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USE OF ELECTRONIC INFORMATION RESOURCES IN MEDICAL AND ALLIED COLLEGES OF GOA STATE: AN ANALYSIS

Dr. Jayaprakash G. Hugar

B U. Kannappanavar Dr.

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Dr. Jayaprakash G Hugar& Dr. B. U. Kannappanavar

Abstract

Purpose: The purpose of this paper is to know preference of electronic resources, to find out the need and satisfaction of electronic information, and to identify the respondents' opinion about IT skills and co-operation of library staff.

Methodology: Survey method adopted for the present study. A structured questionnaire was designed keeping in view of the objectives in mind and distributed to the students and faculty members and collected the required primary data from medical, dental, nursing, pharmacy, homeopathic and ayurveda colleges in the state Goa. Collected data were analyzed using statistical tools.

Findings: It is clear from the study that, about 19 percent of the respondents prefer online database where the percentage of faculties is around 39 percent and that of students is around 47 percent. All these reveal that e-journals, e-books and DVD/ CD ROM database are most preferred electronic resources. Majority of the respondents account for about 63 percent are fully satisfied with e-journals, e-books and e-database.In the study area maximum percent of respondents who used electronic journals published by Science Direct, Oxford University Press, Medknow and Elsevier Science ranges from 22.9 to 26.6 that is about one fourth of the total respondents.

Keywords: Library Resources, Services, Internet, Library use, satisfaction. Goa, Electronic Information, e-resources, e-services, internet, medicine.

Corresponding Author:

* Dr. Jayaprakash G Hugar, Librarian, Dnyanprassarak Mandal's College and Research Centre, Assagao, Bardez, Goa – 403 507. Email: dmclibrarian@rediffmail.com, ORCID No. http://orcid.org/0000-0001-8307-5582

**Dr. B.U. Kannappanavar, Sahayadri College, Shimoga, Karnataka, email: kannappanavar@gmail.com

1. Introduction

Electronic resources are widely accepted because of the ease of usability, readability, affordability and accessibility. Advantages over print media are multi-access, speed, functionality and a vast amount of information stored in small space. Now a days it is very easy to access these electronic resources via internet, few information is available freely in an open access portals and some are in the commercial oriented which we have pay and use.

2. Medical Education in Goa

The establishment of Medical Education is another landmark in the history of education in Goa. The Portuguese made efforts to initiate medical education in those remote times and overcome the innumerable difficulties which they had to face before they could finally succeed is indeed a remarkable chapter in Portuguese Colonial History.

Medical Education in Goa started in the early 18th century in the Royal Hospital of the old city of Goa. The first historical document, in which the need of medical education in Goa is stressed, is a report of the year 1687 by the Councilor of the State. Cristovao de Sousa Coutinho, who, whilst expressing his views on the proposed transfer of the capital city from Goa to Mormugao, suggested the advisability of starting the teaching of medicine in Goa, in order to create in the territory a permanent nucleus of medical assistance. He said “the natives were very intelligent and would learn it very easily”. The suggestion of the Councillor was accepted by the Governor Dom Rodrigo da Costa, who sent a proposal to the King of Portugal to send to Goa two or three good physicians, not only to practice but also to teach medicine to native students.

It seems that the things did not change until the turn of the century and it was only on 2nd December 1702 that Dr. CiprianoValladares was appointed to teach medicine in the Royal Hospital of Goa. This is therefore, the historical date on which medical education was started in Goa, and Dr. Valladares was the pioneer of medical education. Dr. Valladares was followed by Dr. Rosa Pinto, Dr. Jose da Silva Azavedo, and others successively, and the course continued more or less regularly till 1785. After Dr. Bernardes, no doctor trained in Portugal was available for some time and Goa was without a doctor trained in Portugal for many years, so the teaching of medicine suffered.

The teaching which was interrupted between 1770 and 1785, was reinitiated by Dr. Fagundes, pioneer of teaching of surgery in Goa is improved the medical education. Dr. Barroso da Silva worked in Goa for nearly 35 years and did outstanding professional work, saving many lives and preparing a good number of surgeons.

The first regular medical course in Goa was established in 1801 in the Royal and Military Hospital by Dr. Miranda e Almeida who was a demonstrator and relieving lecturer at the University of Coimbra and was appointed as chief physician of Goa, by the Central Government, on a request made by the Governor VeigaCabrl. By this time, the medical services in the Royal and Military Hospital at Goa were reorganized and the teaching of medicine and surgery was better coordinated under a common direction.

Due to sudden transfer of the Director of Medical Education to Lisbon from 1822 to 1842 medical education had an irregular life and suffered many interruptions. In 1871 the Director, Dr. Fonseca Torrie planned a new reform increasing the number of staff-members to seven professors, three demonstrators, and one relieving professor. He also envisaged the creation of a nursing course. However, this project was never approved.

A new attempt to remodel the course was made in 1888. A committee was appointed to work out a project and the task was performed by Dr. Costa Alvares. In place of the existing school, a school of naval and colonial medicine was proposed by the Committee. Besides the traditional course of Medicine and Pharmacy, there was also to be a nursing course. The medical course was to comprise 21 subjects and its duration would be of six years. The Pharmacy course would be of three years duration and would comprise of six subjects. The nursing course was to be of two years. The staff was to be of 10 professors and four relieving professors. The four relieving professors and four out of ten other professors were to be selected from among the degree holders of Goa or Bombay.

This is the history of medical education in the Portuguese possessions of India from its origin to the fall of constitutional monarchy. The Medical School from its foundation in 1842 to 1910

had produced 444 doctors and 135 pharmacists. It is surprising that there were only two Hindus among all these physicians and pharmacists produced up to 1910.

In 1902 there was a move in the Portuguese Parliament which threatened the very existence of the school. It was Dr. Miguel de Mombarda, an eminent professor of the Medical School of Lisbon who then defended it vigorously in the Portuguese Press. He put forth his arguments in a convincing manner and showed why the school should not be closed; but instead developed, so that it might ultimately prove to be a good nucleus of scientific work, and bring both benefit and glory to the Portuguese people. And the school survived.(Pandya, 1982)

2.1 Pharmacy Education in Goa

Pharmacy profession in Goa is the oldest in the Indian subcontinent. The first ever Pharmacy course was introduced along with the medical course in 1842 at the old Portuguese school known as “Escola Medica de Goa and later named as “Escola MedicaCirurgica de Goa”. The Pharmacists (Farmaceuticos) and Doctors (Medico Cirurgiao) were educated and trained in the same medical school and they had almost the same status in the Goan Society.

The only available source of information is an undocumented article by Cordeiro, wherein it was stated that 'with the doctors coming from Portugal, there was always a pharmacist. In the year 1846 a Medical School was opened and in the same school there was a School of Pharmacy also.

Presently, we have one government sponsored and another one self-financing pharmacy college imparting diploma, bachelor and master degree courses in pharmacy subject (Varadan, 1954-1955).

2.2 Nursing Education in Goa

Nursing education was started in Goa by the Portuguese during the 15^{th} Century, the first of its kind in Asia. Besides the traditional course of Medicine and Pharmacy, there was also to be a two years nursing course. After liberation of Goa in 1961, the old nursing education courses were gradually phased out and in their place the Government of India started new nursing

courses according to the Indian Nursing Council Regulations. The Auxiliary Nurse Midwifery Course was started in September 1964 and the General Nursing Midwifery Course was started in September 1965 with technical assistance from WHO and other help from UNICEF. The Post Basic B.Sc. Nursing course was conducted from 1993-2006. In August 2005 the B.Sc. Nursing Course (Basic) was started.(Institute of Nursing Education, 2010 - 2011)

At present three nursing colleges are providing nursing education in Goa. All the colleges are having diploma and bachelor's degree courses in nursing, affiliated to Goa University and recognised by Maharashtra Nursing Council and Indian Nursing Council. (Directorate of Technical Education, 2011)

3. Objectives of the Study

The present study is designed to accomplish the following objectives:

- To know preference of electronic resources.
- To find out the need and satisfaction of electronic information
- To identify the respondents opinion about IT skills and co-operation of library staff.

4. Review of Literature

4.1 **Ranasinghe. Priyanga, Wickramasinghe. Sashimali A, Pieris. WA Rasanga, Karunathilake. Indika and Constantine. Godwin R. (2012)**evaluated the computer literacy among first year medical students in Sri Lanka. The study was conducted at Faculty of Medicine, University of Colombo, Sri Lanka between August-September 2008. First year medical students (n = 190) were invited for the study. Data on computer literacy and associated factors were collected by an expert-validated pre-tested self-administered questionnaire. Computer literacy was evaluated by testing knowledge on 6 domains; common software packages, operating systems, database management and the usage of internet and E-mail. A linear regression was conducted using total score for computer literacy as the continuous dependant variable and other independent covariates. Sri Lankan medical undergraduates had a low-intermediate level of computer literacy. Researchers suggested that, there is a need to improve computer literacy, by increasing computer training in schools, or by introducing computer training in the initial stages of the undergraduate programme. **K.**

P. Singh and M. P. Satija (2007) The paper is an outcome of the research study conducted by the authors on information seeking behavior of agricultural scientists working in the ICAR institutions of Delhi and Punjab Agricultural University, Ludhiana. Data has been collected through the structured questionnaire and analyzed with the help of latest version of MS-Excel for appropriate statistical procedures for the description (i.e., frequencies, percentage, means, and standard deviations, etc.). Study discusses the findings of various strategies and procedures adopted by the agriculture scientists in meeting their information requirements. The survey result shows that agriculture scientists have expressed great dependence in meeting their information requirements on their institutional library/information center. The Library / Information Centre is the most preferred source (72.05%) of the respondents for all categories of agriculture scientists. On the other hand for accessing information, agriculture scientists highly depend on the library collection, followed by the personal collection, collection of their supervisor and of their colleagues. **S Hari Krishna Reddy and C. R. Karisiddappa (1997)** studied the information seeking behavior of 160 professionals in the field of disabilities in India, through a questionnaire survey method, reveals that informal channels are more used for information gathering. Journals are preferred for formal source of information for preparing course / teaching materials. Books are used more for providing consultation and offering therapeutic / diagnostic services. The time spent in borrowing / reading literature for various purposes has also been studied. Results revealed that, oral/written interpersonal communication, group meetings, conference, accidental/by chance means of coming to know about information do exist as in other areas. However, for effective communication, the formal system should necessarily consider the informal means as well. But, it is not evident in this case because the formal system itself has several constraints. Notwithstanding the constraints or obstacles the formal system has, it is essential to organize user education programmes regularly to educate/train the users about different types of information tools and services. The library / information system has primary responsibility to reach a minimum level of requirement so as to be capable of handling the complex information needs and demands. **Biradar, B.S., Anita.S., and Ushalatha D K (2001)** Attempts to know the use pattern of periodicals by medical practitioners. The study reveals that 76.67% and 75% of medical practitioners need current information on new procedures and medicine respectively. 56.67% of medical practitioners

get periodicals through medical associations while major percent (86.67%) of them get current information through seminars, conferences and workshops. Besides 57.67% and 53.33% of doctors use e-mail and internet as a major communication media.

5. Methodology

Survey method was used as the basic method for data collection, employing the questionnaire and the personal interview. And analyzed with the help of SPSS software for the statistical test.

6. Analysis and Discussion of Data

Table 6.1: Gender-wise distribution of respondents

Respondents	**Male**	**Female**	**Total**
Faculties	22 (56.4)	17 (43.6)	39 (100.0)
Students	100 (23.8)	320 (76.2)	420 (100.0)
Total	122 (26.6)	337 (73.4)	459 (100.0)

Source: Field survey.
Note: Figures in parenthesis denotes percentage to the total

The above table reveals that among the faculties there is no considerable difference between male and females respondents but with regard to students respondents one fourth of them are male and remaining are females. This difference is justified from the X^2 test when it was applied to the data in the above table.

Table 6.2 Respondent's opinion about need of electronic information

Opinion	**Faculties**	**Students**	**Total**
Writing paper or presenting paper	17 (43.6)	180 (42.9)	197 (42.9)
Guiding researchers/ students	12 (30.8)	-	12 (2.6)
Preparing answers to specific questions	13 (33.3)	179 (42.6)	192 (41.8)
To keep abreast of knowledge	19 (48.7)	127 (30.2)	146 (31.8)
To get additional information related to subject/ job	20 (51.3)	232 (55.2)	252 (54.9)
For research projects and programs	8 (20.5)	141 (33.6)	149 (32.5)

Source: Field Survey
Note: Figures in parenthesis denotes percentage to the total

With regard to the opinion about the need of electronic information, in the study area, it is studied that, respondents who mainly require electronic information is to get additional information related to subject or job which accounts for around 55 percent of the total respondents where the percentage of faculties is less than the percentage of students as their percentages are 51.3 and 55.2 respectively. This opinion is followed with the opinion of preparing answers to specific question and for writing paper for presenting paper; the requirement of electronic information is needed as their percentages are around 42 and 43 percent where the percentage of faculties is more than students in writing paper or presenting paper and the percentage of students is more than faculties in preparing answers to specific questions. At the same time the need of electronic information to keep side by side knowledge and for research projects and programs is felt by about one third of the respondents. The percentage of faculties feel electronic information is needed to keep abreast of knowledge and more percentage of students feel it is needed for research projects and programs. However, another 2.6 percent of faculties feel electronic information is needed for guiding researchers or students. All these indicate that the role of electronic information in today's world is very important as it is much preferred for getting additional knowledge about any related subjects or job, for writing and presenting papers and so on.

ANOVA Analysis:

H_0: There is insignificant difference regarding opinion about need of electronic information among the respondents.

H_1: There is significant difference regarding opinion about need of electronic information among the respondents.

ANOVA Table						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	49408.33	1	49408.33	15.7343	0.002658	4.964603
Within Groups	31401.67	10	3140.167			
Total	80810	11				

Level of significance = 0.05 Degree of freedom = 1 and 10
Table F value = 4.964603 Calculated F value = 15.7343

As the calculated F value is more than the table F value, null hypothesis is rejected and alternative hypothesis is accepted. Thus, it can be concluded that there is significant difference preference with respect to opinion about need of electronic information among the respondents.

Table 6.3 Respondent's preference of electronic resources

Preferences	**Faculties**	**Students**	**Total**
E – journals	23 (59.0)	174 (41.4)	197 (42.9)
E – books	13 (33.3)	171 (40.7)	184 (40.1)
DVD/ CD – ROM database	15 (38.5)	198 (47.1)	213 (46.4)
Online database	3 (7.7)	83 (19.8)	86 (18.7)

Source: Field Survey

Note: Figures in parenthesis denotes percentage to the total

As there is availability of various electronic resources, the user has to select or prefer the relevant resources. With respect to the preference of the respondents with regard to electronic resources, in the study area it is found that major electronic resources like e-journals, e-books and DVD/ CD ROM database are though somewhat equally preferred which accounts in between 40 to 46 percent by the respondents but when category preference is considered then, the percentage of faculties is more among those who preferred e-journals and in the remaining resources like e-books and DVD/ CD ROM database, the percentage of students is more than faculties. Like that about 19 percent of the respondents prefer online database where the percentage of faculties is around 39 percent and that of students is around 47 percent. All these reveal that e-journals, e-books and DVD/ CD ROM database are most preferred electronic resources.

X^2 Analyses:

H_0: There is no significant difference among the respondents regarding preference of electronic resources.

H_1: There is significant difference among the respondents regarding preference of electronic resources.

Level of significance = 0.01 Degree of freedom = 1

Table X^2 value = 6.635 Calculated X^2 value = 0.322004

As the calculated X^2 value is less than the table X^2 value, null hypothesis is accepted and concluded that there is insignificant difference regarding preference of electronic resources.

Table 6.4 Respondent's usage of electronic journals published by different publishers

Publishers	Faculties	Students	Total
Academic Press	2 (5.1)	53 (12.6)	55 (12.0)
Cambridge University Press	4 (10.3)	74 (17.6)	78 (17.0)
Elsevier Science	11 (28.2)	102 (24.3)	113 (24.6)
Emerald	0 (0.0)	20 (4.8)	20 (4.4)
Kluwar Online	8 (20.5)	75 (17.9)	83 (18.1)
Med know	11 (28.2)	94 (22.4)	105 (22.9)
Oxford University Press	4 (10.3)	111 (26.4)	115 (25.1)
Sage	3 (7.7)	24 (5.7)	27 (5.9)
Science Direct	13 (33.3)	109 (26.0)	122 (26.6)
Science Online	6 (15.4)	80 (19.0)	86 (18.7)
Silver Platter	0 (0.0)	17 (4.0)	17 (3.7)
Springer – Verlag	1 (2.6)	11 (2.6)	12 (2.6)
Taylor and Francis	1 (2.6)	19 (4.5)	20 (4.4)
Thompson Scientific	0 (0.0)	6 (1.4)	6 (1.3)

Source: Field Survey
Note: Figures in parenthesis denotes percentage to the total

With respect to the usage of electronic journals published by different publishers, in the study area maximum percent of respondents who used electronic journals published by Science Direct, Oxford University Press, Medknow and Elsevier Science ranges from 22.9 to 26.6 that is about one fourth of the total respondents. Like that respondents who used journals published by Cambridge University Press, Kluwer Online and Science Online are in between 17 to 18 percent. At the same time another 12 percent of respondents used journals published by Academic Press. The journals published by Emerald, Sage, Silver Platter, Springer-Verlag Taylor and Francis and from Thompson Scientific are rarely used by the respondents as their percentages are below 6 percent. The percentage of faculties is more than students who used electronic journals published by Elsevier Science, Kluwer Online, Medknow, Sage and Science Direct. In the remaining e-journals published by Academic Press, Cambridge University Press, Oxford University Press and Science Online, the percentage of students is more than that of faculties. Like that there are some publishers' journals which are never used by faculties but students use it are Emerald, Silver

Platter and Thompson Scientific. On the other hand, the percentages of both faculties and students are equal with regard to the electronic journals published by Springer-Verlag. These observations indicate that electronic journals published by companies like Elsevier Science, Oxford University Press and Science Direct are most popular ones but still accounts for only one fourth of the total respondents.

ANOVA Analysis:

H_0: There is insignificant difference regarding usage of electronic journals published by different publishers among the respondents.

H_1: There is significant difference regarding usage of electronic journals published by different publishers among the respondents.

ANOVA Table						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	19084.32	1	19084.32	24.02196	4.36E-05	4.225201
Within Groups	20655.79	26	794.4533			
Total	39740.11	27				

Level of significance = 0.05 Degree of freedom = 1 and 26

Table F value = 4.225201 Calculated F value = 24.02196

As the calculated F value is more than the table F value, null hypothesis is rejected and by accepting alternative hypothesis it can be concluded that there is significant difference preference with respect to the usage of electronic journals published by different publishers among the respondents.

Table 6.5 Respondent's dependency of electronic media on different aspects

Dependent On	**Respondents**											
	Faculties				**Students**				**Total**			
	Less than 25	**25 – 50**	**50 – 75**	**Above 75**	**Less than 25**	**25 – 50**	**50 – 75**	**Above 75**	**Less than 25**	**25 – 50**	**50 – 75**	**Above 75**
Local reading material	22 (56.4)	11 (28.2)	0 (0.0)	6 (15.4)	214 (51.0)	122 (29.0)	42 (10.0)	42 (10.0)	236 (51.4)	133 (29.0)	42 (9.2)	48 (10.5)
Accessing reading materials	12 (30.8)	12 (30.8)	8 (20.5)	7 (17.9)	99 (23.6)	114 (27.1)	135 (32.1)	72 (17.1)	111 (24.2)	126 (27.5)	143 (31.2)	79 (17.2)
Updating of knowledge	12 (30.8)	3 (7.7)	8 (20.5)	16 (41.0)	98 (23.3)	74 (17.6)	115 (27.4)	133 (31.7)	110 (24.0)	77 (16.8)	123 (26.8)	149 (32.5)

Source: Field Survey
Note: Figures in parenthesis denotes percentage to the total

The user depend of users on various electronic media may be to locate, access and updating the required information. In other words, it might be to access local reading materials or to access reading materials or to updating of knowledge. The dependency may be at different levels. In the study area, among those respondents who depend less than 25 percent on various electronic media, the dependency on local reading material is seen more than the other two where the percentage of dependency is around 51 percent which is followed by the other two at almost equal percent. Like that among those respondents who depend in between 25 to 50 percent on various sources of electronic media, most dependency again for local reading material followed by accessing reading materials and then for updating of knowledge whose percentages are accordingly 29, 28 and 17percent. The dependency on electronic media is more for accessing reading materials followed by dependency for updating of knowledge and then for local reading materials. Their percentages are 31, 27 and 9 percent respectively. Those respondents who depended above 75 percent on electronic media is more for updating of knowledge with 33 percent followed by accessing reading materials with 17 percent and then for local reading materials with only 11 percent of the respondents. with these observations it can be concluded that for accessing local reading material, majority of the respondents dependency is less than 52 percent where the percentage of faculties is around 55 percent and students is of 51 percent. On the other hand with respect to accessing reading materials majority of the respondents' depend in between 50 to 75 percent where faculties are about 21 percent and students are about 32 percent. At the same time the dependency on electronic media for updating of knowledge is above 75 percent as the percentage of respondents is around 33 percent which is more when compared with other levels of dependency. Among the respondents who depend more than 75 percent, the percentages of faculties are about 41 percent and students are about 32 percent.

Table 6.6 Respondent's satisfaction regarding electronic resources

E – resources	**Respondents**								
	Faculties			**Students**			**Total**		
	Fully satisfied	**Satisfied**	**Not satisfied**	**Fully satisfied**	**Satisfied**	**Not satisfied**	**Fully satisfied**	**Satisfied**	**Not satisfied**
E – journals	26 (66.7)	11 (28.2)	2 (5.1)	263 (62.6)	138 (32.9)	19 (4.5)	289 (63.0)	149 (32.5)	21 (4.6)
E – books	27	9	3	258	118	44	285	127	47

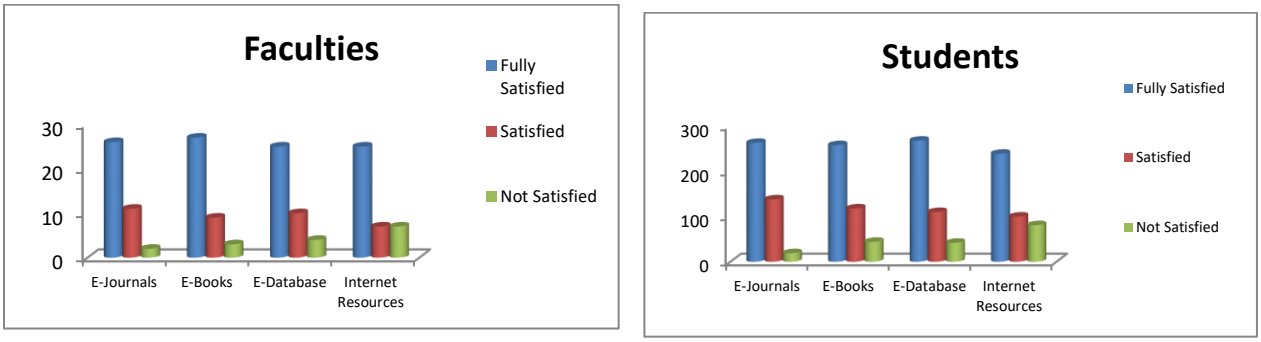
	(69.2)	(23.1)	(7.7)	(61.4)	(28.1)	(10.5)	(62.1)	(27.7)	(10.2)
E – database	25 (64.1)	10 (25.6)	4 (10.3)	268 (63.8)	110 (26.2)	42 (10.0)	293 (63.8)	120 (26.1)	46 (10.0)
Internet Resources	25 (64.1)	7 (17.9)	7 (17.9)	239 (56.9)	100 (23.8)	81 (19.3)	264 (57.5)	107 (23.3)	88 (19.2)

Source: Field Survey

Note: Figures in parenthesis denotes percentage to the total

Regarding satisfaction of the respondents with respect to electronic resources, majority of the respondents account for about 63 percent are fully satisfied with e-journals, e-books and e-database. While slightly less percentage of respondents are satisfied with internet resources which account for about 58 percent. At the same time still there are respondents who are about 10 percent who are not satisfied with the available electronic resources. Among the respondents who are fully satisfied and only satisfied, the percentage of faculties is more than students. And those respondents who are not satisfied, the percentage of faculties is more than students with respect to e-journals and e-database and in other two e-resources like e-books and internet resources; the percentage of student is more than faculties.

Graph 1: Column chart representing respondents' satisfaction regarding electronic resources



Source: Table 52

Table 6.7 Respondent's opinion about IT skill of library staff

Respondents	**Yes**	**No**	**Total**
Faculties	16 (41.0)	23 (59.0)	39 (100.0)
Students	142 (33.8)	278 (66.2)	420 (100.0)
Total	158 (34.4)	301 (65.6)	459 (100.0)

Source: Field Survey

Note: Figures in parenthesis denotes percentage to the total

In the study area there is a fair opinion among the respondents about the IT skill of library staff in their respective libraries. This is because only about 34 percent of the respondents are satisfied with the IT skill of the library staff. On the other hand it is interesting to notice that faculties are more satisfied than students among those respondents who are satisfied with the IT skill of the library as their percentages are around 41 and 34 percent.

X^2 Analyses:

H_0: There is no significant difference regarding opinion about IT skill of library staff.

H_1: There is significant difference regarding opinion about IT skill of library staff.

Level of significance = 0.01 Degree of freedom = 1

Table X^2 value = 6.635 Calculated X^2 value = 0.82

As the calculated X^2 value is less than the Table X^2 value, null hypothesis is accepted and concluded that there is no significant difference regarding opinion about IT skill of library staff. Hence, it can be concluded that though there is difference, it has occurred due to chance.

Table 6.8 Respondent's opinion regarding cooperation of library staff in providing electronic resources

Respondents	Faculties	Students	Total
Co-operative	17 (43.6)	131 (31.2)	148 (32.2)
Somewhat co-operative	17 (43.6)	183 (43.6)	200 (43.6)
Not co-operative	5 (12.8)	106 (25.2)	111 (24.2)

Source: Field Survey

Note: Figures in parenthesis denotes percentage to the total

Though IT skill of the library staff is satisfactory, it will be of no use if library staff does not cooperate with the users. With this respect the respondents feel that the cooperation extended by the library staff to the users is not at satisfactory level as majority of the respondents feel that the cooperation extended by the library staff is somewhat cooperative as their percentage is around 44 percent. This opinion is followed by another 32 percent of the respondents who feel they are cooperative and about one fourth of the respondents feel that they are not cooperative. Among those respondents who felt library staffs are cooperative, the percentage of faculties is more than the students, with respect to the respondents who feel it is somewhat cooperative the percentage of faculties and students are equal and those who feel library staffs are not cooperative, the percentage of students is more than faculties as their respective percentages are

around 25 and 13 percent. To study the relevance of difference between respondents the data was tested with Chi-square test and the result is as follows:

X^2 Analyses:

H_0: There is no significant difference regarding respondents' perception about the co-operation of library staff.

H_1: There is significant difference regarding respondents' perception about the co- operation of library staff.

Level of significance = 0.01 Degree of freedom = 2

Table X^2 value = 9.210 Calculated X^2 value = 3.54

As the calculated X^2 value is less than the table X^2 value, null hypothesis is accepted and concluded that there is no significance difference regarding respondents' perception about the co-operation extended by library staff to the users in providing electronic resources.

7. Findings, Suggestions

7.1 About 19 percent of the respondents prefer online database, all these reveal that e-journals, e-books and DVD/ CD ROM database are most preferred electronic resources.

7.2 Respondents who mainly require electronic information is to get additional information related to subject or job which accounts for around 55 percent of the total respondents.

7.3 Majority of the respondents account for about 63 percent are fully satisfied with e-journals, e-books and e-database.

7.4 In the study area maximum percent of respondents who used electronic journals published by Science Direct, Oxford University Press, Medknow and Elsevier Science ranges from 22.9 to 26.6 that is about one fourth of the total respondents.

7.5 Dependency on electronic media for updating of knowledge is above 75 percent as the percentage of respondents is around 33 percent.

7.6 Only about 34 percent of the respondents are satisfied with the IT skill of the library staff.

7.7 With this respect the respondents feel that the cooperation extended by the library staff to the users is not at satisfactory level as majority of the respondents feel that the cooperation extended by the library staff is somewhat cooperative as their percentage is around 44 percent.

8. Conclusion

Medical and allied college libraries in India are facing various problems related to technology up gradation due to constant developments in the IT field. If all the medical and allied colleges came together in sharing their library resources through network, then it is easy for the professionals/academicians to get information at their fingertips without losing their precious time. All these indicate that the role of electronic information in today's world is very important as it is much preferred for getting additional knowledge about any related subjects or job, for writing and presenting papers and so on.

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