and demands of these clients, certain

questions face the organization. Five key marketing concepts relate to these questions (Zachert, 1986).

## DEFINITION OF MARKETING

Kotler (1994) "Marketing is the analysis, planning, implementation and control of carefully formulated programs designed to bring about voluntary exchanges of values with target markets for the purpose of achieving organizational objectives. It relies heavily on designing the organization's offering in terms of target markets needs and desires, and on using effective pricing, communication, and distribution to inform, motivate, and service the markets."

## MARKETING OF INFORMATION PRODUCTS & SERVICES

In a broad sense, marketing in the context of information products and services, may be defined as a concept of sensitively serving and satisfying the information needs of all those who are involved in education, scholarship, research and development, business, trade industry etc. Libraries should adopt marketing approach in the provision of library users. Nolan (1998) advises professional librarians to become entrepreneurs. According to her, many libraries whether special, corporate, private or public are facing a similar scenario: "do more with less and less." Librarians must not wait for people who have no idea how libraries are managed and who do not care their work to change their situations for them. Libraries must be run like commercial firms and professional librarians must be the managers. Libraries must survive and thrive because they still have a role on play in the community. Librarians like all other professionals have to adapt to and cope with the change taking place in the environment in which they operate. The library is obviously not a profit making organization and so it's worth and survival cannot be determined by profit.

## MARKETING OF INFORMATION PRODUCTS & SERVICES IN LIBRARY

Following are the major Information products and services in library:

### 1.Documentary and non documentary sources

- ▲ Abstracting
- ▲ Indexing Service
- ▲ Trends Reports
- ▲ State of the Arts Report
- ▲ Digest
- ▲ Information News Bulletin

### 2.Traditional dissemination of information product & services

- ▲ Inter library loan Service
- ▲ SDI Service
- ▲ CAS Service

- ▲ Newsletter and Leaflets
- ▲ Bibliographic Service
- ▲ Translation Service
- ▲ Literature Search Service
- ▲ Video cassettes
- ▲ Computer
- ▲ Online Catalogue
- ▲ CD-Rom database
- ▲ Mobile Library Service
- ▲ Internet
- ▲ E-Mail
- ▲ Reprographic Service

### 3.Product Range

- ▲ Reference Books
- ▲ Subject Books
- ▲ Information Bulletin
- ▲ Reprints
- ▲ Online Products
- ▲ Review
- ▲ Index
- ▲ Abstracts Lists
- ▲ Standard
- ▲ Patents
- ▲ Thesis/Dissertation
- ▲ Current Awareness bulletins
- ▲ Monographs
- ▲ Bibliographic Lists

### 4.Product Mix

- ▲ Fact collections
- ▲ Information service
- ▲ Learning Programme

### 5.Product Line

- ▲ Includes information and facts

## II. REVIEW OF RELATED LITERATURE

Anil Kumar and Joginder Singh (2015) reviewed studies which have been undertaken to assess

the Marketing of Information Products & Services by Institute of Microbial Technology under the Council of Scientific & Industrial Research in all the disciplines of IMTECH, Chandigarh. A well structured questionnaire was distributed among the research-scholars and Scientists of eight departments viz, Exploration of Microbial Biodiversity, Protein Science and Engineering, Genetics and Molecular Biology, Cell Biology and Immunology, Biochemical Engineering: Fermentation based Process Development, Bioinformatics, Biosensors and Nanotechnology, Bio-Organic Chemistry following under the Institute of Microbial Technology, Chandigarh. The responses were gathered from 94 users (29 Scientists and 65 Research Scholars). The findings of the survey reveal useful facts about the Marketing of Information Products & Services gender wise use the IMTECH library, in which male respondents were 60.63% than female respondents which were 39.36%. Only 26.59% respondents were using the offline library weekly, 59.57% occasionally. In fact only 13.82% respondents were using the online library daily. In Institute of Microbial Technology respondents i.e. Scientists and Research Scholars were 96.80% who were using the library for the purpose of education work, 88.29% regarding updating knowledge, and writing/presenting paper work were the third purpose for which users were using the library i.e. 72.34%. The fourth purpose for using the library i.e. 69.14% users were in research work and 10.63% in teaching regarding which they were using the library by the Scientists on IMTECH, Chandigarh. In Scientific & Industrial Science i.e. IMTECH only 10.63% respondents were positively using the library for entertainment purpose only. On the basis of the findings, it was suggested that, the library should be in a position to make provisions for online access at faster rates & should have wider access. Most of the respondents suggested that the price should be charged for developing library products & services & it should be reasonable. The motive of the library should not to earn the profit but to provide value added & user oriented products & services on a nominal fee. It was also suggested that, the users should be involved in the designing of the library & information products & services. There should be a continuous feedback mechanism (user surveys) to get to know the responses of the users. Then further action should be taken accordingly.

Anil Kumar et. al. (2015) reviewed studies which have been undertaken to assess the Marketing of Information Products & Services by Central Scientific Instruments Organization under the Council of Scientific & Industrial Research in all the disciplines of CSIO, Chandigarh. A well structured questionnaire was distributed among the research-scholars and Scientists of Seven departments viz, Agrionics, Biomedical Instrumentation, Optical devices & System, Advanced Materials & System, Precision Mechanical System, Ubiquitous Analytical Techniques, and Computational Instrumentation under the Central Scientific Instruments Organization, Chandigarh. The responses were gathered from 67 users (37 Scientists and 30 Research Scholars). The findings of the survey reveal useful facts about the Marketing of Information Products & Services gender wise use the CSIO library, in which male respondents were 73.13% than female respondents which were 26.86%. Only 11.94% respondents were using the offline library thrice in a week, 23.88% weekly, 4.47% daily and 25.37% occasionally. In fact 34.32% respondents were using the online library daily. In Central Scientific Instruments Organization respondents i.e. Scientists and Research Scholars were 95.52% who were using the library for the purpose of education work, 82.08% regarding writing/presenting paper, and updating knowledge were the third purpose for which users were using the library i.e. 80.59%. The fourth purpose for using the library i.e. 44.77% users were in research work and 22.38% in teaching regarding which they were using the library by the Scientists on CSIO, Chandigarh. In Scientific & Industrial Science i.e. CSIO only 5.97% respondents were positively using the library for entertainment purpose



only. On the basis of the findings, it was suggested that, the library services and products should be made more & more digital & even the past literature should be available in digital forms to masses with lesser cost and environmental hazards. Most of the respondents it was suggested that, the CSIO library should be in a position to make provisions for online access at faster rates & should have wider access. It was also suggested that it should be made available develop appropriate collections and services to serve its potential users. It should endeavor to nurture culture of customer service to enhance its image in the eyes of the users.

Anil Kumar and Joginder Singh (2014) reviewed studies which has been undertaken to assess the Marketing of Information Products & Services by Central Soil Salinity Research Institute under the Indian Council of Agricultural Research in all the disciplines of CSSRI, Karnal. A well structured questionnaire was distributed among the research-scholars and Scientists of four departments viz Soil and Crop Management, Irrigation and Drainage Engineering, Crop Improvement & also Technology Evaluation and Transfer under the Central Soil Salinity Research Institute karnal. The responses were gathered from 35 users (30 Scientists and 05 Research Scholars). The findings of the survey reveal useful facts about the Marketing of Information Products & Services gender wise using the CSSRI library in which male respondents were 82.85% than female respondents which were 17.14%. Only 14.28% respondents were using the off line library thrice in a Week, 5.71% daily and 28.57% occasionally. In fact 34.28% users were using the online library daily, 11.42% weekly and 5.71% Scientists thrice in a week use the online library. CSSRI Respondents were 100% using the library for the purpose of Research work & Writing/Presenting paper, and update knowledge which were the second purpose for which users were using the library i.e. 71.42%. The third purpose for using the library i.e. 34.28% users were teaching and 22.85% education regarding which used the library by Scientists on CSSRI, Karnal. Only 14.28% respondents were positively using the library for entertainment only. On the basis of the findings, it was suggested that the intensive effort was required from the part of the top management of the library, and authorities of the concerned ICAR to overcome the identified weakness. Most of the respondents gave proper feedback mechanism to monitor the effectiveness of the services and products. Regular surveys of the respondents should be conducted to know the continuity/discontinuity of the existing services/products and initiation of new services/products. It was also suggested that it should adopt some of the marketing and promotional strategies including publications, programmers of events, media and effective presentation of information products and services through the library website.

Anil Kumar (2014) conducted a study, which has been undertaken to assess the marketing of information products & services in Kurukshetra University library in the disciplines of social science. A well structured questionnaire was distributed among the research-scholars and teachers of seven departments viz History, Public administration, Social Work, Economics, psychology, Sociology, Political Science under the Social Science in K.U.K. The responses were gathered from 120 users (40 Teachers and 80 Research Scholars). The findings of the survey reveal useful facts about the marketing of information products & services in kurukshetra university library. 43.33% of the respondents were always using the library daily, 14.16% sometimes and 14.16% respondents were always using the library once in a week, 6.66% twice in a week. Only 20.83% respondents were always using the library occasionally. 94.16% respondents were using the library for research needs, 70.83% for education purpose only. On the basis of the findings, it was suggested that, in order to improve the library personnel should be made aware of the concepts and principles of modern marketing. So provide

better provision for the library staff to attend in-service and career advancement courses and also most of the respondents were willing to pay for information products & services imply that they rely on the quality of information products than the existing products, which were freely available. So Kurukshetra university library have to restructure or develop some of the existing products and services and to start new services based on market analysis. Most of respondents suggested that Kurukshetra University library should take necessary steps to install plasma or LCD screen in the library entrance hall to display notices and information (photographs, videos etc.) of their information services and products.

Abdulsalami (2013) conducted a study of investigate marketing of library and information services prevalent in six geographical zones in Nigeria Polytechnic. The survey method was used for conducting the study, the instruments used for gathering data were questionnaire, observations and documentary sources. The librarians and students were sample using purposive sample techniques. The data collected were analyzed using frequency and percentages. The study reveals the information resources that were available in most polytechnics libraries as books, journals, pamphlets as well as information communication technology in most Polytechnics libraries, also library orientation and current awareness services were mostly used in marketing their resources and services. Recommendations, annual displays and exhibitions of resources were among resources recommended to library resources so as to attract users to library services.

### III. RESEARCH METHODOLOGY

For the purpose of the study, a questionnaire was designed (Appendix-1). The questionnaire was pre-tested before using it with the survey population. All the respondents were given the same questionnaire irrespective of their status. The questionnaire was distributed to any of the respondents who willingly agreed to participate in the study. The respondents were also interviewed to fill the gaps. A five point Likert scale has been used to know the users attitude towards marketing, level of satisfaction, and marketing statements.

### OBJECTIVES OF THE STUDY

The present study intends to investigate the following objectives:

- ▲ To examine and access the Information Products & Services provided by the libraries of the Institutions of ICAR and CSIR.
- ▲ To identify the information needs of Scientists and Research Scholars and willingness to pay for the information products & services.
- ▲ To investigate the knowledge of awareness of Marketing of Information Products & Services among the library users.
- ▲ To examine the availability of infrastructural facilities required for performing marketing functions and activities in the libraries of the under study area.
- ▲ To measure the attitude towards marketing activities among the library users.
- ▲ To examine and understand the common problem faced by the users to access the information resources of both research institutions.

## Scope of the Study

The scope of the present study is confined to the scientists and research scholars working in the field of Science & Technology and Agricultural Sciences of 11 Indian National level Institutions of ICAR and CSIR, located particularly at Delhi, Haryana & Chandigarh. The list of these selected research institutions which has been taken for the present study is given as:

### ICAR (Indian Council of Agricultural Research)-05

1. IARI-Indian Agricultural Research Institute (New Delhi)
2. IASRI- Indian Agricultural Statistical Research Institute (New Delhi)
3. NDRI- National Dairy Research Institute (Karnal)
4. CSSRI- Central Soil Salinity Research Institute (Karnal)
5. CIRB- Central Institute for Research on Buffaloes (Hissar)

### CSIR (Council of Scientific & Industrial Research) – 06

1. NISCAIR- National Institute of Science Communication & Information Resources (New Delhi)
2. CRRI- Central Road Research Institute (New Delhi)
3. NISTADS- National Institute of Science Technology & Development Studies (New Delhi)
4. NPL- National Physical Laboratory (New Delhi)
5. IMT- Institute of Microbial Technology (Chandigarh)
6. CSIO- Central Scientific Instruments Organization (Chandigarh)

## Hypotheses

- ⤴ There is no significant association between among the users using the offline library & selected demographic variable.
- ⤴ There is no significant association between among the users using the online library & selected demographic variable.
- ⤴ There is no significant association between among the users about average time spend in the offline library.
- ⤴ There is no significant association between among the users about average time spend in the online library.
- ⤴ There is no significant association between among the status wise users about awareness of Information Products & Services.
- ⤴ There is no significant association between among the status wise users access about Information products & services provided by the ICAR & CSIR libraries.
- ⤴ There is no significant association between among the status wise common problem face by users to access the information products & services.



## Statement of the Problem

Documentation activities of a country are very much interred linked with the research & developmental efforts of the country. Agricultural research was recognized and integrated under the ICAR with vastly augmented facilities. Similarly, CSIR was setup for a vast complex of research laboratories for the development of technologies and their utilization in industries. These two premier Indian Institutions in the field of Science & Technology and Agricultural Sciences located particularly in Delhi, Haryana, & Chandigarh providing information to their members from a long time in the past. Research libraries spend huge amounts every year in building up their collections and offering library services. But these are of no use if these are not used to satisfy information needs of the library users. Effective utilization of resources and services can be achieved through marketing approach. It can assist them in the task of designing, developing and delivering appropriate services and products. Therefore, it is inevitable to know the attitudes towards marketing of information products & services among the librarians and users. Thus, the topic of my research is "MARKETING OF INFORMATION PRODUCTS & SERVICES IN THE SELECT LIBRARIES OF ICAR AND CSIR INSTITUTIONS IN INDIA: A STUDY "

## Data Collection

The users' questionnaires were distributed personally to all the 760 respondents under various research institutions, viz Scientists & Research Scholars in selected ICAR & CSRI Institutions in India. The respondent had to visit many times, particularly to the Scientists to collect the filled up questionnaires in all the 10 research institutions could be collected. However, in spite of regular visits & reminders the questionnaires were not filled & even were not received back. But also respondent had to visit many times to CSRI institutes i.e. NPL, but this Institute was not giving permission to fill up the User's questionnaire, so for that particular reason the respondent removes the CSRI Institute i.e. NPL from this present study. ICAR Institutions i.e. IARI, New Delhi was a very large institute which include 24 branches, so I choose only agriculture branch in this particular study. The following table shows questionnaires distributed & filled up received from both the category of users of all the 10 selected research Intuitions of ICAR & CSIR in India.

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Population

Institutions		Users	Total Users	No. of Questionnaire Supplied	No. of Questionnaire Received	Percentage	
ICAR	IARI	Scientists	85	60	43	71.66	
		R.S	90	63	47	74.60	
	IASRI	Scientists	49	35	25	71.42	
		R.S	25	19	17	89.47	
	NDRI	Scientists	127	91	70	76.92	
		R.S	169	120	98	81.66	
	CSSRI	Scientists	35	33	30	90.90	
		R.S	05	05	05	100	
	CIRB	Scientists	28	26	20	76.92	
		R.S	04	04	04	100	
<b>ICAR Institutes Total</b>			<b>617</b>	<b>456</b>	<b>359</b>	<b>78.72</b>	
CSRI	NISCAIR	Scientists	19	16	13	81.25	
		R.S	-	-	-	-	
	CRRI	Scientists	61	43	33	76.74	
		R.S	21	14	14	100	
	NISTADS	Scientists	21	18	15	83.33	
		R.S	04	04	04	100	
	NPL	Scientists	-	-	-	-	
		R.S	-	-	-	-	
	IMT	Scientists	57	40	29	72.50	
		R.S	128	90	65	72.22	
	CSIO	Scientists	55	45	37	82.22	
		R.S	37	34	30	88.23	
	<b>CSRI Institutes Total</b>			<b>403</b>	<b>304</b>	<b>240</b>	<b>78.94</b>
	<b>Cumulative Total</b>			<b>1020</b>	<b>760</b>	<b>599</b>	<b>78.81</b>

Breakup of the Sample

Table 3.1 Gender Wise - Distribution of the Sample

Variables	Options	Frequency	Percentage
Gender wise	Male	375	62.6
	Female	224	37.4

Table 3.1 shows that majority of the respondents were male constituting 62.6% and 37.4% female respondents.

Figure 3.1

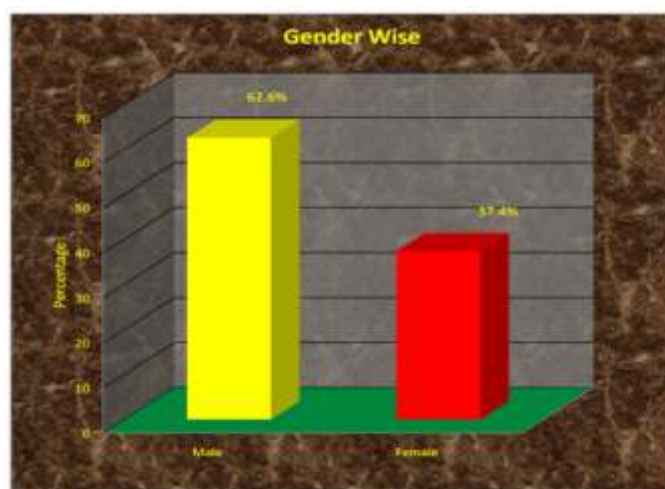


Figure 3.2

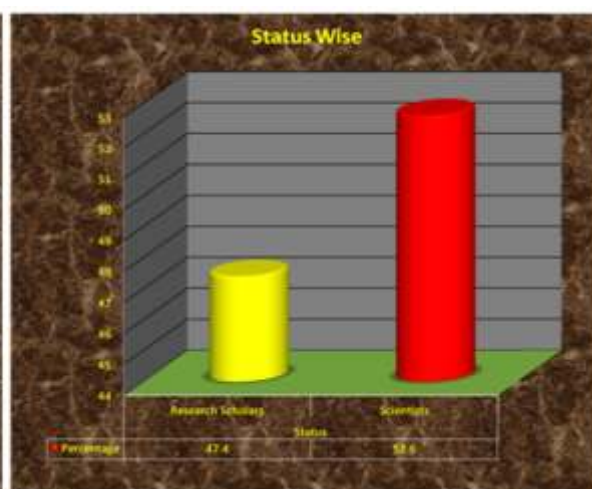


Table 3.2 Status Wise- Distribution of the Sample

Variables	Options	Frequency	Percentage
Status Wise	Research Scholars	284	47.4
	Scientists	315	52.6

Table 3.2 shows that ,100% of the sample is from academic community consisting of Research Scholars & Scientists these constitute the core target groups according to the objectives of the selected research libraries. Majority of the respondents were from Research Scholars category forming 47.4% of the total sample followed by Scientists 52.6%. The pictorial representation of the status wise distribution of sample is given in figure 3.2.

### III.ANALYSIS & INTERPRETATION

Table No: 4.1 Frequency of Using the Off-Line Library

Sr. No	Options	Frequency (N=371)	Percentage
01	Daily	58	15.6
02	Weekly	95	25.6
03	Thrice in a week	61	16.4
04	Occasionally	157	42.3
05	Never	0	0.0

Table 4.1 shows the respondents various availability of using the selected research libraries. Majority of 25.60% Research Scholars & Scientists were used the offline library weekly, 42.30% occasionally and 16.40% thrice in a week. In fact only 15.40% respondents were using the off-line library daily.

Figure No: 4.2

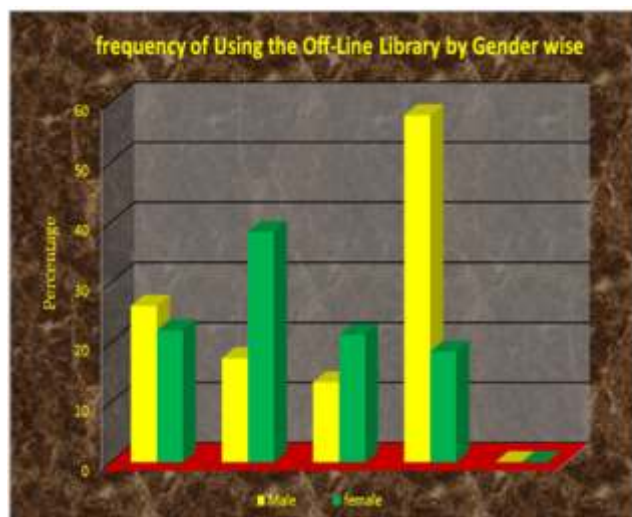


Figure No: 4.3

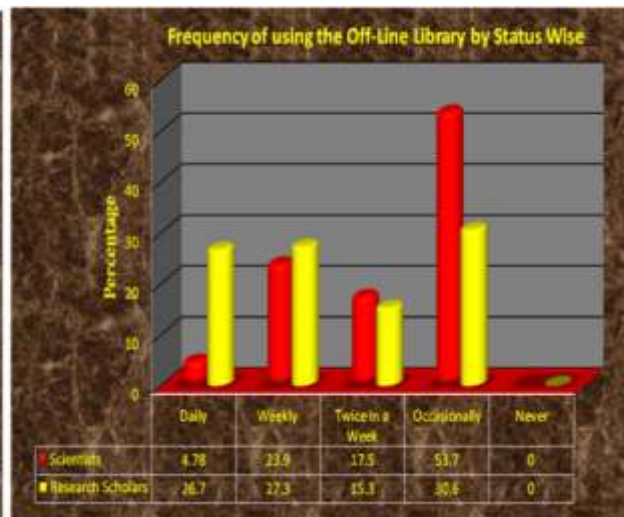


Table 4.2 Frequency of Using the Off-Line Library by Gender wise

Gender-Wise	Daily	Weekly	Twice In a Week	Occasionally	Never	Total	X 2
Male	26 (26.0)	39 (17.3)	30 (13.3)	130 (57.7)	0 (0.0)	225 (100)	57.0 Df- 3 0.000
female	32 (21.9)	56 (38.3)	31 (21.2)	27 (18.4)	0 (0.0)	146 (100)	
<b>Total</b>	<b>58 (15.6)</b>	<b>95 (25.6)</b>	<b>61 (16.4)</b>	<b>157 (42.3)</b>	<b>0 (0.0)</b>	<b>371 (100)</b>	

Significant at 0.05 level

The use of offline library in relation to the gender wise of the ICAR & CSIR respondents i.e. Research Scholars & Scientists was presented in Table 4.2. It should be seen that 26.0% male respondents were using the offline library daily and 21.9% female respondents, 17.3% were weekly by male respondents and 38.3% female. In fact 13.3% ICAR & CSIR male respondents were using the offline library twice in a week, 21.2% were female. Majority of them 57.7% male respondents were occasionally using the offline library and 18.4% were female respondents.

The chi square value of 57.0 showed that the significant variation in the frequency of using the offline library by different category of gender wise at 0.05% level of significance. Here the P Value is less than the critical value. Hence the null hypothesis 1 is rejected.

Table 4.3 Frequency of Using the Off-Line Library by Status Wise

Status Wise	Daily	Weekly	Twice In a Week	Occasionally	Never	Total	X 2
Scientists	09 (4.78)	45 (23.9)	33 (17.5)	101 (53.7)	0 (0.0)	188 (100)	41.09 Df-3, P .000*
Research Scholars	49 (26.7)	50 (27.3)	28 (15.3)	56 (30.6)	0 (0.0)	183 (100)	
<b>Total</b>	<b>58 (15.6)</b>	<b>95 (25.6)</b>	<b>61 (16.4)</b>	<b>157 (42.3)</b>	<b>0 (0.0)</b>	<b>371 (100)</b>	

Significant at 0.05 level

The frequency of using the library by respondents based on the type of Status wise is given in Table. 4.3.

Table 4.3 shows that 4.78% Scientists were always using the status wise offline library daily, 23.9% were weekly, 17.5% were twice in a week and 53.7% occasionally. Majority of them 26.7% Research Scholars were always using the status wise offline library daily, 27.3% were weekly in the subject of interest, 15.3% were twice in a week and also 30.6% were occasionally.

The chi square value of 41.09 showed that ,the significant variation in the frequency of using the offline library by different category of status wise at 0.05% level of Significance. Here the P Value is less than the critical value. Hence, the null hypothesis 1 is rejected.

Table No: 4.4 Frequency of using the Online Library

Sr. No	Options	Frequency (N=228)	Percentage
01	Daily	220	96.5
02	Weekly	06	2.64
03	Thrice in a week	02	0.87
04	Occasionally	0	0.0
05	Never	0	0.0

Table 4.4 shows the respondents various availability of using the selected research libraries. Majority of 96.5% Research Scholars & Scientists were using the online library daily and 2.64% were weekly. In fact only 0.87% respondents were using the online library twice in a week.

#### 4.5 Frequency of Using the Online Library by Status Wise

Status Wise	Daily	Weekly	Twice In a Week	Occasionally	Never	Total	X 2 Df, P.
Scientists	120 (94.4)	05 (3.93)	02 (1.57)	0 (0.0)	0 (0.0)	127 (100)	3.566 Df-2, P .168
Research Scholars	100 (99.0)	01 (0.99)	0 (0.0)	0 (0.0)	0 (0.0)	101 (100)	
<b>Total</b>	<b>220 (96.4)</b>	<b>06 (4.0)</b>	<b>02 (1.33)</b>	<b>0 (0.0)</b>	<b>0 (0.0)</b>	<b>228 (100)</b>	

Not Significant at 0.05 level

The frequency of use of library by respondents based on the type of Status wise is given in Table. 4.5

Table 4.5 shows that,94.4% Scientists were always using the status wise online library daily, 3.93% were weekly and 1.57% twice in a week. Majority of them 99.0% Research Scholars were always using the status wise online library daily and less than 1% were weekly in the subject of interest.

The chi square value of 3.566 showed that, the not significant variation in the frequency of using the different category of status wise at 0.05% level of Significance. Here the P Value is greater than the critical value. Hence, the null hypothesis 2 is accepted.



Figure No: 4.5

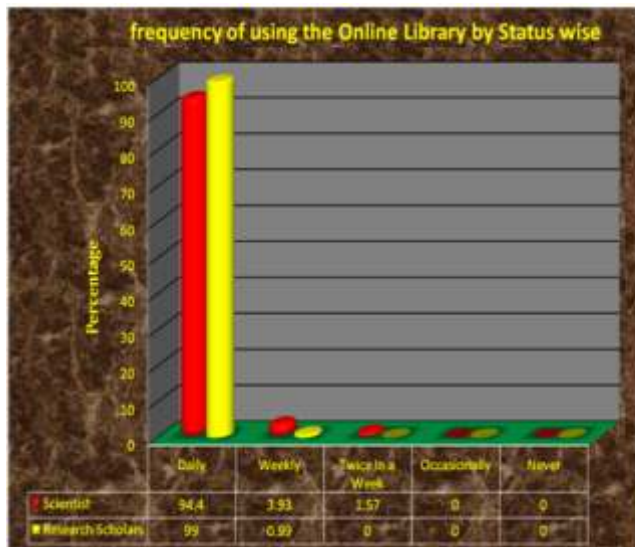


Figure No: 4.6

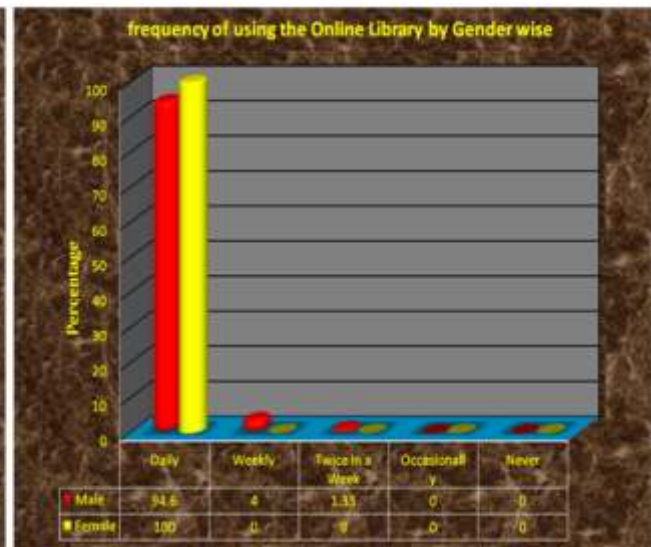


Table 4.6 frequency of using the Online Library by Gender wise

Gender-Wise	Daily	Weekly	Twice In a Week	Occasionally	Never	Total	X 2, Df, P.
Male	142 (94.6)	06 (4.0)	02 (1.33)	0 (0.0)	0 (0.0)	150 (100)	5.991 0.116
female	78 (100)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	78 (100)	
<b>Total</b>	<b>220 (96.4)</b>	<b>06 (4.0)</b>	<b>02 (1.33)</b>	<b>0 (0.0)</b>	<b>0 (0.0)</b>	<b>228(100)</b>	

Not Significant at 0.05 level

The use of online library in relation to the gender wise of the ICAR & CSIR respondents i.e. Research Scholars & Scientists was presented in Table 4.6

It should be seen that, 94.6% male respondents were always using the online library daily and 100% female respondents, 4.0% were weekly by male respondents only. In fact 1.33% ICAR & CSIR male respondents were always using the online library twice in a week.

The chi square value of 5.991 showed that, the not significant variation in the frequency of using of online library by different category of gender wise at 0.05% level of significance. Here the P Value is greater than the critical value. Hence, the null hypothesis 2 is accepted.

Table No: 4.7 Frequency of Average Time Spend in the Off-Line Library

Sr. No	Options	Frequency (N=363)	Percentage
01	Less than 30 Minutes to 1 Hour	172	47.4
02	1 to 2 hours	156	43.0
03	2 to 3 hours	32	8.8
04	3 to 4 hours	2	0.6
05	More than 4 hours	1	0.3

Table 4.7 shows that ICAR & CSIR respondents i.e. Scientists and Research Scholars were mostly spending time on the off-line and online different research institute libraries. 47.40% respondents



spend less than 30 minutes to 1 hour, 43% from 1 to 2 hours and 8.80% from 2 to 3 hours regarding off-line time in the library on a visit.

#### 4.8 Average Time Spend in the Off-Line Library-Status Wise

Status Wise	Less than 30 Min. to 1 hour	1 to 2 hours	2 to 3 hours	3 to 4 hours	More than 4 hours	Total	X 2 Df, P.
Scientists	92 (50.8)	79 (43.6)	09 (4.97)	01 (0.55)	0 (0.0)	181 (100)	Df-4, P .092
Research Scholars	80 (43.9)	77 (42.3)	23 (12.6)	01(0.54)	01 (0.54)	182 (100)	
<b>Total</b>	<b>172 (47.3)</b>	<b>156 (42.9)</b>	<b>32 (8.81)</b>	<b>02 (0.05)</b>	<b>01(0.02)</b>	<b>363(100)</b>	

Not Significant at 0.05 level

The status wise analysis of average time spend in the off-line library on a visit by the respondents is given in Table 4.8.

Table 4.8 indicates that, majority of the 50.8% Scientists were time spend on a visit the library less than 30 minute to 1 hour, 43.6% were 1 to 2 hours and 4.97% were 2 to 3 hours. Less than 1% of the Scientists spend 3 to 4 hours. Majority of them 43.9% of the Research Scholars were time spend on a visit the library less than 30 minute to 1 hour indicates the research work of the institute libraries. In fact 42.3% of the Research Scholars were time spends 1 to 2 hours, 12.6% were 2 to 3 hours and 0.54% more than 4 hours time spends in the library on a visit.

The chi square value of 7.985 showed that, the not significant variation in the frequency of average time spend in the off-line library on a visit by different category of status wise at 0.05% level of Significance. Here the P Value is greater than the critical value. Hence, the null hypothesis 3 is accepted.

Figure No: 4.8

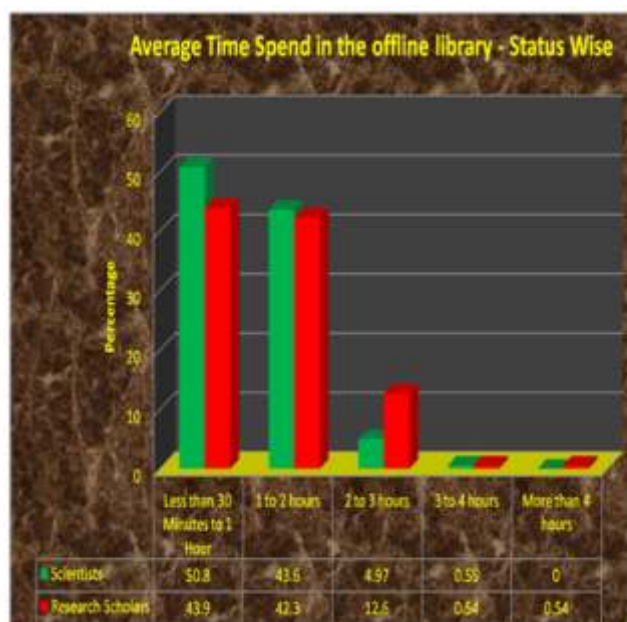


Figure No: 4.10

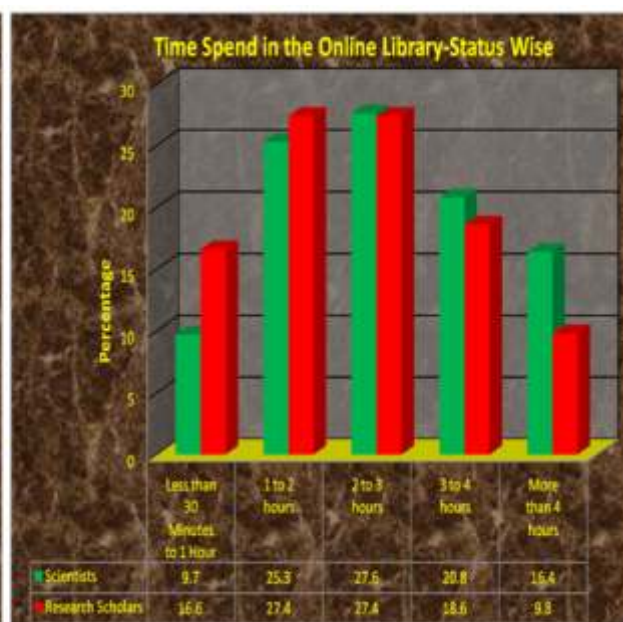


Table No: 4.9 Average Time Spend in the Online Library

Sr. No	Options	Frequency (N=236)	Percentage
01	Less than 30 Minutes to 1 Hour	30	12.7
02	1 to 2 hours	62	26.3
03	2 to 3 hours	65	27.5
04	3 to 4 hours	47	19.9
05	More than 4 hours	32	13.6

Table 4.9 shows that, ICAR & CSIR respondents i.e. Scientists and Research Scholars were mostly spending time on the online and off-line different research institute libraries. 12.70% respondents spend less than 30 minutes to 1 hour, approximately 27 % both were from 1 to 2 and 2 to 3 hours, and 19.9% from 3 to 4 hours regarding online time spend in the library on a visit. In fact only 13.6% Scientists and Research Scholars were spending the online library regarding the visit on education, research work, and entertainment etc.

#### 4.10 Average Time Spend in the Online Library-Status Wise

Status Wise	Less than 30 Min. to 1 hour	1 to 2 hours	2 to 3 hours	3 to 4 hours	More than 4 hours	Total	X <sup>2</sup> Df, P.
Scientists	13 (9.70)	34 (25.3)	37 (27.6)	28 (20.8)	22 (16.4)	134 (100)	4.324 Df-4, P .364
Research Scholars	17 (16.6)	28 (27.4)	28 (27.4)	19 (18.6)	10 (9.80)	102 (100)	
<b>Total</b>	<b>30 (12.7)</b>	<b>62 (26.2)</b>	<b>65 (27.5)</b>	<b>47 (19.9)</b>	<b>32 (13.5)</b>	<b>236(100)</b>	

Not Significant at 0.05 level

The status wise analysis of average time spend in the online library on a visit by the respondents is given in Table 4.10.

Table 4.10 indicates that only 9.70% Scientists were spending time to the online library less than 30 minute to 1 hour, 25.3% were 1 to 2 hours and 27.6% were 2 to 3 hours. In fact 20.8% of the Scientists were spending 3 to 4 hours while 16.4% more than 4 hours.

Majority of them 27.4% of the Research Scholars were spending time to the online library 1 to 2 hours & 2 to 3 hours indicates the research work of the institute libraries. In fact 18.6% of the Research Scholars were spending time to 3 to 4 hours, 16.6% were less than 30 minute to 1 hour and 9.80% were more than 4 hours spending time to the online library.

The chi square value of 4.324 showed that, it is not significant & the variation in the frequency of spending time to the online library on a visit by different category of status wise at 0.05% level of Significance. Here the P Value is greater than the critical value. Hence, the null hypothesis 4 is accepted.

Table No: 4.11 Purpose of Using the Library

Sr. No	Options	Frequency	Percentage
01	Teaching	169	28.2
02	Education	509	84.9
03	Research Work	244	40.7
04	Updating Knowledge	434	72.4
05	Writing Paper & Presenting Paper	480	80.1
06	Entertainment	54	9.01
07	Translation	0	0
08	Any Other	0	0

Most of the respondents i.e. Scientists and Research Scholars were using the library for more than one purpose. The analysis shows that, main purpose of using the library was education, updating knowledge & writing/Presenting paper.

In ICAR & CSIR selected research institutes respondents i.e. Scientists and Research Scholars were 84.9% who were using the library for the purpose of education work, 80.1% in Writing & Presenting paper and updating knowledge were the third purpose for which users were using the library i.e. 72.4%. The fourth purpose for using the library i.e. 40.7% respondents were doing for research work and 28.2% for teaching regarding which they were using the library by respondents on ICAR & CSIR institutions. In ICAR & CSIR both were only 9.01% respondents positively using the library for entertainment purpose only.

Table No: 4.12 Reason for not being a regular user of the library

Sr. No	Options	Frequency	Percentage
01	Lack of time	154	25.7
02	Insufficient Material	0	0.0
03	Get information elsewhere or online	244	40.7
04	Lack of trained staff	0	0.0
05	Inconvenient working hours	37	6.2
06	Library staff is not helpful	0	0.0
07	Inconvenient location	42	7.0
08	Any Other	0	0.0

Data given in Table 4.12 indicates that, 40.70% of ICAR & CSIR respondents identified the main reason they get information elsewhere or online 40.70% followed by lack of time 25.70% and 6.20% for inconvenient working hours. The geographical position of the library recognized as the fourth reason reported by 7% of the users complained about the inconvenient location by the ICAR & CSIR libraries in Haryana, Punjab and Delhi.

Table No: 4.13 Information Services that need to find

Sr. No	Options	Frequency	Percentage
01	Current Awareness Services	199	33.2
02	Newspaper clippings	0	0.0
03	Indexing/Abstracting Services	40	6.67
04	Translation Services	40	6.67
05	Literature Search	420	70.1
06	Photocopying of Periodical Articles	260	43.4
07	Selective Dissemination of Information	200	33.3
08	Circulation of Periodical Content	0	0.0
09	Reference Services	150	25.0
10	Inter Library Loan	60	10.0
11	Repackaging & Condensation Service	0	0.0
12	Any other	0	0.0

ICAR & CSIR respondents may use the Information Services for a variety of reasons. The need of using Information Services differs from one user to another.

It can be seen from Table 4.13 that, 33.2% respondents were using the current awareness services, 6.67% indexing/abstracting services and same 6.67% translation services about the subject of interest they need. The study shows that, ICAR & CSIR respondents were mostly who used the information service which 70.1% literature search while 43.3% photocopying of periodical articles and 33.3% selective dissemination of information. It has been found that 25.0% ICAR & CSIR respondents make always use of reference service and 10.0% inter library loan for the information need required & the subject of interest positively.

Table No: 4.14 Information Products that need to find

Sr. No	Options	Frequency	Percentage
01	Subject Books	209	34.8
02	Information Bulletin	110	18.3
03	Reprints	34	5.67
04	Online Products	359	59.9
05	Review	06	1.0
06	Index	06	1.0
07	Abstracts Lists	150	25.0
08	Reference Books	189	31.5
09	Standards/Patents	0	0.0
10	Thesis/Dissertation	150	25.0
11	Current Awareness Bulletins	50	8.34
12	Monographs	06	1.0
13	Bibliographic lists	84	14.0
14	Any other	0	0

To survey the users' regarding Information Products, fourteen types of information products were identified and formulated.

The responses analyzed in Table 4.14 reveal that, more than 34.8% of the respondents want Subject books and 59.9% Online Products i.e. E-Books, E-Journal, E-Magazine and E-Paper etc. More

than 25% ICAR & CSIR respondents i.e. Research Scholars and Scientists want need of information products i.e. reference books, Thesis/Dissertation & abstract lists. All the other products required by the ICAR & CSIR respondents have been given in table 4.34 in order of their preference.

Table No 4.15 Awareness about Marketing of Information Products & Services

Variables Information Products & Services	Awareness						Mean	SD	Rank
	Not Aware of		Aware of but Not Used		Aware of & Used				
	F.	%	F.	%	F.	%			
Reprographic Service	0	0	01	0.01	598	99.8	<b>2.99</b>	<b>24.3</b>	1
Literature Searching	0	0	09	1.66	590	98.4	<b>2.98</b>	<b>24.0</b>	2
Internet Service	0	0	12	2.00	587	98.0	<b>2.97</b>	<b>23.8</b>	3
CAS	0	0	81	13.5	518	86.5	<b>2.86</b>	<b>21.3</b>	4
Online E-Resources	0	0	105	17.5	494	82.5	<b>2.82</b>	<b>20.5</b>	5
Reprints/Pre-Print	0	0	158	26.4	441	73.6	<b>2.73</b>	<b>19.0</b>	6
CD ROM Database	13	2.2	237	39.6	349	58.3	<b>2.56</b>	<b>17.1</b>	7
Document Scanning Printing	0	0	317	52.9	282	47.1	<b>2.47</b>	<b>17.2</b>	8
Abstracting Service	08	1.33	336	56.0	255	42.6	<b>2.41</b>	<b>17.1</b>	9
Indexing Service	15	2.50	330	55.0	254	42.4	<b>2.39</b>	<b>16.8</b>	10
Bibliographic Service	17	2.2	332	55.4	250	41.7	<b>2.38</b>	<b>16.8</b>	11
SDI Service	67	11.1	290	48.4	242	40.4	<b>2.29</b>	<b>15.5</b>	12
Document Delivery Service	70	11.6	308	51.4	221	36.9	<b>2.25</b>	<b>15.6</b>	13
Govt./Institute Publications	65	10.8	323	53.9	211	35.2	<b>2.24</b>	<b>15.8</b>	14
Review	7	1.2	444	74.1	148	24.7	<b>2.23</b>	<b>19.0</b>	15
Standards	14	2.3	440	73.5	145	24.2	<b>2.21</b>	<b>18.8</b>	16
Enquiry Services	13	2.17	450	75.1	136	22.7	<b>2.20</b>	<b>19.1</b>	17
Inter Library Loan Service	36	6.0	435	72.6	128	21.4	<b>2.15</b>	<b>18.4</b>	18
Circulation of Periodical C.	29	4.84	455	75.9	115	19.2	<b>2.14</b>	<b>19.1</b>	19
Monographs	73	12.1	426	71.1	100	16.7	<b>2.04</b>	<b>18.0</b>	20
Translation Service	57	9.5	470	78.5	72	12.0	<b>2.02</b>	<b>19.4</b>	21
Consultancy Service	100	16.6	428	71.4	71	11.9	<b>1.95</b>	<b>18.0</b>	22
Patents	99	16.5	435	72.6	65	10.9	<b>1.94</b>	<b>18.3</b>	23
Newspaper Clipping	228	38.0	313	52.2	58	9.7	<b>1.71</b>	<b>15.8</b>	24
Repackaging Condensation	247	41.2	332	55.4	20	3.3	<b>1.62</b>	<b>16.8</b>	25

It is revealed from Table 4.15 that majority of ICAR & CSIR respondents i.e. research Scholars & Scientists keep themselves aware of & used through Information Products & Services i.e. Reprographic, which has been ranked at Rank 1st with highest mean value ( $\bar{x} = 2.99, s = 24.3$ ) followed by Literature Searching (2nd rank), Internet Service (3rd rank) and Current Awareness Service which has been ranked 4th. The least number of respondents aware of & used were Marketing of Information Products & Services for Repacking & Condensation (rank 25th).

In fact more than 70% ICAR & CSIR respondents were aware of, but not used by Information Products & Services i.e. Review, Standard, Enquiry Service, Inter Library Loan Service, Circulation of Periodical Contents, Monographs, Translation Service, Consultancy Service, Patents. Majority of them 58.3% respondents were aware of and used the IT based CD ROM database Service and 82.5% Online E-Resources. The other ways in order of preference have been given in Table 4.15. The pictorial representation of the distribution of the respondent's based on the awareness and usage of Information Products and Services is given in Figure 4.15



Figure 4.15

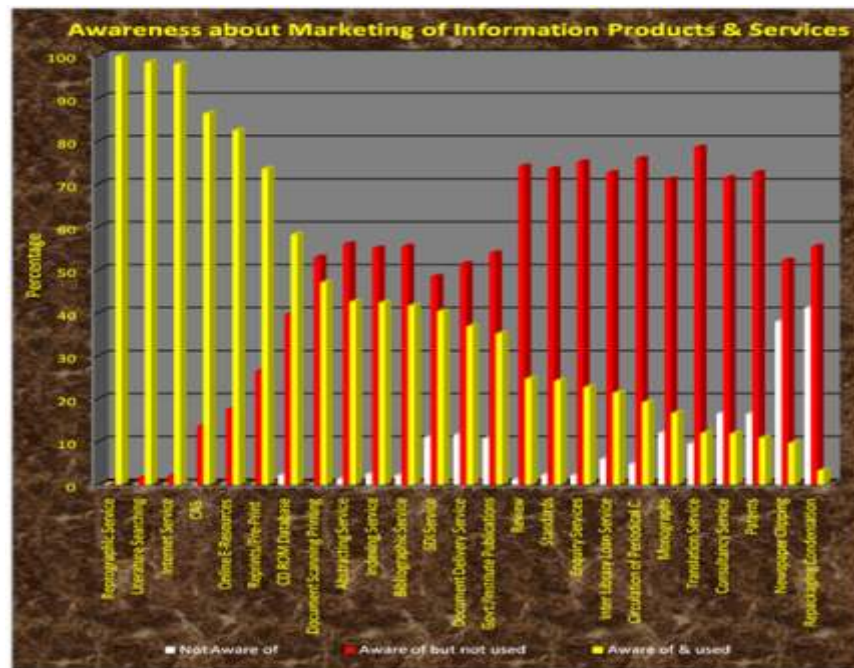


Table No: 4.16 Frequency to Access the Information Products & Services

Variables Information Products & Services	Access of Knowledge										Mean	SD	Rank
	Never		Sometimes		Usually		Often		Always				
	F.	P.	F.	P.	F.	P.	F.	P.	F.	P.			
Reprographic Service	01	0.01	78	13.0	112	18.6	308	51.4	100	16.6	3.71	14.1	1
Literature Searching	09	1.50	109	18.1	134	22.3	147	24.5	200	33.3	3.70	12.0	2
Internet Service	12	1.50	15	2.50	57	9.51	109	18.1	406	67.7	4.47	17.1	3
CAS	81	13.5	09	1.50	50	8.34	90	15.0	369	61.6	4.09	15.7	4
Online E-Resources	105	17.5	115	19.1	80	13.3	100	16.6	199	33.2	3.28	11.2	5
Reprints/Pre-Print	158	26.3	110	18.3	10	1.66	60	10.0	261	43.5	3.26	13.2	6
CD ROM Database	250	41.7	202	33.7	85	14.1	04	0.66	58	9.68	2.02	13.6	7
Document Scanning/P.	317	52.9	160	26.7	80	13.3	40	6.67	02	0.33	1.74	14.8	8
Abstracting Service	344	57.4	155	25.8	80	13.3	12	2.00	08	1.33	1.63	15.6	9
Indexing Service	345	57.5	140	23.3	90	15.0	17	2.83	07	1.16	1.66	15.5	10
Bibliographic Service	349	58.2	160	26.7	75	12.5	15	2.50	00	0.0	1.59	15.9	11
SDI Service	357	59.5	142	23.7	90	15.0	10	1.66	00	0.0	1.58	16.0	12
Document Delivery S.	378	63.1	190	31.7	28	4.67	03	0.50	00	0.0	1.42	17.2	13
Govt./Institute Pub.	388	64.7	159	26.5	39	6.51	13	2.17	00	0.0	1.46	17.1	14
Review	451	75.2	140	23.3	06	1.00	02	0.33	00	0.0	1.26	19.2	15
Standards	454	75.7	125	20.8	19	3.17	01	0.16	00	0.0	1.27	19.2	16
Enquiry Services	463	77.2	130	21.7	06	1.00	00	0.0	00	0.0	1.23	19.6	17
ILL Service	471	78.6	115	19.1	10	1.66	03	0.50	00	0.0	1.24	19.7	18
Circulation of Periodical	484	80.8	98	16.3	17	2.83	00	0.0	00	0.0	1.22	20.1	19
Monographs	499	83.3	92	15.3	08	1.33	00	0.0	00	0.0	1.18	20.6	20
Translation Service	527	87.9	50	8.34	12	2.00	10	1.66	00	0.0	1.17	21.6	21
Consultancy Service	528	88.1	68	11.3	03	0.50	00	0.0	00	0.0	1.12	21.7	22
Patents	534	89.1	61	10.1	04	0.66	00	0.0	00	0.0	1.11	21.9	23
Newspaper Clipping	541	90.3	49	8.18	09	0.15	00	0.0	00	0.0	1.11	22.1	24
Repackaging & Con.	579	96.6	17	2.83	03	0.50	00	0.0	00	0.0	1.03	23.6	25



F= Frequency, P= Percentage

Table 4.16 reveals that, majority of ICAR & CSIR respondents i.e. Research Scholars & Scientists i.e. 51.4% & 33.3% were always access the Information Products & Services about reprographic service and literature searching which have been ranked 1st & 2nd with the mean value i.e. ( $\bar{x}$ =3.71,  $s$ =14.1) and ( $\bar{x}$ =3.70,  $s$ =12.0) for both the categories respectively. The respondents were least never access the Information Products & Services about repackaging & Condensation and newspaper clipping which been ranked 24th and 25th respectively with the mean values ( $\bar{x}$ =1.03,  $s$ =23.6) and ( $\bar{x}$ =1.11,  $s$ =22.1) respectively for both the categories.

Table No: 4.17 Willingness to pay for Information Products & Services

Variables	Options			
	Willingness To Pay: Free		Willingness To Pay: Fee	
	Frequency	Percentage	Frequency	Percentage
Indexing Service	599	100.0	0	0
Abstracting Service	599	100.0	0	0
Bibliographic Service	599	100.0	0	0
SDI Service	599	100.0	0	0
Current Awareness Service	599	100.0	0	0
Newspaper Clipping	599	100.0	0	0
Consultancy Service	599	100.0	0	0
Reprographic Service	193	32.2	406	67.8
Reprints/Pre-Print	325	54.3	274	45.7
Document Delivery Service	586	97.8	13	2.2
Translation Service	586	97.8	13	2.2
Inter Library Loan Service	599	100.0	0	0
Internet Service	553	92.3	46	7.7
Document Scanning Printing	599	100.0	0	0
Literature Searching	586	97.8	13	2.2
Enquiry Services	599	100.0	0	0
Repackaging & Condensation	599	100.0	0	0
Monographs	599	100.0	0	0
Review	599	100.0	0	0
Circulation of Periodical Contents	599	100.0	0	0
Govt./Institute Publications	599	100.0	0	0
Patents	599	100.0	0	0
Standards	599	100.0	0	0
CD ROM Database	496	82.8	103	17.2
Online E-Resources	599	100.0	0	0

In Table 4.17 the ICAR & CSIR respondents i.e. (284 Research Scholars & 315 Scientists) who were willing to pay for needed information Products & Services have been analyzed. Data indicates that, 67.8% respondents were ready to pay for Photocopy, 45.7% for Reprints/Pre-Print Service, 2.2% for different Libraries Services i.e. Document Delivery, Translation, Literature Searching while 7.7% for Internet Service and other free of cost at all the ICAR & CSIR libraries Products and Services.

The analysis shows that, the positive attitude of the respondents for charging fee for quality Products & Services, especially IT enabled Products & Services in the different research libraries in

Haryana, Punjab & Delhi.

Table 4.18 & 4.19 Online Databases Relating in their Subject Field

Variables	Options	F.	P.
Are you familiar with online database relating in your subject field?	Yes	494	82.5
	No	17.5	17.5
If yes, Please	<b>NARD</b> -National Agricultural Research Database	0	0.0
	<b>CERA</b> -Consortium for E-Resources in Agriculture	282	47.1
	<b>NKRC</b> - National Knowledge resources Consortium	212	35.4
	<b>AGRIS</b> - Agricultural Information System	119	19.9
	<b>Krishi Kosh</b>	0	0.0

F= Frequency P= Percentage

Figure 4.18

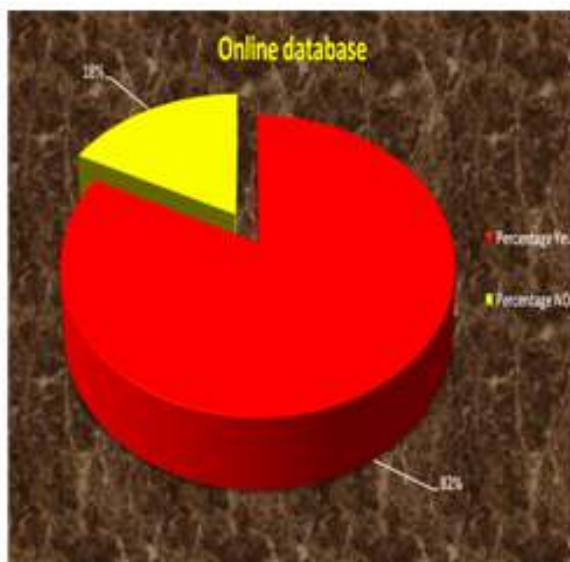
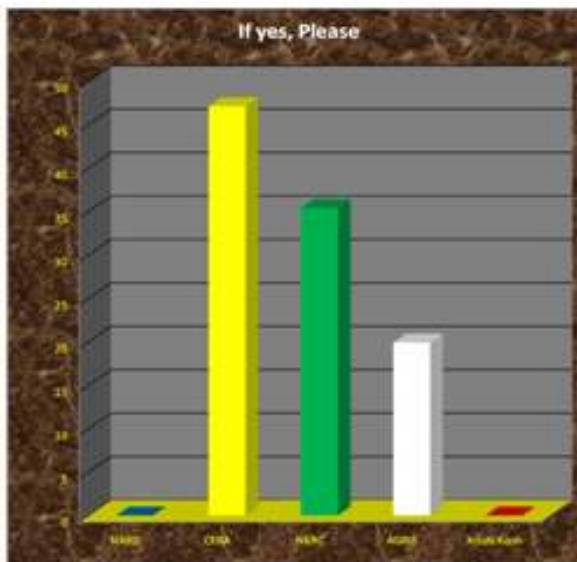


Figure 4.19



The use of online database is the need of the hour of the present days. Table 4.18 shows the access about online database was among the Scientists & Research Scholars. ICAR & CSIR respondents i.e. Scientists & Research Scholars were asked about access of online database. It was found that 82.5% respondents have access the online database related in their subject field and then only 17.5% never used it.

Table 4.19 shows that, majority of 47.1% respondents i.e. Scientists & Research Scholars reported that the CERA (Consortium for E-Resources in Agriculture) was used and 35.4% of the respondents were using the NKRC (National Knowledge Resources Consortium) and also 19.9% AGRIS (Agricultural Information System) database relating in their subject field of interest.

Table No: 4.20 &amp; 4.21 You are able to Keep Up yourself with Innovations in your field

Variables	Options	F.	P.
How much you are able to keep up yourself with innovations in your field?	To a very great extent	88	14.7
	To a great extent	168	28.0
	To a considerable extent	196	32.7
	To a Moderate extent	125	20.9
	To some extent	22	3.7
If, "To Some Extent", please specify the reasons	No current awareness services available	0	0.0
	No specify information available in field of	1	0.2
	No time to use library	18	3.0
	Limited knowledge of library collection	2	0.3
	Undeveloped Information Products/Services	1	0.2
	Others	0	0.0

F= Frequency, P= Percentage

For this purpose five degrees of keeping up their selves with innovations in their field of interest were identified and formulated.

Table 4.20 shows that, a majority of the ICAR & CSIR respondents i.e. Research Scholars & Scientists 32.7% were able to keep up their selves with innovations in their field to a considerable extent, 28.0% respondents were to a great extent, 14.7% to a very great extent and 20.9% to a moderate extent in their field of interest. Only 3.7% ICAR & CSIR respondents were able to keep up their selves with innovations in their field to some extent.

Five categories of reasons were identified & formulated to clarify respondents "To Some Extent" in keeping up their selves with innovations as a part of question two of part one. The data collected from 599 respondents i.e. Research Scholars & Scientists whose degrees of keeping up you with innovations were limited or moderate has been analyzed in Table 4.21 The main reason as stated (To Some Extent) by 3.0% of the respondents is that they do not find "No time to use the library" in the field of their interest. In fact only 0.3% of the ICAR & CSIR respondents state that they have "Limited knowledge of library collections" and 1.0% find the "No specify information available in field of" and "Undeveloped Information Products/Services" offered by library to keep up you with innovations.

Table 4.22 Common Problem faced by Users to access the Information Resources

Sr. No	Options	Frequency	Percentage
01	Lack of Information Technology	112	18.6
02	Information access is very expensive	47	7.84
03	Information is scattered in too many sources	91	15.1
04	Non availability of electronic resources	27	4.50
05	Marketing of Information is not cost effective	15	2.50
06	Language barrier	12	2.00
07	Some other reasons i.e. location /hours/ environment/time	295	49.2

Seven categories of reasons were identified and formulated to clarify common problem faced by respondents to access the information resources. The main problem as stated by 49.2% of the ICAR & CSIR respondents i.e. research Scholars & Scientists is that they do not access the information

resources like some other reasons i.e. location/hours/environment & time. In fact, 15.1% ICAR & CSIR respondents state that, they have faced problem to access the information & scattered in too many sources, 7.84% information access was very expensive while 18.6% lack of Information Technology.

Table 4.23 Common Problem faced by Users to access the Information Resources -Status Wise

Status Wise	Lack of Inf. Technology	Inf. Access is very expensive	Inf. is scattered in too many sources	Non availability of E- Resources	Marketing of Information is not cost effective	Language barrier	Some other reasons i.e. location /hours/ environment/time	Total	X <sup>2</sup> Df, P
Scientists	60 (19.0)	30 (9.52)	49 (15.5)	17 (5.39)	09 (2.85)	08 (2.53)	142 (45.0)	315 (100)	7.28  Df-6,  0.296
Research Scholars	52 (18.3)	17 (5.98)	42 (14.7)	10 (3.52)	06 (2.11)	04 (1.40)	153 (53.8)	284 (100)	
<b>Total</b>	<b>112</b> <b>(18.6)</b>	<b>47</b> <b>(7.84)</b>	<b>91</b> <b>(15.1)</b>	<b>27</b> <b>(4.50)</b>	<b>15</b> <b>(2.50)</b>	<b>12</b> <b>(2.00)</b>	<b>295</b> <b>(49.2)</b>	<b>599</b> <b>(100)</b>	

Not Significant at 0.05 level

Seven categories of reasons were identified and formulated to clarify common problem faced by Research Scholars & Scientists to access the information resources.

The main problem as stated by 45% of the ICAR & CSIR Scientists is that, they do not access the information resources like some other reasons i.e. location/hours/environment & time while 53.8% Research Scholars. Only 5.39% Scientists state that, they have faced problem to access the Non availability of E- Resources while 3.52% Research Scholars. Less than 3.0% Scientists they have faced problem to access the marketing of Information was not cost effective while 2.11% Research Scholars and 19.0% ICAR & CSIR Scientists lack of Information Technology followed by 18.3% Research Scholars.

The chi square value of 7.28 showed that, the not significant variation in the frequency of common problem faced by users to access the Information resources by different category of status wise at 0.05% level of Significance. Here the P Value is greater than the critical value. Hence, the null hypothesis 11 is accepted.

#### V.FINDINGS OF THE STUDY

- ✦ Majority of 25.60% Research Scholars & Scientists were using the offline library weekly, 42.30% occasionally and 16.40% thrice in a week. In fact only 15.40% respondents were using the off-line library daily.
- ✦ 96.5% Research Scholars & Scientists were using the online library daily and 2.64% were weekly. In fact only 0.87% respondents were using the off-line library twice in a week.
- ✦ 47.40% respondents spend less than 30 minutes to 1 hour, 43% from 1 to 2 hours and 8.80% from 2 to 3 hours regarding off-line time in the library on a visit.
- ✦ 12.70% respondents spend less than 30 minutes to 1 hour, approximately 27 % both were from 1

to 2 and 2 to 3 hours, and 19.9% from 3 to 4 hours regarding online time spend in the library on a visit.

- ✦ In fact, only 13.6% Scientists and Research Scholars were spending the online library regarding the visit on education, research work, and entertainment etc.
- ✦ In ICAR & CSIR selected research institutes respondents i.e. Scientists and Research Scholars were 84.9% who were using the library for the purpose of education work, 80.1% in Writing & Presenting paper and updating knowledge were the third purpose for which users use the library i.e. 72.4%.
- ✦ The fourth purpose for using the library i.e. 40.7% respondents were doing for research work and 28.2% for teaching regarding which they were using the library by respondents on ICAR & CSIR institutions.
- ✦ In ICAR & CSIR both were only 9.01% respondents positively using the library for entertainment purpose only.
- ✦ 40.70% of ICAR & CSIR respondents identified the main reason that they get information elsewhere or online 40.70% followed by lack of time 25.70% and 6.20% for inconvenient working hours.
- ✦ 33.2% respondents were using the current awareness services, 6.67% indexing/abstracting services and same 6.67% translation services about the subject of interest they need.
- ✦ The study shows that ICAR & CSIR respondents were mostly who used the information service which 70.1% literature search while 43.3% photocopying of periodical articles and 33.3% selective dissemination of information.
- ✦ 34.8% of the respondents want Subject books and 59.9% Online Products i.e. E-Books, E-Journal, E-Magazine and E-Paper etc. More than 25% ICAR & CSIR respondents i.e. Research Scholars and Scientists want need of information products i.e. reference books, Thesis/Dissertation & abstract lists.
- ✦ In fact more than 70% ICAR & CSIR respondents were aware of, but not used by Information Products & Services i.e. Review, Standard, Enquiry Service, Inter Library Loan Service, Circulation of Periodical Contents, Monographs, Translation Service, Consultancy Service, Patents.
- ✦ Majority of them 58.3% respondents were aware of and using the IT based CD ROM database Service and 82.5% Online E-Resources.
- ✦ Data indicates that, 67.8% respondents were ready to pay for Photocopy, 45.7% for Reprints/Pre-Print Service, 2.2% for different Libraries Services i.e. Document Delivery, Translation, Literature Searching while 7.7% for Internet Service and other free of cost at all the ICAR & CSIR libraries Products and Services.
- ✦ 82.5% respondents have access the online database related in their subject field and then only 17.5% never used it.
- ✦ 47.1% respondents i.e. Scientists & Research Scholars reported that the CERA (Consortium for E-Resources in Agriculture) was used and 35.4% of the respondents were using the NKRC (National Knowledge Resources Consortium) and also 19.9% AGRIS (Agricultural Information System) database relating in their subject field of interest.
- ✦ 32.7% were able to keep up their selves with innovations in their field to a considerable extent, 28.0% respondents were to a great extent, 14.7% to a very great extent and 20.9% to a moderate extent in their field of interest. Only 3.7% ICAR & CSIR respondents were able to keep up their

selves with innovations in their field to some extent

- ✦ The main reason as stated (To Some Extent) by 3.0% of the respondents is that, they do not find “No time to use the library” in the field of their interest. In fact only 0.3% of the ICAR & CSIR respondents state that they have “Limited knowledge of library collections” and 1.0% find the “No specify information available in field of” and “Undeveloped Information Products/Services” offered by library to keep up you with innovations.
- ✦ 49.2% of the ICAR & CSIR respondents i.e. research Scholars & Scientists is that, they do not access the information resources like some other reasons i.e. location/hours/environment & time.
- ✦ In fact 15.1% ICAR & CSIR respondents state that they have faced problem to access the information & scattered in too many sources, 7.84% information access was very expensive while 18.6% lack of Information Technology.

## SUGGESTIONS

Based on the findings, the following Suggestions are put forward to improve the Marketing of Information Products and Services in ICAR & CSIR selected research institutions of India.

- ✦ The ICAR & CSIR libraries should be made available by developing appropriate collections & services to serve its potential users & should use modern techniques. It should endeavor to nurture culture of customer service to enhance its image in the eyes of the users.
- ✦ ICAR & CSIR libraries have to restructure or develop some of the existing products & services and to start new services based on market analysis.
- ✦ The price charged for developing library products & services should be reasonable. The motive of the library should not to earn profit but to provide value added & user oriented products & services on a nominal fee.
- ✦ To improve the library, personnel should be made aware of the concepts and principles of modern marketing. So provide better provision for the library staff to attend in-service and career advancement courses and also most of the respondents were willing to pay for information products & services imply that they rely on the quality of information products than the existing products, which were freely available.
- ✦ ICAR & CSIR libraries should adopt some of the marketing and promotional strategies including publications, programmers of events, media and effective presentation of information products and services through the library website.
- ✦ ICAR & CSIR libraries should adopt an appropriate marketing approach for developing Information Services and Products properly.

## ACKNOWLEDGEMENTS

First and foremost, I would like to thank the almighty God the most beneficent and merciful, who blessed me for completing this work. It is not possible to record in words the inspirational guidance of my father Sh. Som Nath Kapoor, Mother Shanti Devi & also Dr. Joginder Singh (Associate Prof.), Dept. of Library & Information Science from Kurukshetra University Kurukshetra. I am highly thankful to my wife Pooja Kapoor the inspirational guidance.



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