

**Full Length Research**

**Information Use by Research Scholars in  
Multidisciplinary Areas of Science and Technology:  
A Survey of Sant Gadge Baba Amravati University,  
Maharashtra**

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The research paper tries to illustrate the concept of information use. It highlights the areas of multidisciplinary research in science and technology. Meeting the multidisciplinary needs of research scholars begins with understanding the activities that create these needs and their place in the knowledge system. The intension behind this research survey is to recognize the purpose and frequency of visit to the library by multidisciplinary research scholars in the field of science and technology. The survey was conducted to gain a clear picture of how multidisciplinary research scholars in science and technology seek information, the most used information sources or services by them. It is an attempt to know users awareness and utilization of various information services provided by the university library of Sant Gadge Baba Amravati University.

**Keywords:** Current Awareness Service (CAS); Selective Dissemination of Service (SDI); Multidisciplinary Research; Science and Technology; Research and Development.

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**INTRODUCTION**

Research is a continuous process where each new invention suggests some new problems. These new problems inspire to new research scholars for their future research (Adithya and Talawar, 2009). The general meaning of information use is that, "it is concerned with understanding what information sources people choose and the ways in which people apply information to make sense of their lives and situations". Brady (2004) stated

the role of libraries according to him a library plays a lead role in disseminating research information in any research organization. With the help of libraries research scholars selected their research problems and completed their research in well manner.

It is very difficult to provide valid information to the research scholars and satisfy their information needs in any discipline. According to Popoola (2008) in science and technology discipline providing information within time is not easy task due to many factors such as

tremendous growth of scientific literature, subject scope, nature and complexity, scattering of literature, language barriers and multidisciplinary nature, etc. So it is very important to study the information needs of research scholars in multidisciplinary areas of Science and technology. In the campus of Sant Gadge Baba Amravati University central library is situated. The library offers both conventional and modern services to its users. The purpose of the research study is to recognize the user awareness and utilization of various information services provided by the central library of Sant Gadge Baba Amravati University.

### **OBJECTIVES OF THE RESEARCH STUDY**

1. To recognize the areas of multidisciplinary research in the field of science and technology.
2. To recognize the purpose and frequency of visit to the library by research scholars in the field of science and technology.
3. To recognize the nature of information requirement and types of information sources used by research scholars in central library of Sant Gadge Baba Amravati University.
4. To recognize the nature of communication channels used by the research scholars to share research information.
5. To know users awareness and utilization of various information services provided by the central library of Sant Gadge Baba Amravati University.

### **Review of past studies**

Ranganathan (2011) in the case study of Bharathidasan University, Tiruchirappalli, about use of information sources by the personal attributes science faculty members and research scholars in a university environment stated that, scientific periodicals, abstracting and indexing journals, bibliographic databases and newspapers were the resources of information which were most frequently used. According to Bates (1996), many people in well defined disciplines such as chemistry are in fact working in multidisciplinary fields and exhibit high citation rates outside their own fields. Kumar and Reddy (2014) in their article, 'Use of E-Journals by Research Scholars in University Libraries in Andhra Pradesh' assessed the type of e-journals used, purpose for which they are used, amount of time spent in using them, problems in accessing e-journals, search methods used in accessing them, satisfaction with print and e-journals, adequacy of e-journals and training obtained in accessing them. Similarly, Palmer and Bates (1996) have done systematic research in information needs of multidisciplinary research. Devarajan (1989)

stated that majority of research areas chosen by physical scientists and natural scientists are multidisciplinary in nature. Murphy (2003) stated that the basic research in pure science and technology is on the decrease.

### **RESEARCH METHODOLOGY AND SAMPLING**

The research study is mainly based on the data collected from the central library of Sant Gadge Baba Amravati University and research scholars from various Science and Technology departments. For this structured questionnaire for University Librarian is constructed and used as prime instrument for primary data. The other questionnaire is designed for the survey of research scholars. The survey questionnaire was includes a Likert type rating scale with five possible responses. The total 180 questionnaires were distributed out of these 148 research scholars responded to the questionnaires, the response rate is 82.22%. The entire 148 questionnaire were selected for analysis and interpretation of data. Responses to the questions were analyzed using simple statistical techniques and presented in the forms of table and figures.

### **Limitation of the research study**

The study covers the research scholars at various teaching departments of Sant Gadge Baba Amravati University, registered research scholars at the research centers and central library users those use library for research purpose. The study used simple percentage method for data analysis.

### **RESULT**

#### ***Area of multidisciplinary research***

Multidisciplinary areas of science and technology are involving several academic disciplines or specializations in an approach to a topic problem Ex. Bioinformatics which is the combination of Biology, Information Science and Mathematics. Multidisciplinary areas of science and technology are classified into various subjects. The data reveals that the areas of multidisciplinary research in science and technology are industrial Chemistry, Medicinal Chemistry, Informatics, Bioinformatics, Microbiology, Chemistry, Physics, Zoology, Petrochemicals, Oil and Paint Technology, Paper Pulp Technology, Geology, Mathematics, Applied Electronics and Computer Sciences, etc.

### **Information sources/ Services offered to the research scholars by the Central Library**

Both conventional and modern types of information services provided to the research scholars of science and technology. These services includes lending, reference, reprint, photocopying and specialized services such as newspaper clipping service, current awareness service, Selective Dissemination of Information (SDI), OPAC, literature searches of online databases, bibliographic databases, abstracting and indexing, consolidation and repackaging. The N-List consortia, ABI information Complete, SCOPUS database, IEE Xplore database, E-journals, etc. are some important information sources

offered to the research scholars of science and technology by the central library.

### **General Information of the Respondents**

The general information of the respondents is shown in Table 1-3.

### **Age wise distribution of Respondents**

The Table-1 gives the age wise distribution of the respondents. It is found that, large number of the respondents representing 41.89% fall into the age group 31-35 years. Followed by 22.29% as 36-40 years, 18.92% as 26-30 age group, 'less than 25' years 8.11% and 'above 40' range 8.79%.

S. N.	Age in Years	Number of Respondents	Percentage of Respondents
1	<25	12	8.11
2	26-30	28	18.92
3	31-35	62	41.89
4	36-40	33	22.29
5	40>	13	8.79
<b>Total</b>		<b>148</b>	<b>100</b>

(Sources: Filled in questionnaire)

### **Gender wise distribution of Respondents**

S. N.	Gender	Number of Respondents	Percentage of Respondents
1	Male	92	62.16
2	Female	56	37.84
<b>Total</b>		<b>148</b>	<b>100</b>

(Sources: Filled in questionnaire)

From the Table-2 it is observed that, out of total 148 respondents 92 (62.16%) were male research scholars and 56 (37.84%) were female.

### **Educational qualification of the Respondents**

The qualification groups are identified and for the better use of research study it is divided into six groups. The Table-3 shows that 72 (48.65%) respondents possess M. Sc. degree followed by research degree i.e. Ph. D. 36 (24.32%). NET (JRF)/SET qualified research scholars were 18 (12.16%) while M. Phil. degree 9 (6.08%). It is noticed that, not single respondent has the highest degree in science i.e. D. Sc. (Doctor of Science).

S. N.	Qualification	Number of Respondents	Percentage of Respondents
1	M. Sc.	72	48.65
2	M. Phil.	09	6.08
3	Ph. D.	36	24.32
4	D. Sc.	00	0
5	NET(JRF)/SET	18	12.16
6	GATE	13	8.79
<b>Total</b>		<b>148</b>	<b>100</b>

(Sources: Filled in questionnaire)

### **Frequency of visit to the central library**

The central library plays an important role in providing research information to the research scholars. The regular visit of library shows the efficiency of the central library in meeting the information needs. The Table-4 shows the frequency of visit to the central library and use of library by multidisciplinary research scholars in the areas of science and technology.

S. N.	Frequency	Number of Respondents	Percentage of Respondents
1	Daily	48	32.43
2	Once a Week	31	20.95
3	Twice a Week	13	8.79
4	Once a Month	23	15.54
5	Twice a Month	10	6.75
6	Occasionally	16	10.81
7	Never	7	4.73
<b>Total</b>		<b>148</b>	<b>100</b>

(Sources: Filled in questionnaire)

From the Table-4 it is clear that, 32.43% of the respondents use the central library daily, 20.95% respondents use 'once a week', 8.79% use 'twice a week', 15.54% respondents use 'once a month' and 6.75% visited the library 'twice a month' and 10.81% of respondents are 'occasional' users and very few i.e. 4.73% of the respondents never used the central library.

### **Ranking of use of information channels by Research Scholars**

To identify the information channels by research scholars the question asks to the respondents where they seek current valid research information. The responses were calculated and given in the Table-5. It is found that, the articles from print and online journals on science and technology were the means through which all research scholars i.e. 100% obtain current research information. Internet has the second rank 99.32% research scholars use internet while 97.97% respondents communicate with colleagues and 97.29% were in contact with the experts for current information. And the other means in the order of preferences are 'use of conference proceedings/seminar papers etc. 93.91% and 87.83% research scholars' visit other institute and so on.

S. N.	Information channel	Rank	No. of Research Scholars & Percentage (%)
1	Journals Article (Print & Online)	1	148 (100%)
2	Internet	2	147 (99.32%)
3	Communication with colleagues	3	145 (97.97%)
4	Communication with colleagues experts	4	144 (97.29%)
5	Attending conferences/seminars/workshops	5	143 (96.62%)
6	Use conference proceedings/seminar papers, etc.	6	139 (93.91%)
7	Other institute	7	130 (87.83%)
8	Audio-Visual Media	8	125 (84.45%)
9	Membership in professional bodies	9	123 (83.10%)

(Sources: Filled in questionnaire)

### **Research Scholars' awareness and actual use of information services**

Table 6 is related to the Information services provided by the central library and research scholar's responses about their awareness and use. Details of user awareness and use of various services by research scholars are given in the table. It is observed that, most of the respondents were aware of and use of 'online search' i.e. 81.76% followed by 81.08% respondents were aware of 'newspaper clipping service' and use it. It is an important current awareness service given by the central library. 13.51% respondents were aware about it but not used while 5.41% respondents still not used this service. More than 70% of the respondents are aware of and use of services like lending, claim on book, reference and inter library loan services. SDI service is a prominent information service offered by central library to research scholars 69.60% are aware of and use this facility while 13.51% respondents are not aware of SDI service. It is notice that the very important service such as literature search through CD-ROM databases and online databases only 66.89% respondents very aware of and used it. Similarly nearly 60% of the respondents are aware of the photocopying, bibliographic services and current awareness services

S. N.	Information services	Aware & Used	Aware But Not Used	Not Aware	Total (%)
1	Online search	121 (81.76%)	18 (12.16%)	09 (6.08%)	148 (100%)
2	Newspaper clipping	120 (81.08%)	20 (13.51%)	08 (5.41%)	148 (100%)
3	Lending	116 (78.38%)	14 (9.46%)	18 (12.16%)	148 (100%)
4	Claim on Book	115 (77.70%)	15 (10.14%)	18 (12.16%)	148 (100%)
5	Reference	112 (75.67%)	12 (8.11%)	24 (16.22%)	148 (100%)
6	Inter Library Loan	104 (70.27%)	24 (16.22%)	20 (13.51%)	148 (100%)
7	Selective Dissemination of Information	103 (69.60%)	25 (16.89%)	20 (13.51%)	148 (100%)
8	Literature search on CD-ROM/Online Database	99 (66.89%)	31 (20.95%)	18 (12.16%)	148 (100%)
9	Photocopying	98 (66.22%)	29 (19.60%)	21 (14.18%)	148 (100%)

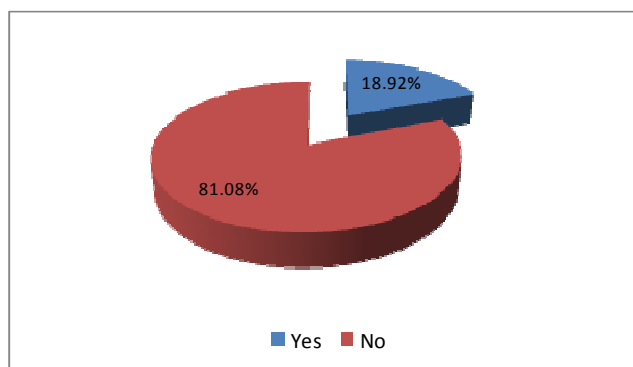
**Table 6: continues**

10	Bibliographic services	98 (66.22%)	30 (20.27%)	20 (13.51%)	148 (100%)
11	Current Awareness Services	95 (64.19%)	35 (23.65%)	18 (12.16%)	148 (100%)

(Sources: Filled in questionnaire)

***Use of Libraries other than central library***

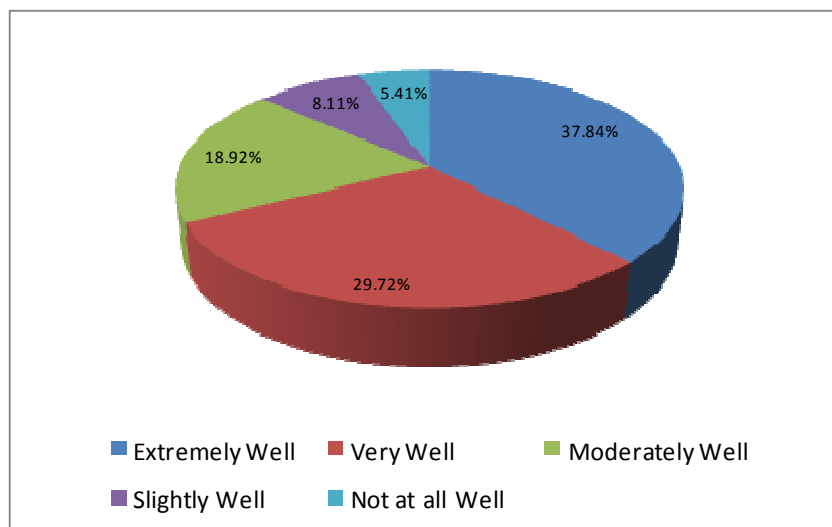
From the research study it is found that, 28 (18.92%) respondents made use of other libraries in addition to the central library while 120 (81.08%) respondents were depend fully on the central library.



**Figure 1:** Use of Libraries other than central library

***Rating of library services by the Research Scholars***

The question was asked to the research scholars to rate the services and overall performance of the central library of Sant Gadge Baba Amravati University. More than 37.84% of the research scholars rate the library services 'extremely well', 29.72% as 'very well', 18.92% as 'moderately well', 8.11% as 'slightly well' and only 5.41% rate the central library services 'not at all well'.



**Figure 2:** Rating of library services by the Research Scholars  
(Sources: Filled in questionnaire)

### ***Demand for specific information sources or services***

The question asked to the research scholars whether they demand the central library for any specific information sources or services in relation with their research needs. Out of 148 research scholars 129 (87.16%) gives positive response that they asked the central library for their required research information and 19 (12.84%) respondents never asked for specific information.

<b>Table 7: Demand for specific information sources or services</b>		
<b>Opinion</b>	<b>Number of Respondents</b>	<b>Percentage</b>
Yes	129	87.16
No	19	12.84
<b>Total</b>	<b>148</b>	<b>100</b>

(Sources: Filled in questionnaire)

### ***Time taken to get the demanded information***

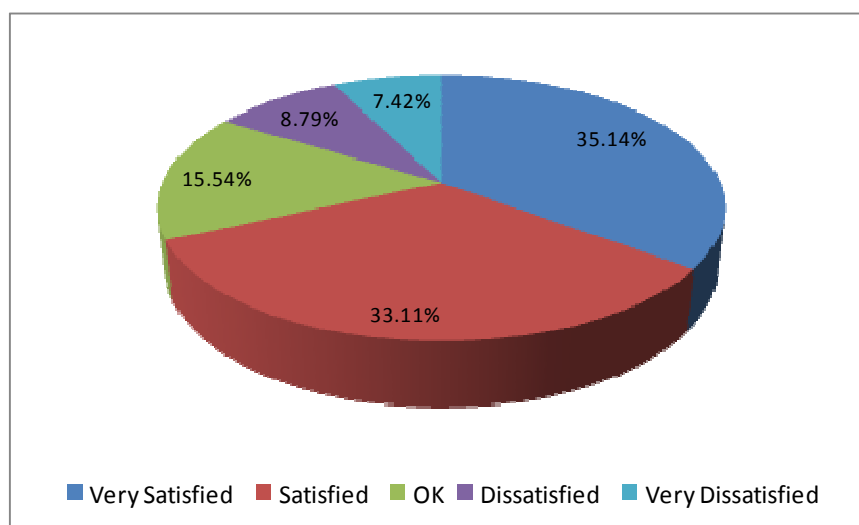
The two questions were asked to the respondents' one relating to time taken to get the demanded information by the central library and other about their satisfaction in providing the demanded information. The Table-8 reveals that out of 148 respondents 34.46% indicated the time taken is 1-5days, 26.35% indicated 6-10 days while 19.59% have indicated the time taken 11-15 days. Only 8.79% respondents indicated that the central library taken one month to supply the demanded information items.

<b>Table 8: Time Taken to get the demanded information</b>		
<b>Time taken to get a document (days)</b>	<b>Number of Respondents</b>	<b>Percentage</b>
1-5	51	34.46
6-10	39	26.35
11-15	29	19.59
16-20	16	10.81
Within a Month	13	8.79
<b>Total</b>	<b>148</b>	<b>100</b>

(Sources: Filled in questionnaire)

### ***Rating of satisfaction towards the response of the central library***

The rating of satisfaction towards the response of the central library is given in the Figure-3. The table reveals that response of the central library in providing the information was very satisfied for 35.14%, satisfied for 33.11% while 15.54% respondents are feeling OK. Only 8.79% respondents were dissatisfied towards the response of the central library and 7.42% are very dissatisfied.



**Figure 3:** Rating of satisfaction towards the response of the central library. (Sources: Filled in questionnaire)

## FINDINGS AND RECOMMENDATIONS

### Findings

The findings of the research study demonstrate that highest number of research scholars falls under the age group 31-35 years and lowest number of research scholars are from below 25 years. 62.16% research scholars are male. 48.65% of the total respondents have their highest degree M. Sc. and 24.32% of respondents have Ph. D. in their respective discipline. Majority of research scholars used central library for up-dating their information and knowledge. Articles from print and online journals are the most preferred channel used by the research scholars (100%) to keep themselves up-to-date with multidisciplinary areas of science and technology. It is found that 32.43% of the research scholars visit the central library daily. Both conventional and modern library services are used by the research scholars. Almost 81.08% of the research scholars depend fully on the central library to get research information. 34.46% research scholars get valid information items from central library within 1-5 days. 97% research scholars prefer sharing research information by communication with colleagues and experts.

### Recommendations

The research scholars recommended that the both print and online journals and online databases related to the science and technology must be added in the collection of central library. Claim items and information of new

arrivals must be communicated to the research scholars within short period.

## CONCLUSION

Now a day the research trends move towards multidisciplinary subjects. Most of the research scholars selected their research topics in such area. They need most valid information and update information for their research purpose. The library and information centers are the main sources to provide such information. Information search in the multidisciplinary area is difficult for the research scholars. For this proper instructions for collecting of information must be given to the research scholars. To make right information to the right person at the right time in the right form and within a right manner libraries and information centre are essential.

The central library of Sant Gadge Baba Amravati University is more concerned with providing specialized information services to its users. The research centers and teaching departments within the university are engaged in research and development activities in multidisciplinary areas of science and technology. In order to increase the use of library facilities by the research scholars, the central library has conducted compulsory user awareness programmed from time to time.

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