INFORMATION EQUIRED BY ENGINEERING FACULTY MEMBERS: A STUDY

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Abstract

The study examines the aspects of information seeking behaviour of the faculty of Engineering Colleges affiliated to Mahatma Gandhi University, Kottayam, Kerala. It includes nature and type of information required their need. The relationship between the nature and type of information required with academic status. The nature and type of information required with institutions,

Keywords

Information seeking, information and communication technology, Engineering Libraries.
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Introduction

The information seeking behaviour of scientists is been one of the main concerns of librarians and information scientists. As information technologies, which nowadays are major means of information service provision, develop, information services are improved and as a result information seeking activities of scientists go though changes and adjustments. This is a cycle where research on information behaviour of scholars leads to better information services and improved information services might make the scholars alter their information seeking activities and behaviour. Hence, the need for study of the information-seeking behaviour of scholars.

Zhang[1] stresses that a thorough understanding of user information needs and information seeking behavior is fundamental to the provision of successful information services. Wilson[2] points out that the scope of information-seeking behavior research is vast and many new concepts and methods are being developed with the help of this research. It is clear that the study of human information-seeking behavior is now a well-defined area of research. According to Davidson and Lingman[3] the understanding of information needs and information-seeking behavior of various professional groups is essential as it helps in the planning, implementation, and operation of information system, and services in work settings White[4] states that if academic librarians are to realistically serve academic researchers, they must recognize the changing needs and variations in information gathering and provide services that would be most useful4. Shahzad[5] conducted a survey to find out the information-seeking behavior of faculty members of Government College University , Lahore . He acquired the data from all three faculties, i.e., science and technology, social sciences and humanities. Anjum[6] studied the information needs of humanities teachers at the University of the Punjab. Many authors have pointed out that the studies on information-seeking behavior and needs of social scientists are fewer than those involving the natural sciences, and the studies of humanists' information needs are fewer still (Line,[7]; Hopkins,[8]; Blazek,[9]; Challener,[10]. According to Line new studies of information users and their needs are even more necessary in the age of the Internet. Researchers such as Callison [11], Devadason and Pratap[12], and Ellis[13] have explored quantitative and qualitative methodologies for user studies. Information-seeking behavior differs among user groups. Academic libraries must understand According to Wilson [14,15],

information-seeking behavior includes "those activities a person may engage in when identifying their own needs for information, searching for such information in any way, and using or transferring that information." Kakai, et al.,[16] have defined information seeking behavior as an individual's way and manner of gathering and sourcing for information for personal use, knowledge updating, and development.

METHODOLOGY

The present study is questionnaire based survey in which a structured was used as the instrument for collection of data from the respondent. This questionnaire was prepared and distributed among the 26 institutions of engineering faculty members. After constant personal persuasion by the investigators 1164 field questionnaires collected and analyzed. The following engineering Colleges Affiliated to Mahatma Gandhi University, Kottayam, Kerala,

1 Rajiv Gandhi Institute Of Technology Kottayam
2 Amaljyothi Engineering College, Kottayam
3 Mangalam College of Engineering, Kottayam
4 Saintgits College of Engineering, Kottayam
5 St. Joseph's College of Engg. and Technology,Kottayam
6 Mar Athanasius College of Egineering, Ernakulam
7 Adi Shankara Institute of Engineering and Technology, Kalady
8 Federal Institute of Science and Technology (FISAT), Ernakulam
9 Ilahia College of Engg. and Technology, Ernakulam
10 K.M.E.A Engineering College, Ernakulam
11 Matha College of Technology, North Paravur
12 Rajagiri School of Engineering and Technology,Kochi
13 S.C.M.S. School of Engineering Technology, Ernakulam
14 S.N.Gurukulam College of Engineering, Ernakulam
15 S.N.M Institute of Management and Technology, North Paravur
16 Vishwajyoti College of Engineering and Technology, Ernakulam
17 Jaibharath College of Management & Engineering Technology, Kochi
18 Indira Gandhi Institute of Engg. & Tech. for Women, Kothamangalam
19 Mar Baselious Institute of Technology & Science, Kothamangalam
20 Caarmel Engineering College, Ranni
21 Mount Zion College of Engineering, Kadammanitta Pathanamthitta
22 Musaliar College of Engineering and Technology, Pathanamthitta
23 Sree Bhudha College of Engineering for women, Pathanamthitta
24 Govt. Engineering College, Idukki
25 University College of Engineering Thodupuzha
26 Mar Baselius Christian College of Engg. and Tech., Peerumedu

Data provided by the respondents, based on the five point scale, relating to the nature and type of information required are presented in table 1.

Nature and types of information required by respondents with Weighted Arithmetic Mean and rank

The following table shows Weighted Arithmetic Mean and rank of Nature and types of information required by respondents.

Table 1 **Nature and Information required by the Information Seeking Behavior of respondents with Weighted**

Sl.No	Nature and Information required	0	%	1	%	2	%	3	%	4	%	WAM	Rank
1	Review of literature (Reviews, year books, repots, etc)	65	5.6	110	9.5	320	27.5	502	43.1	167	14.3	25.1	6
2	Theories / Basic, scientific and Technical	16	1.4	62	5.3	236	20.3	602	51.7	248	21.3	28.6	2
3	Methods, Processes and Procedures	67	5.8	124	11	342	29.4	421	36.2	210	18	25.0	7
4	Experimental designs, results and application	54	4.6	98	8.4	326	28	502	43.1	184	15.8	25.7	5
5	Material, equipment and apparatus know how	89	7.6	194	17	328	28.2	439	37.7	114	9.79	22.5	8
6	Information about current development in your field	16	1.4	27	2.3	174	14.9	697	59.9	250	21.5	29.8	1
7	Computer programs and model building information	72	6.2	109	9.4	263	22.6	409	35.1	311	26.7	26.7	4
8	Standard and patent specifications and code of practice	139	12	283	24	271	23.3	293	25.2	178	15.3	20.8	9
9	Scientific and Technical news	63	5.4	79	6.8	248	21.3	519	44.6	255	21.9	27.1	3

0 – Non-motivator 1 – Weakest motivator 2 – Average motivator 3 – Fairly motivator 4 – Strongest motivator

It is observed from the table1 the WAM values of the nine variables along with the rank of the information required and listed as follows:.

ANOVA (Two-way) test for nature and types of information required

Two way ANOVA of test the significance, the variables of nature and type of information required, and the results are presented in Table 2

Table – 2 Nature and Information required vs designation

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	133172	8	16646.5	7.0507	0.0567	8.7543
Columns	77583	4	19395.75	8.2152	0.0785	7.5382
Error	75551	32	2360.9687			
Total	286306	944				

It can be such from a reading of data presented in Table 2 that, the F value is less than the table value of the variables, which infers that the difference in the sample mean is significant. The level of significance was tested At 95% confidence interval.

Table - 3 Nature and Information required vs institution

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	110115	8	13764.375	10.6618	0.0862	8.8752
Columns	65475	4	16368.75	12.6791	0.09	9.5432
Error	41312	32	1291			
Total	216902	44				

It can be seen from a reading of data presentation Table 3 that, the F value is higher than the table value of the variables, which infers that the difference in the sample mean is significant. The level of significance was tested at 95% confidence interval

Chi – Square Test for Nature and Types of Information Required

Values relating to the variables were further subjected to Chi-square test to buttress the above

findings; it shows that there is not much difference between the findings of the ANOVA, Independent sample t-test and Chi-square test with regard to the nature and types, of information sought by the sample based on their designation. The results are given in Table

Table - 4 Nature and type of Information required vs institutions

S.no.	Nature and type of information required	Calculated χ^2 value	Rank
1	Review of literature (Reviews, year books, repots, etc)	31.9282	6
2	Theories / Basic, scientific and Technical	197.799	2
3	Methods, Processes and Procedures	23.076	7
4	Experimental designs, results and application	86.282	5
5	Material, equipment and apparatus know how	22.129	8
6	Information about current development in your field	242.022	1
7	Computer programs and model building information	96.108	4
8	Standard and patent specifications and code of practice	20.8	9
9	Scientific and Technical news	103.641	3

The computed Chi square value is greater than the tabulated value of all the fifteen variables at 95% confidence interval. Hence, the difference in nature and type of information required is significant.

The variables for Chi square value in top ranks are as follows:

1. Information about current developments (242.022)
2.Theoretical background/basic S&T information (197.799)
3. Scientific and Technical news (103.641)
4. Computer programs and model building information (96.108)
5. Experimental designs, results and applications (86.282)
6. Review of literature (Reviews, year books, repots, etc)(31.928)
7.Methods, processes and procedures (23.076)
8. Material, equipment and apparatus know how information(22.129)
9. Standard and patent specifications and code of practice(20.8)

Table – 5 Nature and type of Information required vs Designation

S.no.	Nature and type of information required	Calculated χ^2 value	Rank
1	Review of literature (Reviews, year books, repots, etc)	55.131	6
2	Theories / Basic, scientific and Technical	282.490	2
3	Methods, Processes and Procedures	48.456	7
4	Experimental designs, results and application	82.584	5
5	Material equipment and apparatus know how	32.242	8
6	Information about current development in your field	545.953	1
7	Computer programs and model building information	160.511	4
8	Standard and patent specifications and code of practice	29.04	9
9	Scientific and Technical news	232.890	3

The computed Chi square value is greater than the tabulated value of all the fifteen variable.

The variables for Chi square value in top ranks are as follows:

1. Information about current developments (545.953)
2. Theoretical background/basic S&T information (282.490)
3. Scientific and Technical news (232.890)
4. Computer programs and model building information (160.511)
5. Experimental designs, results and applications (82.584)
6. Review of literature (Reviews, year books, repots, etc)(55.131)
7.Methods, processes and procedures (48.456)
8. Material, equipment and apparatus know how information(32.242)
9. Standard and patent specifications and code of practice(29.04)

Conclusion

The findings presented here show that the respondent of engineering colleges share their

requirement of the Information Seeking Behaviors that librarians should be aware of, but display differing needs at differing stages of their programs. Thus, it would be a profitable approach for librarians begin to think about services to Faculty of engineering colleges i.e., librarians can better provide key services to targeted groups. For example, most participants of this study utilized librarians mainly for tracking down specific works: Information about current development in their field,. , basic S&T information ,Scientific and Technical news like that. yes, but one that does not reach out to those in the more formative, in all stages of their programs. Moreover, those who have reached the stage of tracking down specific works have already passed the more critical stages of topic selection, focusing, and project initiation, and are thus, comparatively speaking, far less in need of help. The results of this study also suggest that the designation of the sample and the institutional to which they belong have no impact on their Information Seeking Behaviour. In other words the designation and Institution of the sample has direct bearing on information seeking behavior. (Table 2-5), this has been supported by ANOVA test and chi-square test.

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