

AWARENESS AND UTILIZATION OF E-RESOURCES BY FACULTY MEMBERS WITH SPECIAL REFERENCE TO HEALTH SCIENCE INSTITUTIONS IN DELHI, INDIA - A CASE STUDY

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Abstract

In the present study is undertaken to assess their information needs, information seeking behaviour in electronic age, use of electronic resources, services, the problems and barriers encountered, purpose of using databases, e-journals, search methods of electronic resources in health science and its related organizations has attempted to suggest for designing a model through which the faculty members can meet their information needs. Survey method for used the present study. The sampling method adopted for the purpose of this study was the simple random sampling technique. The study covers 354 Faculty Members who are engaged in a number of health sciences institutions and its related organizations in Delhi. Faculty includes Professors (32.48%), Additional professors (3.95%), Associate Professors (25.15%), and Assistant Professors (38.42%). The sample size comprising of 55.08% male and 44.92% female. The questionnaires were distributed to 400 faculty members. In the process, 354 duly filled in questionnaires. Through the findings, it is clearly indicated that the respondent agree the information are scattered in too many sources as their main problem in seeking information seems that nowadays there has variety choices of format. It is suggested and recommends that library should conduct events involving students and faculties so that there has cooperation in order to educate the library users.

Keywords: Information-Seeking Behaviour, e-resources, User Needs, Information; Information retrieval; Faculty; Delhi; India

1.0 Introduction

Today ICT impact is much more in academic library system with higher speed of communication in the learning and research environment. It changes in the behavior of library users. Libraries are adding new electronic information resources and bringing services for the benefit of users. In the early 21st century higher education has become a competitive enterprise. At present the information and knowledge revolution is very elevated. The increase in information available on the Web has affected information seeking behavior due to many electronic resources (e-resources) are available in the library.

Today's users have their information needs met via a number of options. They not come physically to the library to use print formats but can stay at home or the office and access online library resources and services via network method at any time.

The present study is an attempt to analyze the use of e-resources by Health Sciences faculty members in Delhi and to find out the problems and constraints faced by the users in accessing the e-resources with some purposeful suggestions for their development.

The main objective of this study is to determine the information needs and seeking behaviour of the health sciences faculty members. The present study is questionnaire based survey in which a structured questionnaire was used as the instrument for collection of data from the respondent. Survey research has been used, with the selection of random samples from large and small populations to obtain empirical knowledge of a contemporary nature. The data for this study was collected among the faculty members of the health science institutions, in Delhi. A questionnaire containing both open-ended and closed questions was prepared and distributed to four hundred faculty members.

The Faculty members were requested to fill in the questionnaire given to them. The responses received from three hundred and fifty four faculty members were tabulated and subjected to further statistical analysis.

2.0 Objectives

The major purpose of the study was to examine the awareness and utilization of library electronic resources and services by Faculty Members of Health Sciences, in Delhi specifically.

- To find out the preference for electronic and print information resources by the health sciences faculty members
- To find out the types of computer based services used.
- To find the different purposes for which the electronic resources is used by faculty members.
- To identify the frequency of use of the library by the faculty.
- To identify the various methods adopted to locate information resources.
- To know how the users utilize e-resources efficiently and effectively.
- To identify the problems faced by faculty in information-seeking and methods adopt in resolving these problems in electronic form.
- To understand the behaviour of faculty members in gathering information.

3.0 Methodology

The present study is questionnaire based survey in which a structured questionnaire was used as the instrument for collection of data from the respondent. Survey research has been used, with the selection of random samples from large and small populations to obtain empirical knowledge of a contemporary nature. The data for this study was collected among the faculty members of the health science institutions, in Delhi. A questionnaire containing both open-ended and closed questions was prepared and distributed to four hundred faculty members. The Faculty members were requested to fill in the questionnaire given to them. The responses received from three hundred and fifty four faculty members were tabulated and subjected to further statistical analysis.

4.0 Limitations of the Study

The study has been limited to the following aspects:

- The limitation of the study the major health science institutions of Delhi have been taken into account as the geographical area of the study.
- Faculty members comprising of teaching community, who belong to different disciplines in health sciences are considered as the population of the study. Secondly it is also decided to include only the faculty of various levels (i.e. Assistant professors, Associate professors, Additional professors, Professors and those involved in the teaching) taken from the various fields of health science
- Various institutions such Medical colleges (Govt. and private), Universities, Institutions (national) conducting MBBS degree, PG courses and Research institutions etc. having more number of specialization courses in the institutes initiation till 2013 have been covered as sources of data.
- 400 faculty members in different subjects from the different institutions/organizations have been considered for the study, from which only 354 responded faculty members have been studied.
- Data from the faculty members were collected during July, 2013 to May, 2014

5.0 Data Analysis

Out of the 400 copies of the questionnaire that were administered to the faculty members, 354(88.5%) were retrieved. The data collected in the study is presented according to the objectives of the study.

Table -1: Sample Size

Sl. No.	No. of Questionnaires Distributed	No. of Questionnaires Received	Percentage
1	400	354	88.5%

Table- 2: Total Respondents (Gender wise)

Sl.No	Description	No. of Respondents	Percentage
1	Male	195	55.08
2	Female	159	44.92
Total		354	100

Table-2 represents classification of respondents by gender. Out of 354 questionnaires received, 195(55.08%) of the respondents are male faculty members and 159(44.92%) female respondents. This shows that two-third of the respondents are male. Among the faculty members, it is found that male faculty members are more when compared to female faculty members.

Table-3 Academic status of Faculty

S.N.	Designation	No. of Respondents	Percentage
1	Professor	115	32.48%
2	Additional Professor	14	3.95%
3	Associate Professor	89	25.15%
4	Assistant Professor	136	38.42%
Total		354	100%

Table-3 reveals that out of the total numbers of respondents (354), majority of the faculty members 136(38.42%) are Assistant professors and 115 (38.42%) faculty members are Professors, 89(25.15%) of the respondents are Associate and only 14 (3.95%) of the faculty members are Additional Professors. Thus, it is found that majority of the faculty members are Assistant Professors

Table-4: Language preferred

Sl. No	Language	No. of Respondents	Percentage
1	English	344	97.17
2	Hindi	03	0.85
3	French	02	0.57
4	Other	5	1.41
Total		354	100

A question was asked to find out the language of reading materials preferred by the faculty members. It is cleared from the analysis that all the faculty members 344(97.17%) use English language.

PURPOSE OF SEEKING INFORMATION

Regarding the purposes why the faculty members of health sciences seek for information, it is quite obvious from the Table- 5 shows that majority of the faculty members 170(48.03%) frequently seek information for research work. About 167(47.17%) faculty members sometimes seek information for writing papers and presenting papers.

Table -5: Purpose of Seeking Information

Purpose	Faculty members				
	Very Frequently	Frequently	Sometimes	Rarely	Never
General awareness	34 (9.60%)	56(15.81%)	158(44.63%)	93(26.27%)	13(3.67%)
Preparing class notes for teaching	143(40.39%)	166(46.89%)	43(12.14%)	2(0.56%)	-
Preparing / supplementing lectures	103(29.09%)	161(45.48%)	57(16.10%)	21(5.93%)	12(11.86%)
Research work	148(41.80%)	170(48.02%)	34(9.60%)	2(0.56%)	-
Preparing answers to questions	46(12.99%)	118(33.33%)	162(46.05%)	22(6.23%)	6(1.69%)
For writing papers & presenting papers	59 (16.67%)	77(21.75%)	167(47.17%)	49(13.84%)	2(0.56%)
For guiding research students	52(14.69%)	91(25.70%)	164(46.33%)	47(13.27%)	-
Reading /Thinking purpose	29(8.19%)	53(14.97%)	163(46.04%)	97(27.4%)	12(3.39%)
Discussions	25(7.06%)	66(18.65%)	138(38.98%)	117(33.05%)	8(2.25%)
For recreational purpose	16(4.52%)	37(10.45%)	117(33.05%)	158(44.63%)	26(7.34%)

OPINION OF ACCESSIBILITY OF ELECTRONIC INFORMATION RESOURCES

The study observed that 263(74.29%) out of 354 faculty members opinion regarding the accessing electronic information resources were easy to access, followed by 91(25.71%) faculty members have expressed that it is about the same as print resources to use electronic resources. This indicated that majority of the faculty members are conversant in accessing Electronic Information Resources.

Table -6: Opinion of Accessibility of Electronic Information Sources

SN	Opinion	Respondents	
		No. of faculty members	%
1	Easier	170	48.03
2	About the same (same amount of time with or without electronic sources)	103	29.09
3	More difficult (take more time to gather and sort of information)	81	22.88
Total		354	100

CONVENIENT TO ACCESS ELECTRONIC SOURCES (CATEGORY WISE)

Table-7: Convenient to gather information through Electronic Sources

S.N	Convenient to gather information in Electronic Sources	Professors	Additional Professors	Associate Professors	Assistant Professors
1	Easier	62(53.92%)	7(50%)	40(44.95%)	61(44.85%)

2	About the same (same amount of time with or without electronic sources)	33(28.69%)	5(35.72%)	36(40.45%)	29(21.33%)
3	More difficult (take more time to gather and sort of information)	20(17.39%)	2(14.28%)	13(14.60%)	46(33.82%)

Table-7 shows that a majority of professors (53.92 percent), (50 percent) in the category of Additional Professors, (44.95 percent) Associate professors and (44.85 percent) Assistant professors had convenient and eaier access to electronic sources. Less no. of the respondents have stated that it is more difficult and take more time to gather and sort of information in the category Additional professors as well as Assistant professors.

SEARCH OPTIONS OF THE RESPONDENTS FOR SEEKING INFORMATION

The question was asked about the search function use for information seeking. Table-8 shows that maximum number 125(35.31%) of the faculty members use subject search function followed by 113(31.92%) of respondents use 'keywords search'. Also 54(15.26%) faculty members use 'title search' and 39(11.02%) members use 'author search' and remaining faculty members 23(6.49%) use Boolean operators while search for information.

Table-8 Search function(s) use for information

Sl. No	Search Function (s)	No. of Respondents	% of Respondents
1	Keyword search	113	31.92
2	Title Search	54	15.26
3	Author search	39	11.02
4	Subject search	125	35.31
5	Boolean operators	23	6.49
Total		354	100%

LOCATION OF ACCESSING INFORMATION

The data collected for this purpose reveals that majority of respondents 164 (46.33%) faculty members access the information at their department. However, 33.33% (i.e., 118) of faculty members access information in the library, 55(15.54%) respondents access information at their house and only 17(4.80%) respondents access information at Computer centre. The data collected for this purpose is presented in the below table:

Table-9: Place of accessing information

S.N.	Place of accessing information	No. of respondents	Percentage
1	Library	118	33.33
2	Computer centre	17	4.80
3	Department	164	46.33
4	Home	55	15.54
Total		354	100%

REASONS FOR VISIT TO THE LIBRARY

Libraries play important role in fulfilling the information needs of the user community. Frequency of the visit to the library does not indicate the nature and purpose of visit by its users. Keeping this aspect in mind, the respondents were asked to indicate the purpose of their visit to the library.

Table-10: Reason for library visit

S.N.	Reason for visiting library	No. of Respondents	% of Respondents
1	To get books issued	128	36.16
2	To use periodical	77	21.75
3	To use reference materials	38	10.74
4	To read newspapers/magazines	23	6.49
5	To use audio-visual materials	17	4.80
6	To browse periodicals/books	32	9.04
7	To browse online journals/databases	39	11.02
Total		354	100

FREQUENCY OF VISIT TO LIBRARY

To know the frequency of faculty members' visit to the library, the frequency of visit has been classified in six categories as shown in Table. From the below table it is noted that 263(74.29%) faculty members have the habit of visiting libraries 'when there is a need whereas 52(10.69%) faculty members more than once in a week, 15(4.23%) once in a week. The Table also shows that the number of the faculty members who visit library 'daily' is not up-to the expectation 10(2.83%). A few of them use to visit once in a month 8(2.25%) and 6(1.69%) Fortnightly. It is clear from above interpretation that maximum no. of respondents who visit library when there is a need.

Table-11: Frequency of library visit

Sl.No	Frequency of visit to the library	Response Rate	
		Nos.	% of Respondents
1	Daily	10	2.83
2	Once in a Week	15	4.24
3	More than once in a Week	52	14.69
4	Fortnightly	06	1.69
5	Once in Month	08	2.26
6	When there is need	263	74.29
Total		354	100

PREFERENCES TO KEEP A BREAFAST OF CURRENT DEVELOPMENTS

Periodicals are one of the most important resources of the library which keeps the users abreast in their field of interest. The question was asked about the method used by the faculty member to keep abreast of current developments. It is observed from figure-4, 11 that out of the total respondents (i.e., 354 respondents) of Faculty members under the study 28.53% of respondents (i.e., 101 respondents) have given maximum priority to 'Reading current issues of print journals/magazines', 24.29% of respondents (i.e. 86 respondents) have given priority to 'Reading latest books in the field' respectively. Moderate importance is given to 'Browsing current issues of electronic journals' by 51(14.41%) respondents. It is found that 34(9.60%) given preference to 'Attending conferences, workshops etc. In electronic media, moderate importance is equally shared by 31 (8.76%) searching online databases.' followed by 16(4.55%) faculty members 'Browsing websites of institutes/organizations' to keep current developments.

Table -12: Frequency of library visit

Sl.No	Sources	No. of Respondents	% of Respondents
1	Reading curent issues of print journals/magazines	101	28.53
2	Reading latest books in the field	86	24.29

3	Browsing current issues of electronic journals	51	14.41
4	Searching online databases	31	8.76
5	Browsing websites of institutes/organizations	16	4.55
6	Accessing e-books	09	2.54
7	E-mail alerts from publishers	07	1.97
8	Through awareness services like CAS & SDI	04	1.12
9	Interaction with colleagues and experts	05	1.41
10	Attending conferences, workshops etc.	34	9.60
11	E-mail discussion groups	08	2.25
12	Other methods	02	0.57

TIME SPENT IN VARIOUS PURPOSES

The below has given us an idea about time spent in various purposes by faculty members. It has indicated that 52.56% of them spent 1-2 hours for the purpose of searching online databases. For the Browsing e-journals on Internet 48.30% of them spent 1-2 hours, and Searching for related websites 44.07%. Spending 30-60 minutes is highest for Searching for books 46.61%, Interaction with colleagues/experts (44.92%), and 40.39% for Photocopying. Majority the 49(13.84% faculty members are found to spend more than 2 hours for Searching online databases.

Table-13: Time Spent in Various Purposes

S.N.	Various Purposes	Time spent (in hours) (%)			
		Up-to 30 minutes	30 to 60 minutes	1 to 2 hours	More than 2 hours
1	Searching journals/magazines	106(29.94%)	147(41.53%)	82(23.16%)	19(5.37%)
2	Searching for books	88(24.86%)	165(46.61%)	84(23.73%)	17(4.80%)
3	Interaction with colleagues/experts	92(25.99%)	159(44.92%)	77(21.75%)	26(7.34%)
4	Browsing e-journals on Internet	37(10.45%)	101(28.53%)	171(48.30%)	45(12.72%)
5	Searching online databases	42(11.86%)	77(21.75%)	186(52.53%)	49(13.84%)
6	Searching for related websites	57(16.10%)	98(27.68%)	156(44.07%)	43(12.15%)
7	E-mail alerts, correspondence	87(24.58%)	126(35.59%)	93(26.28%)	48(13.55%)
8	Accessing e-books	121(34.18%)	138(38.98%)	73(20.63%)	22(6.21%)
9	Photocopying	134(37.86%)	143(40.39%)	67(18.93%)	10(2.82%)
10	Scanning & printing	143(40.39%)	124(35.03%)	56(15.82%)	31(8.76%)

PROBLEMS IN ACCESSING ELECTRONIC INFORMATION RESOURCES

It can be inferred from Table -14 that accessing the electronic resources is not free from problems. The respondents were asked to mention the problems they faced while using the electronic sources for seeking information. The most common problem face by the faculty members during seeking information is that of choosing appropriate database. Data analysis shows that 62(17.51%) faculty members are facing problems about choosing appropriate database, 53(14.97%) members stated that that Information scattered in too many sources. and 48(13.56%) members facing problems due to lack of time.

Table-14: Problems in accessing Electronic Information sources

S.N.	Kind of Problem	No. of Respondents	Percentage
1	Unavailability of required /latest materials	23	6.49
2	Material is not available	14	3.96
3	Incomplete information materials	32	9.03
4	Sources are very expansive/located far away	28	7.91
5	Language barrier	24	6.78
6	Technical problems (system hangs, server down time, speed etc.)	33	9.33
7	Lack of training in using electronic resources /products	37	10.46
8	Information scattered in too many sources	53	14.97
9	Choosing appropriate database	62	17.51
10	Lack of time	48	13.56

METHODS USED TO RESOLVE IN ACCESSING ELECTRONIC RESOURCES FOR INFORMATION SEEKING

Table-15; Method used to resolve information seeking problems

S.No	Methods use to resolve information seeking problems	No of Respondents	% of Respondents
1	I make use of more than one library	09	2.54
2	I prefer an individual, independent work	73	20.62
3	I take support of my colleagues	49	13.84
4	I make use of search engines on internet	112	31.64
5	I will make efforts to learn internet search skills	33	9.32
6	I consult more and more sources	47	13.28
7	I learn how to use electronic resources	31	8.76
	Total	354	100

Table-15-reveals that 112(31.64%) faculty members make use of search engines on Internet to resolve the problems to use electronic resources for information seeking, 73(20.62%) were prefer and individual, independent work. 49(13.84%) faculty members were take support of their colleagues, 47(13.28%) respondents consult more and more sources. About 33(9.32%) were make effort to learn internet search skills, 31(8.76%) respondents learn themselves how to use electronic resources and only 9(2.54%) faculty members make us of more than one library to resolve the problems of use of electronic resources for information seeking.

COMFORTABLE TO ACCESS INFORMATION

Majority of faculty members 226(63.84%) stated that they are somewhat comfortable to access Web OPAC, 174(49.15%) electronic books, 140(39.54%) of faculty members electronic databases. The study found that 113(31.92%) faculty members were very comfortable to searching online database i.e. MEDLINE.

Table-16: Method used to resolve information seeking problems

Sl. No	Sources	No. of Respondents			
		Very comfortable	Comfortable	Somewhat comfortable	Uncomfortable
1	Web OPAC	22 (6.21%)	78(22.03%)	226(63.84%)	28(7.90%)
2	Electronic journals	76(21.47%)	132(37.29%)	137(38.70%)	09(2.54%)
3	Electronic books	46(12.99%)	111(31.35%)	174(49.15%)	23(6.49%)
4	Electronic databases	61(17.23%)	132(37.28%)	140(39.54%)	21(5.93%) Contd...
5	Web Search engine	81(22.88%)	120(33.89%)	138(39.98%)	15(4.23%)
6	Searching MEDLINE	113(31.92%)	167(47.17%)	71(20.05%)	03(0.84%)

ASK HELP FROM LIBRARY STAFF WHEN USING THE ELECTRONIC RESOURCES

The question was asked regarding how often, you need help when using the electronic resources. The Table-17 shows the response to the question 252 (71.19%) respondents' mentions that sometimes they ask help from library staff, 67(18.93%) respondents says that seldom. About 16(4.51%) respondents mention that they ask help from library staff often followed by 12(3.39%) very often. It shows that only 7(1.98%) respondents they never ask help from library staff when they using the electronic resources.

Table-17: Frequency of help asked by respondent from library staff when using the electronic resources

S.N.	Support from library staff	No. of Respondents	Percentage
1	To locate books	223	62.99
2	To locate current periodicals	67	18.93
3	To understand use of various reference tools	29	8.19
4	Library catalogue	35	9.89
Total		354	100

USE OF COMPUTER BASED SERVICES**Table -18: Use of computer based services**

S.N.	Computer based tools	No. of Respondents	% of Respondents
1	Use OPAC	91	25.70
2	Search CD ROM Databases	108	30.51
3	Search online databases	77	21.76
4	Bbrowse Internet	78	22.03
Total		354	100%

Table -18 shows that majority of the respondents 108(30.51%) are searching reading material through using CD-ROM databases, 91(25.70%) members search reading material using OPAC. About 78(22.03%) members search reading material by browsing through the Internet and remaining 77(21.76%) respondent search online databases.

PURPOSE OF USING E-JOURNALS/DATABASES

There are many reasons for using e-journals/databases. The researcher wanted to find out the purpose of using the periodicals/databases. Hence, the researcher has collected the data from the respondents and the analyzed data is displayed in the table 19. It is revealed that 201(56.78%) respondents are using the periodicals/databases for

teaching work, followed by 93(26.28%) were using to research work, 52(14.69%) using the e-journals/databases for updating knowledge and only 8(2.25%) using for general awareness.

Table 19: Purpose of using e-journals/databases

Sl.No.	Purpose	No. of Respondents	% of Respondents
1	Updating knowledge	52	14.69
2	Research	93	26.28
3	Teaching work	201	56.78
4	General awareness	08	2.25
Total		354	100%

PREFERRED SEARCH ENGINE FOR GATHERING INFORMATION

A search engine is designed to search for information on the internet. The search engine presents the search results in the form of a search results list. The search results can be Web pages, images, videos, and other types of files. In order to ascertain which search engine is mostly used by the faculty members were asked to mention their choice.

Table -20: Frequency of Using Search Engine

S.No	Search engine	Frequency	
		Response rate	Percentage
1	Google	307	86.73
2	Yahoo	33	9.32
3	AltaVista	3	0.85
4	Gopher	2	0.56
5	MSN	2	0.56
6	Lycos	5	1.42
7	Excite	2	0.56
Total		354	100%

Above table shows that faculty members of health sciences 307(86.73%) used Google.com. The Table-20 indicate that "Yahoo" is also used by them, its frequency of use being 33(9.32%). Use of other such search engines by the faculty members of health sciences is found to be relatively low and even below the desired rank. The research found that among the faculty members "Google" is the most popular search engine.

SUCCESS IN FINDING INFORMATION NEEDS THROUGH ELECTRONIC RESOURCES

Table -21: Success in finding information needs through electronic sources

Sl. No	Finding information	Frequency	% of Respondents
1	The information that I got is relevant	73	20.62
2	The information that I got covers the scope of my topic	135	38.13
3	The information that I got is up-to-date	104	29.38
4	I got a lot materials from my search	42	11.87

The majority of the faculty members 135(38.13%) availed the information covers the scope of their topic browsing through electronic sources and 104(29.38%) faculty members says that they got up-to-date information. Nearly 73(20.62%) faculty members availed relevant information. About 42(11.87%) faculty members mention that they got lot of material from their search

INFORMATION SEEKING HABITS

It is observed from the table that out of the total respondents (i.e., 354 respondents) comprising of Faculty members under the study, 117(33.05% of respondents have given first priority for Reading articles /books, 58 (16.38%) of

respondents have given second priority for Scanning journal titles or citations, 48(13.56%) of respondents have choose 3rd priority for Reading electronic journals. Then 44 (12.43%) of respondents have given 4th priority for attending conferences/colloquia/workshops, 42 (11.87%) of respondents have given fifth priority to Searching electronic databases. After that, 19 (5.37%) of respondents have given 6th priority for Conversing with co-workers or of the experts in institute, 12 (3.39%) of respondents have given 7th priority to Conversing with experts located outside institute and 9 (2.54%) of respondents have given priority to E-mailing co-workers or other experts, 4 (1.41%) of respondents have given priority to Discussion lists/List servs.

Table-22: Information seeking habits of respondents

S. N.	Information seeking habits	No. of Respondents	% of Respondents
1	Conversing with experts located outside institute	12	3.39
2	Conversing with co-workers or other experts in institute	19	5.37
3	E-mailing co-workers or other experts	09	2.54
4	Discussion lists/List serves	05	1.41
5	Scanning journal titles or citations	58	16.38
6	Reading articles/books	117	33.05
7	Attending conferences/colloquia/workshops	44	12.43
8	Searching electronic databases	42	11.87
9	Reading electronic journals	48	13.56
	Total	354	100

6.0 CONCLUSION

The major findings of this study have provided insight of the faculty members' attitude about electronic information resources and services in the surveyed institutions. It also helped to identify the problems related to various services provided in the libraries. This study helps to provide guidelines, based on which improvements could be made in the information system. The library authority may conduct the orientation programs to teach the users about the accessibility of various sources and services available and offered by the library, training of users in utilizing the online journals, e-books and databases how to find necessary information which are relevant. Library professionals must awareness about the library's traditional service as well as electronic services and resources in order to provide effective service to the users. This research has a limitation to faculty member of health sciences institutions, Delhi. Further research can be extended to state and national level. While studying information seeking behaviour (ISB), it is essential to know its various categories and methods so that the real picture of users' perception is visualized. However, to run the library and information system smoothly, it is information seeking behaviour (ISB) which is required to adopt on priority basis to make the system successful.

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