

# Information Seeking Behavior of Marine Scientists in Bharathidasan University: A Case Study

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**Abstract** - The study analyses the requirements for different types of information in an environment where the need for internal and external resources are intertwined. It was found that, although there were differences in the features of the information seeking patterns of the Marine Science faculty members and Research Scholars, the behavioural characteristic were similar; and the study identified identical or very similar categories of information seeking behaviour to those of academic researchers. The results were then compared to certain minor variations concerned with awareness levels of facilities, the extent of usage of a source and the research stage at which a strategy may be employed were identified. Nonetheless, fundamental differences in information seeking behaviour could not be determined. Finally, the extent to which developments in electronic communication have had any impact on the information or communication patterns of the Marine Science faculty members and research scholars is considered. The analysis of the data thus collected, covers the use of the library collection, library catalogue, library service facilities, etc. and the information needs of the users of the library.

**Keywords:** Information, Electronic communication, Marine Science, Communication Channels, Bibliographical Sources

## I. INTRODUCTION

In this cyber age, information plays a pivotal role in different spheres of human endeavors such as education, research and development, decision and policy making. The role of library and information centers in providing information for these endeavors is well documented. The generators and users of information play a key role in information transfer and utilization process (Joglekar, 1986). The user community in an academic library system constitutes the faculty, Research scholars and educational administrators. From the view point of the user whether he is the faculty member and research scholar, he needs variety of information. The information which is quite recent to the user is continuously being recorded and the user needs selective services to keep him abreast with current development (Amrithpal, 1998). In order to maximize the use of the resources of the library, surveys should be undertaken to ascertain the users' requirement and information seeking behavior.

## II. STATEMENT OF THE PROBLEM

To examine the information seeking behavior of academicians, the authors selected areas of psychology

(Garvey and Griffiths, 1966), health (Cheng and Lam, 1996) and social sciences and humanities (Horner, Thirlwall, 1989). But the studies relating to the School of Marine Science is rather scanty. Therefore, the present researcher has selected the School of Marine Science in order to analyze the information seeking behavior of research scholars and teaching staff of the School of Marine Science. Since Marine Science research has become so dependent upon an effective information support system that it gets crippled in the absence of a good library. Therefore, the marine science professionals play a very significant role in enriching the marine biological scientists and scholars by providing them with the latest information concerning their areas of interest. In this background the present study examines the information seeking behavior of faculty members and research scholars of School of Marine Science in Bharathidasan University.

## III. OBJECTIVES OF THE STUDY

The objective of this explorative study is to cast light on the methods used by marine scientists for gathering information and their information needs. The following were selected as the specific objectives of the study.

1. To find out the communication channels through which information is acquired by the marine scientists.
2. To examine the pattern of library used by marine scientists.
3. To find out the extent of time spent by the marine scientists in searching for information.
4. To examine the extent of use of the library facilities and services made by marine scientists.
5. To find out the purpose for which they seek and collect information.
6. To identify the factors motivating the information seeking behaviour of marine scientists.
7. To determine the relative importance of different sources of information used by them.

## IV. METHODOLOGY

The survey was chosen as the method most likely to describe accurately the information seeking behaviour of individuals involved (such as staff members and research scholars) in the field of Marine Science.

### A. Survey Format

The survey collected data to describe respondent's information seeking behavior and to relate this behavior to a number of variable. The survey form included questions about characteristic of the respondents that might influence their information seeking behaviour.

### B. Sample Selection

The study population consisted of faculty members and research scholars of the School of Marine Science in Bharathidasan University, Tiruchirappalli. The data was collected from the respondents through the questionnaire. A total of twenty faculty members were working and fifty research scholars studying in this department and the questionnaire designed for the purpose was distributed to all of them. Out of which fifty eight responded to our request with a response rate of 82.8. This sample was surveyed and the responses (n = 58) analysed.

## V. ANALYSIS

Marine biological literature appears in a wide variety of sources. The present research examines the information seeking behavior of teaching members and research scholars of marine science.

### A. General Information

TABLE I POSITION OF THE RESPONDENTS

Category	Male	Female	Total	Percentage
Professor	3	-	3	5.2
Associate professor	3	-	3	5.2
Assistant Professor	8	2	10	17.2
Ph.D. Scholar	25	5	30	51.8
M.Phil. Scholar	10	2	12	20.6
Total	49	9	58	100%

From the table I, it is inferred that the existing gender inequality in the distribution of position help particularly among the staff members of the School of Marine Science in Bharathidasan University. For instance, male staff members constitute 24.13 percent and female 3.44 per cent. In short, male members are five times more when compared to women members in the School of Marine Science. Besides, the female representation is absent in some positions viz., Professors and Associate Professor. The position wise distribution of respondents indicates that as hierarchy moves up in the ladder, the number of staff members goes down.

### B. Formal Communication

Table II represents the formal communication of the sample respondents and explains that the highest contribution in all the three type of formal communication is made by the

Readers. The average number of research papers published in national journal per Associate professor has been 74.66 followed by Professors (40.0) and Lecturers (15.3) and Research Scholars (1.3). The same trend is prevailing in the publication of research articles in international journals and in the publication of books. Apart from that the M.Phil. Scholars contribution about formal communication is also negligible. Hence, it is concluded that the increase in the experience of teaching and research are coping with the publications of research articles and books.

TABLE II FORMAL COMMUNICATION OF THE SAMPLE RESPONDENTS OF THE MARINE SCIENTISTS

Category	Formal Communication		
	No. of Average Publication of Research Articles		
	National Journals	International Journals	Books
Professors	40.0 (30.5)	20.66 (46.06)	1.0 (9.65)
Associate professor	74.66 (56.9)	20.66 (46.06)	8.33 (80.41)
Assistant Professor	15.3 (11.6)	3.3 (7.36)	0.8 (7.72)
Ph.D. Scholars	1.13 (0.9)	0.23 (0.52)	0.23 (2.22)
M.Phil. Scholars	0.16 (0.1)	-	-
Total	131.25 (100)	44.85 (100)	10.36 (100)

### C. Informal Communication

Table III describes the informal communication of the sample respondents of the Marine Scientists. Here also, the activities of informal communication are accompanied by the experience of teaching and research, if the experience increases, the informal communication activities also augments (Jange & Maheswarappa, 1998). For example, the average number of national conferences attended by Associate professor has been 41.66 and it is gradually declining if the hierarchy goes down. The research scholars participation relating to the international conferences attended and visit to abroad is very little. Thus, it is evidenced that the formal and informal activities are determined by the experience of teaching and research.

### D. Use of Library

Information is the essential element for progress of higher education and plays vital role in national progress proper use of information is directly related to the growth of study, research and teaching facilities and its multidirectional growth of higher education (Ranganathan, 2012). The academic libraries have been used by scientists in different manner. The use of library could be measured in various ways. One such way, which may give an idea of the use of the library, is that of finding the frequency of the visits of users to the library. For the present study, the use pattern of library includes frequency of visit to library, purpose of visit to library and sources of bibliographic information used.

TABLE III INFORMAL COMMUNICATION OF THE SAMPLE RESPONDENTS OF THE MARINE SCIENTISTS

Category	Informal Communication Activities		
	Conference attended		No. of Times visited to foreign countries
	National Conference	International Conference	
Professors	21.66 (28.89)	11.0 (41.46)	2.0 (31.80)
Associate professor	41.66 (55.57)	8.0 (30.15)	3.33 (52.94)
Assistant Professor	8.9 (11.87)	2.5 (9.42)	0.9 (14.30)
Ph.D. Scholars	2.33 (3.11)	5.03 (18.96)	0.06 (0.95)
M.Phil. Scholars	0.42 (0.56)	-	-
Total	74.97 (100)	26.53 (100)	6.29 (100)

### 1. Frequency of Visiting the Libraries

TABLE IV FREQUENCY OF VISITING THE LIBRARIES OF MARINE SCIENTISTS

Frequency of Visit	Marine Biologists							A+B	%
	Staff Members (A)				Research Scholars (B)				
	Prof.	Asso.Prof	Assist.Prof	Tot.	Ph.D	M.Phil	Tot		
Every day	-	2	4	6	16	8	24	30	51.7
Once in a week	1	-	1	2	6	1	7	9	15.5
More than once a weak	1	-	3	4	2	2	4	8	13.8
Once in a fortnight	-	1	1	2	2	-	2	4	6.9
Once in a month	-	-	1	1	2	-	2	3	5.2
Occasionally	1	-	-	1	2	1	3	4	6.9
Total	3	3	10	16	30	12	42	58	100

It is evident from Table IV that the (51.7%) majority of marine biologists visited the library every day to meet their information needs. Further, about 15.5 per cent of the marine scientists visited the library once in a week, 13.8 per cent more than once a week; 6.9 per cent are visit both once in a fortnight and occasionally and the remaining 5.2 per cent once a month.

### 2. Purpose of Visit to the Library

The purpose of the visit to the library is an important criterion to measure the use of the library. Table- 5 it is observed that 81.03 per cent of marine scientists visit to library to collect bibliographical information and 72 per cent come to library to gather current information about their subject fields. Background information required for preparing research articles, projects / thesis etc. constitute

43 per cent. The marine scientists give less importance for gathering information relating to statistical and institutional information.

### 3. Sources of Bibliographical Information Used

The library use pattern in terms of sources of bibliographic information used to examine and the results show that 72 per cent of marine scientists used electronic Media such as on line search followed by library catalogues (51.7%), direct browsing of Library Shelves (48%) and citation in current reading materials (44.8%). Library catalogue and direct browsing of Library Shelves are largely used by Research scholars (50%). On the contrary, staff members are largely using electronic media (56%) and colleagues (50%). Further, citation in current reading materials is equally used by teaching members and research scholars.

TABLE V PURPOSE OF VISIT TO LIBRARY BY MARINE SCIENTISTS

Purpose of visit	Marine Scientists							A + B	%	
	Staff (A)				Total	Research Scholars (B)				Total
	Prof.	Associ. Prof.	Assist.Prof	Ph.D.		M.Phil.				
Bibliographical Information	3	2	9	14	25	8	33	47	81.03	
Current Information	3	3	7	13	23	6	29	42	72.0	
Background Information	1	1	3	5	16	4	20	25	43.1	
Statistical Information	-	-	4	4	7	2	9	13	22.4	
Institutional Information	-	-	2	2	3	4	7	9	15.5	

TABLE VI SOURCES OF BIBLIOGRAPHIC INFORMATION USED BY MARINE SCIENTISTS

Bibliographic Information	Marine Scientists						A + B	% age	
	Staff (A)			Total	Research Scholars (B)				Total
	Prof.	Assoc.Prof	Assist.Prof		Ph.D.	M.Phil.			
Library catalogue	3	3	9	15	14	1	15	30	51.7
Colleagues	1	1	6	8	14	1	15	23	39.6
Direct Browsing of Library Shelves	1	2	4	7	16	5	21	28	48
Experts in the field	2	3	3	8	6	-	6	14	24
Citation in current reading	2	2	6	10	15	2	17	27	46.5
Electronic media	2	1	7	10	24	8	32	42	72

### E. Use of Library Services

The prime objective of collection, storage and organization of information in the university library is to facilitate the academic community to exploit and harness fully the resources of the library effective library services bring about a functional library (Ranganathan, 2015). The modern academic libraries are required to use modern information techniques and services. From the table- of the use of library

services it is found that the 86 percent of Marine scientists used Reference services followed by loan of books (72.5) Bibliographical service (72 %) and Reprographic service 65.5 % .Reference service, loans of books and Bibliographical service are largely used by research scholars. On the contrary, staff members are largely used in the same conditions. Further, Inter library loan service is equally used by staff and research scholar.

TABLE VII RESPONDENTS OPINION ABOUT THE LIBRARY SERVICES

Library Services	Marginally		Substantially		Completely		Total (%)
	Staff	Res. Sch	Staff	Res. Sch	Staff	Res. Sch	
Loan of books	1	13	8	12	5	6	45 (77.5)
Reference Service	0	7	8	16	6	13	50 (86.0)
Bibliographical Service	7	10	4	11	5	5	42 (72.0)
Current Awareness Service	1	8	4	7	3	7	30 (51.7)
Database Search	3	7	3	7	1	7	27 (46.0)
Inter library loan	4	4	3	10	2	6	30 (51.7)
Reprographic Service	2	4	6	8	4	14	38 (65.5)
Journal / Periodical circulation	1	3	2	5	5	11	27 (46.0)

TABLE VIII RESPONDENTS OPINION ABOUT THE LEVEL OF MOTIVATION OF INFORMATION SEEKING

Level of Motivation	Non Motivation		Weakest Motivation		Average Motivation		Fairly Motivation		Strongly Motivation		Total (%)
	Staff	Res. Sch	Staff	Res. Sch	Staff	Res. Sch	Staff	Res. Sch	Staff	Res. Sch	
Preparation for Class Teaching	-	5	-	1	1	8	1	5	13	3	37 (63.8)
General Awareness for New Knowledge	-	1	-	4	3	7	3	12	9	8	47 (81.0)
Participation in Seminar / Conferences	-	1	-	3	2	8	4	9	9	12	48 (82.7)
Increase of Promotional opportunities	-	7	-	2	4	4	4	6	6	3	36 (62)
Write and Published Papers	1	3	-	3	-	9	4	10	11	11	52 (89.6)
Guide to Research Scholar / Students Project	-	4	-	-	-	1	2	19	13	3	32 (55)

### F. Motives and the Purpose of Seeking Information

The motives and the purpose of seeking information is discussed with the respondents and the findings reveal that the marine scientists are seeking information for write and published research articles and papers (89.6 %), for participation in seminar conferences etc (82.75), prepare for class teaching (63.8). These studies revealed that the scientists are seeking information for keeping self-improvement and up to date developments in the field of specialization (Asunka., Chae., Hughes & Natriello 2009). The Marine Scientists give less important to data treat for guide to research scholars / student project.

### VI. FINDINGS

The following findings were drawn from this study.

1. There are significant variations in the formal communication among the different categories of Marine Scientists. The increase in the experience of teaching and research are coping with the publications of research articles and books.
2. The activities of informal communication are higher among Associate Professor followed by Professor, Assistant Professor and Research Scholars.
3. Most of the respondents, both from staff members and research scholars, visit the library daily. The effect of frequency of visiting the library will be there on teaching, research purposes and for keeping up-to-date knowledge as well as for under taken retrospective literature search.
4. Electronic media, Library Catalogue, direct browsing of library shelves and citation in current reading materials are the major sources of bibliographic information.
5. General information and Bibliographic information should keep abreast with current developments which are main types of information required by the Marine scientists.
6. More than half of the Marine scientists are aware of library services and are using the services. The mainly used library services are Reference Service, loan of book, bibliographical services.
7. They are mainly seeking information for writing and publishing papers, attending conferences and seminars and for class teaching when compared to other purposes.

### VII. CONCLUSION

The increasing growth and consumption of information at all levels of human activity has led to the gradual shifting of the industrial society into an information society. In a developing information society rapid and convenient delivery of required information is the ordinary state of affairs. The information has created problems for users to locate and retrieve the required information in time. These require adequate information management skills on the part of the users which can be examined through the seeking behavior of users. Hence, it is concluded that the increase in the experience of teaching and research is coping with the publication of research articles and books and also reference service, loans of books, bibliographical services are the major library services are used by faculty members and research scholars.

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