

Awareness, Use, and Impact of Electronic Information Services on the UG and PG Students at JNMC Library, AMU, Aligarh, India

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Abstract

The changing landscape of information delivery format from print to electronic has played a great role in enhancing the usage of library. Therefore, the libraries are interested in subscribing a number of online databases of electronic resources to generate various Electronic Information Services (EISs). The purpose of this study is to identify the acceptance of EISs among the Undergraduate (UG) and Postgraduate (PG) students of Jawaharlal Nehru Medical College (JNMC), Aligarh Muslim University (AMU), Aligarh, India, and determine the usage level, satisfaction, instructions/assistance, and problems faced while searching the EISs. The data was collected through a questionnaire, administered randomly among 100 UG and PG students. Around 60 questionnaires were returned and the researcher selected 57 questionnaires to draw the result. The findings of the study revealed that most of the respondents were well aware of the available EISs, such as internet, e-mail, and online database. A large number of the respondents were using the e-mail, internet, e-reference, web, and online database services to gain knowledge for their research work. Google and Yahoo were the most used search engines for fulfilling the literature queries and there was agreement with the instructions provided in using and accessing the EISs. Most of the respondents were satisfied with the EISs provided by the JNMC Library. This was a one-of-a-kind study conducted to recognize the importance of EISs and the role of user education programme or information literacy programme to boost the usage of available EISs at the JNMC library, AMU.

Keywords: Electronic media, Electronic information services, Medical library

1. Introduction

The emergence of new technologies has revolutionized the world of information as well as provided better ways of transmission. This changing landscape of information delivery format from print to electronic/digital has played a great role in enhancing the usage of libraries. These e-resources are being used interchangeably as online resources, digital resources, and web resources. Therefore, the libraries are interested in subscribing to a number of online databases of electronic resources considering their various advantages so that the Electronic Information Services (EISs) could be generated from the available online databases. Now, these EISs have become an essential part and empowered the medical students, faculty members, and practitioners in medical libraries.

An EIS is like any library system whose primary purpose is to provide access to reference from, or otherwise utilize information from one or more databases stored electronically on an online data storage media, such as magnetic disk or optical disc. The stored information could be bibliographic or citation record, abstract, full-text, documents, numerical data, image records, sound records, inventory records, personnel records, financial records, or any other types of records that can be stored in digital form (Singh 2002).

According to Bokor (2003), although the world wide web is the major space for posting and disseminating information on the internet, there is a lack of centralized control or authority statistics about the web, in terms of web pages, websites, and users, even though it has grown at an exponential rate of 50 per cent a year, representing an ever-increasing proportion of human knowledge becoming available online.

In fact, in a subject like medical science, the electronic information is growing more rapidly as compared to other subjects. The change in the format of information has totally changed the shape of medical libraries. These EISs generated from the available online databases

may be categorized as online database service, e-document delivery services, internet services, web services, e-mail service, e-bulletin board service, e-indexing and abstracting service, e-CAS & SDI, e-reference service, etc.

2. Background

The Mohammedan Anglo Oriental (MAO) College was established in 1875. It is considered as one of the important milestones in the educational and social history of modern India. The MAO College was initially affiliated with the Calcutta University and was later transferred to the Allahabad University in 1885. In 1920, the status of the College was changed to a Central University by the Indian Legislative Council Act. Currently, Aligarh Muslim University (AMU) has 12 faculties, five colleges, 15 centres, three institutes, three academies, 30,000 students, 1,400 teachers, and 6,000 non-teaching staff; the University offers 325 courses. The Jawaharlal Nehru Medical College (JNMC) was founded on October 22, 1962 under the Faculty of Medicine, AMU, Aligarh (www.amu.ac.in).

The JNMC Library has been providing its services effectively and efficiently to the faculty and students of the College. Because of the ever-changing landscape of medical sciences, the Library strives to transform from the library of past to the library of future as e-library. It has more than 55,000 books and bounded volumes of journals, an exclusive collection of about 3,000 theses and dissertations of MD/MS/PhD, a comprehensive collection of World Health Organization (WHO)/United Nations (UN) publications, Non-Governmental Organization (NGO) reports, health data reports, etc. It maintains old journals from 1940 onwards in its archived collection. Besides 115 international and 25 Indian current print journals, the Library also subscribes to various online databases of e-resources such as J-Gate, UGC-INFONET Digital Library Consortium (Elsevier Science Direct, American Chemical Society, American Institute of Physics, American Physical Society,

Annual Reviews, Cambridge University Press, Emerald, Institute of Physics, ISID, JCCC, J-STOR, Nature, Oxford University Press, Project Muse, Project Euclid, Royal Society of Chemistry, SciFinder Scholar, SIAM, Springer Link, Taylor and Francis, Web of Science, Wiley-Blackwell, etc.), Electronic Resources in Medicine (ERMED) from NML, New Delhi, Pubmed from USA, and other open access e-resources (Biomed Central, DOAJ, MedInd, cancernet, etc.) (J. N. Medical College Library, www.jnmc.edu/library.htm). From the above-mentioned available online databases, various EISs were generated and used in the study.

3. Scope and Limitations of the Study

The University consists of 12 faculties, five colleges, 15 centres, three institutes, and three academies now. It was not easy to cover all the faculties, colleges, centres, institutes, and academies. Therefore, the JNMC was selected for this study by the researcher. The present study was limited to the Under Graduate (UG) and Post Graduate (PG) students of JNMC, AMU Aligarh, and personal characters were not considered.

4. Objectives of the Study

The EISs have been generated substantially from the available e-resources. This study was conducted to seek user's opinion concerning the awareness, use, and impact of EISs in the JNMC library.

The present study attempts to achieve the following objectives:

- To know the availability of EISs at JNMC Library, AMU, Aligarh
- To determine the awareness and use of available EISs
- To know the purpose of using EISs by the UG and PG students
- To know the most frequently used EISs by the UG and PG students

- To find out the problems faced and types of assistance/instructions in accessing and using the EISs
- To determine the level of user's satisfaction and suggest solutions for effectively using the available EISs

5. Methodology and Analysis

The researcher selected the JNMC Library to conduct an in-depth study. For this purpose, students pursuing Bachelor's and Master's Degree courses from JNMC were selected. The entire population of medical students was too large to be adequately covered for data collection in a single study. Therefore, a total of 100 questionnaires were distributed randomly among the UG and PG medical students of the JNMC and 60 filled in questionnaires (60 per cent of the distribution) were returned. The investigator selected 57 questionnaires and the responses received were analysed and tabulated using a simple statistical method.

5.1 Status of Respondents

All the respondents were classified in two categories as shown in Table 1. After analysis, it was observed that out of the 57 respondents, the UG and PG students were 33 (57.89 per cent) and 24 (42.11 per cent), respectively.

5.2 Frequency of Visit to the Library

The frequency of visit to the library was classified in five categories as shown in Table 2. It was noted that 54.54 per cent of the UG students visited library two to three times in a week and 27.27 per cent visited library daily. Similarly, 50 per cent of the PG students visited library

Table 1: Status of Respondents

S.no.	Status	Respondents	
		Numbers	%
1.	UG Students	33	57.89
2.	PG Students	24	42.11

Table 2: Frequency of visit to the Library

S.no.	Frequency	No. of respondents					
		UGS*	%	PGS**	%	Total	%
1.	Daily	9	27.27	12	50.00	21	36.84
2.	Two to three times in a week	18	54.55	3	12.50	21	36.84
3.	Weekly	3	9.09	6	25.00	9	15.79
4.	Monthly	0	0.00	0	0.00	0	0.00
5.	Occasionally	3	9.09	3	12.50	6	10.53

Note: *UGS= UG Students, **PGS= PG Students

Table 3: Awareness of EISs

S.no.	EISs	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Online database service	18	54.55	21	87.50	39	68.42
2.	E-document delivery services	12	36.36	6	25.00	18	31.58
3.	Internet services	30	90.91	24	100	54	94.74
4.	Web services	15	45.45	12	50.00	27	47.37
5.	E-mail service	21	63.64	21	87.50	42	73.68
6.	E-bulletin board service	0	0.00	0	0.00	0	0.00
7.	E-indexing & abstracting service	6	18.18	9	37.50	15	26.32
8.	E-CAS & SDI	3	9.09	3	12.50	6	10.53
9.	E-reference service	6	18.18	9	37.50	15	26.32

daily while 25 per cent visited the library weekly. It was also observed that 12.5 per cent of the PG students and 9.09 per cent of the UG students visited library occasionally. Around 12.5 per cent of the PG and 9.09 per cent of the UG students visited library two to three times in a week and weekly, respectively. Thus, the study revealed that most of the respondents visited the library daily and two to three times in a week.

5.3 Awareness of EISs Provided by the Library

Table 3 indicates the awareness of EISs provided to the UG and PG students in the library. It was promising to note that 90.91 per cent of the UG

and 100 per cent of the PG students were aware about the internet services. Similarly, 63.63 per cent, 54.55 per cent, 45.45 per cent, and 36.36 per cent of the UG students, respectively, were aware about the e-mail, online database, web, and e-document delivery provided in the library, while 87.5 per cent, 87.5 per cent, 50 per cent, 25 per cent, 37.5 per cent, and 37.5 per cent of the PG students were aware about the online database, e-mail, web, e-indexing and abstracting, e-reference, and e-document delivery provided in the library, respectively. It was also observed that a less number of UG students were aware about e-indexing and abstracting, e-reference, and

e-CAS & SDI services provided in the library, respectively, whereas e-CAS & SDI services were popular among a miniscule number of the PG students. Both the UG and PG students were found to be unaware about e-bulletin board service. The results demonstrate that services, such as internet, e-mail, and online database were very popular among the respondents. Various studies have confirmed that the users were aware therefore they tend to use EISs (Arif and Meadows 1994; Hewitson 2002). There were other study results which show that the students and faculty were aware of the internet (Kumar and Kumar 2010).

5.4 Awareness Approaches of EISs

Table 4 depicts that 81.82 per cent of the UG students came to know about the available EISs in the library through their friends. It was followed by 36.36 per cent, 27.27 per cent, and 27.27 per cent of them, who stated that they discovered the EISs through library websites, membership, staff, and other sources, respectively. In the case of PG students, 37.5 per cent were aware through membership, while 37.5 per cent,

37.5 per cent, and 37.5 per cent were made aware through library brochure, their friends, and staff, and other sources, respectively. A small percentage of both the UG and PG students stated that they came to know about it through library brochure and library websites, respectively. Thus, the majority of the respondents came to know through their friends. In their study, Kumar and Kumar (2010) showed that many of the students and faculty learnt either by trial and error or through the advice of friends.

5.5 Use of EISs

Table 5 explicitly shows that 81.82 per cent of the UG and 87.5 per cent of PG students used EISs available in the library. The respondents also revealed the major reasons such as lack of terminals and unfamiliarity with EISs, and lack of trained staff and training for not using EISs. The study by Debowski (2000), Tahir, Mahmood, and Shafique (2010) highlighted the difficulties in accessing EISs, while lack of terminals and trained staff are the major reasons for not accessing the EIS as confirmed by Ali (2005).

Table 4: Awareness approaches of EISs

S.no.	Awareness approaches	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Through membership	9	27.27	9	37.50	18	31.58
2.	Through library websites	12	36.36	3	12.50	15	26.32
3.	Through library brochure	3	9.09	9	37.50	12	21.05
4.	Through your friends	27	81.82	9	37.50	36	63.16
5.	Through staff and other sources	9	27.27	9	37.50	18	31.58

Table 5: Use of EISs

S.no.	Options	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Yes	27	81.82	21	87.50	48	84.21
2.	No	6	18.18	3	12.50	9	15.79

5.6 Use of Various Types of EISs Available in the Library

Table 6 shows the use of various types of EISs available in the library. It was noticed that the majority of the UG students, i.e., 88.89 per cent used internet and e-mail services, followed by 55.56 per cent who used online database and e-reference, respectively. The percentage of PG students was 100 per cent, 85.71 per cent, 71.43 per cent, and 71.43 per cent in the use of e-mail, internet, web, and e-reference available in the library, followed by 42.86 per cent, 42.86 per cent, 28.57 per cent, and 28.57 per cent who used e-indexing and abstracting, online database, e-document delivery, and e-CAS & SDI provided in the library, respectively. A lesser percentage of 22.22 per cent, 22.22 per cent, and 11.11 per cent UG students used e-indexing and abstracting, e-CAS & SDI, and e-document delivery services, respectively. Similarly, only 14.29 per cent of the PG students used bulletin board services provided in the library, respectively. Thus, the above results are supported by the study Crawford (2004), Hewitson (2002), Vicente, Crawford, and Clink (2004) as it revealed that the internet was the most widely used EIS. Other studies showed that

the users use online databases (Ali and Hasan 2003; Bates 1996); while it was also observed by the study of Ali and Hasan (2003) that the use of electronic services is unsophisticated, centering on e-mail and chatting.

5.7 Time Spent in Searching EISs

It was observed (Table 7) that 15 (55.56 per cent) UG students spent less than one hour in searching EISs while six (22.22 per cent), three (11.11 per cent), and three (11.11 per cent) of them spent more than one hour, one hour, and more than two hours, respectively. On the other hand, 12 (57.14 per cent) PG students spent more than one hour in searching EISs, followed by six (28.57 per cent) and three (14.28 per cent) who spent more than two hours and less than one hour in searching EISs, respectively. Thus, most of the respondents spent less than one hour and more than one hour in searching EISs.

5.8 Frequency of Using EISs

Table 8 reveals the frequency of using EISs. It was observed that 12 (44.44 per cent) and 12 (44.44 per cent) UG students used the internet daily and e-mail weekly, respectively. It was also noticed that nine (33.33 per cent), nine

Table 6: Use of various types of EISs

S.no.	Types of EISs used	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Online database service	15	55.56	9	42.86	24	50.00
2.	E-document delivery services	3	11.11	6	28.57	9	18.75
3.	Internet services	24	88.89	18	85.71	42	87.50
4.	Web services	9	33.33	15	71.43	24	50.00
5.	E-mail service	24	88.89	21	100	45	93.75
6.	E-bulletin board service	0	0.00	3	14.29	3	6.25
7.	E-indexing & abstracting service	6	22.22	9	42.86	15	31.25
8.	E-CAS & SDI	6	22.22	6	28.57	12	25.00
9.	E-reference service	15	55.56	15	71.43	30	62.50

Table 7: Time spent in searching EISs

S.no.	Awareness approaches	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Less than one hour	15	55.56	3	14.29	18	37.50
2.	One hour	3	11.11	0	0.00	3	6.25
3.	More than one hour	6	22.22	12	57.14	18	37.50
4.	Two hour	0	0.00	0	0.00	0	0.00
5.	More than two hour	3	11.11	6	28.57	9	18.75

(33.33 per cent), nine (33.33 per cent), nine (33.33 per cent), nine (33.33 per cent), and nine (33.33 per cent) used web services daily, e-mail daily, the internet weekly, online database occasionally, and e-document delivery occasionally, respectively. Similarly, three (11.11 per cent) UG students used online database services daily, followed by three (11.11 per cent), and three (11.11 per cent) online database and e-reference weekly; three (11.11 per cent) used e-document delivery service bimonthly, respectively. In addition, six (22.22 per cent) UG students used e-CAS & SDI monthly, followed by three (11.11 per cent) who used the web, three (11.11 per cent) used e-mail, three (11.11 per cent) used e-bulletin board, three (11.11 per cent) used e-indexing and abstracting, and three (11.11 per cent) used e-reference services, respectively, while 12 (44.44 per cent), six (22.22 per cent), six (22.22 per cent), and six (22.22 per cent) of them used e-reference services, the internet, e-bulletin board, and e-indexing and abstracting occasionally, followed by three (11.11 per cent) who used the web and three (11.11 per cent) used e-CAS & SDI, respectively. It was noted that the PG students used online database daily, internet daily, and e-mail daily, respectively, as 15 (71.42 per cent), 15 (71.42 per cent), and 12 (57.14 per cent). It was also observed that nine (42.85 per cent) and nine (28.5 per cent) PG students used web and e-reference daily, followed by three (14.28 per cent) for e-document

delivery, three (14.28 per cent) for e-indexing and abstracting, and three (14.28 per cent) for e-CAS & SDI, whereas six (28.75 per cent) PG students used e-document delivery weekly, followed by figures of three (14.28 per cent) who used e-mail, three (14.28 per cent) for e-bulletin board, and three (14.28 per cent) for e-CAS & SDI. It was also noted that three (14.28 per cent) PG students used e-document delivery bimonthly, followed by three (14.28 per cent) for web and three (14.28 per cent) for e-reference services. Similarly, three (14.28 per cent) and three (14.28 per cent) PG students used web and e-mail services monthly; three (14.20 per cent) and three (14.28 per cent) who used internet, e-indexing and abstracting services occasionally.

As a result, the internet service and e-mail were the most frequently used EISs by the UG students; whereas, online database, the internet, and e-mail were also frequently used EISs by the PG students.

The staff members used EISs regularly as validated by a study (Hewitson 2002). The findings of study (Macauley 2013) highlighted that the internet services, e-mail services, online database, and electronic database were often used by the UG students.

5.9 Purpose of Using EISs

Table 9 depicts that most of the PG and UG students, i.e., 15 (62.50 per cent) and 18 (54.55 per cent) used the EISs to update their knowledge and for research work, respectively.

Table 8: Frequency of using EISs

S.no.	Awareness approaches	No. of respondents																					
		UGS						PGS															
		D	%	W	%	B	%	M	%	O	%	D	%	W	%	B	%	M	%	O	%		
1.	Online database service	3	11.11	3	11.11	0	0.00	0	0.00	9	33.33	15	71.43	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2.	E-document delivery services	0	0.00	0	0.00	3	11.11	0	0.00	9	33.33	3	14.29	6	28.57	3	14.29	0	0.00	0	0.00	0	0.00
3.	Internet services	12	44.44	9	33.33	0	0.00	0	0.00	6	22.22	15	71.43	0	0.00	0	0.00	0	0.00	3	14.29	3	14.29
4.	Web services	9	33.33	0	0.00	0	0.00	3	11.11	3	11.11	9	42.86	0	0.00	3	14.29	3	14.29	0	0.00	0	0.00
5.	E-mail service	9	33.33	12	44.44	0	0.00	3	11.11	3	11.11	12	57.14	3	14.29	0	0.00	3	14.29	0	0.00	0	0.00
6.	E-bulletin board service	0	0.00	0	0.00	0	0.00	3	11.11	6	22.22	0	0.00	3	14.29	0	0.00	0	0.00	0	0.00	0	0.00
7.	E-indexing & abstracting service	0	0.00	0	0.00	0	0.00	6	22.22	3	11.11	3	14.29	0	0.00	0	0.00	0	0.00	3	14.29	3	14.29
8.	E-CAS & SDI	0	0.00	0	0.00	0	0.00	6	22.22	3	11.11	3	14.29	3	14.29	0	0.00	0	0.00	0	0.00	0	0.00
9.	E-reference service	0	0.00	3	11.11	0	0.00	3	11.11	12	44.44	6	28.57	0	0.00	3	14.29	0	0.00	0	0.00	0	0.00

(D = Daily, W = Weekly, B = Bimonthly, M = Monthly, and O = Occasionally)

Similarly, 15 (45.45 per cent) and 15 (45.45 per cent) UG students used EISs to update knowledge and for study purpose, respectively, while nine (37.50 per cent) and six (25 per cent) PG students used EISs for research work and for study. A small number of UG and PG students used EISs for teaching purposes.

The overall results show that the respondents used EISs to update knowledge, for research work and for study. Hewitson (2002) in a study showed that the staff members used EISs regularly for their research, professional development, PhD work, and teaching while the study of Ojedokum and Owolabi (2003) highlighted that most of the academic staff in the University of Botswana used the internet for their research/teaching activities. The study of Macauley (2013) validates the above result as the students used EISs for academic purposes,

online application/registration, research, communication with friends and colleagues, sourcing for materials for project writing, completing assignments, and for other personal purposes.

5.10 Sources Used for Locating Information

Table 10 depicts that 24 (88.89 per cent) UG students used library databases for locating electronic information, followed by 18 (66.67 per cent) and 15 (55.56 per cent) who used directories and bibliographies, respectively, while 18 (85.71 per cent) PG students used library databases, followed by 12 (57.14 per cent) and 12 (57.14 per cent) who used indexes and bibliographies for locating e-information, respectively. Thus, the results showed that library databases, directories, and bibliographies were

Table 9: Purpose of using EISs

S.no.	Purpose	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	To update knowledge	15	45.45	15	62.50	30	52.63
2.	For study purpose	15	45.45	6	25.00	21	36.84
3.	For research work	18	54.55	9	37.50	27	47.37
4.	For preparing assignment	0	0.00	0	0.00	0	0.00
5.	For teaching purpose	6	18.18	3	12.50	9	15.79

Table 10: Sources used for locating E-Information

S.no.	Sources used	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Library databases	24	88.89	18	85.71	42	87.50
2.	Directories	18	66.67	9	42.86	27	56.25
3.	Indexes	6	22.22	12	57.14	18	37.50
4.	Bibliographies	15	55.56	12	57.14	27	56.25
5.	Union catalogue	3	11.11	3	14.29	6	12.50
6.	OPAC	0	0.00	6	28.57	6	12.50

(Multiple answers were permitted)

the preferred sources for locating information among the respondents. In their study, Stewart and Narendra (2005) indicated that indexes and databases are now largely used sources for locating e-information.

5.11 Search Technique Used

In order to know the search technique used in e-information as shown in Table 11, it was noticed that 15 (55.56 per cent) and nine (33.33 per cent) UG students used subject term and full text search for finding the required e-information. Similarly, nine (42.86 per cent) PG students used Boolean logic. This reveals that subject term (truncated) search, full text search, and Boolean logic were the most used search techniques by the respondents. Boolean logic and truncation were the most often used search facilities by IIT users as confirmed by the study of Ali (2005).

5.12 Problem Faced while Searching

It was observed (Table 12) that 15 (55.56 per cent) and nine (33.33 per cent) UG students faced

technical and internet access problems, respectively, while six (28.57 per cent) and six (28.57 per cent) PG students faced technical and internet access problems as faced by the UG students in searching EISs, respectively. In addition, a small number of UG students revealed language as a problem. As a result, majority of the respondents revealed that they faced technical and internet access problems.

5.13 Retrieval Performance

Table 13 shows that an equal number of six (40 per cent) and six (40 per cent) UG students indicated about the retrieval performance of Online Public Access Catalogue (OPAC) as neutral and average, respectively, while nine (50 per cent) and nine (33.33 per cent) PG students indicated that the retrieval performance of OPAC was excellent and good. A very less number of three (20 per cent) UG students and three (16.67 per cent) PG students highlighted the retrieval performance as good and neutral. Thus, the majority of respondents showed the OPAC retrieval performance as good and neutral.

Table 11: Search technique used

S.no.	Search techniques	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Boolean logic	3	11.11	9	42.86	12	25.00
2.	Weighted term search	3	11.11	6	28.57	9	18.75
3.	Subject term (Truncated) search	15	55.56	6	28.57	21	43.75
4.	Full text search	9	33.33	6	28.57	15	31.25

Table 12: Problem faced while searching

S.no.	Problems	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Language	3	11.11	0	0.00	3	6.25
2.	Command	0	0.00	0	0.00	0	0.00
3.	Technical	15	55.56	6	28.57	21	43.75
4.	Internet access	9	33.33	6	28.57	15	31.25

Table 13: Retrieval performance

S.no.	Retrieval performance	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Excellent	0	0.00	6	33.33	6	18.18
2.	Good	3	20.00	9	50.00	15	45.45
3.	Fair	0	0.00	0	0.00	0	0.00
4.	Neutral	6	40.00	3	16.67	9	27.27
5.	Average	6	40.00	0	0.00	6	18.18

Table 14: Search engine used for literature queries

S.no.	Search engine used	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Google	33	100.00	21	87.50	54	94.74
2.	Google scholars	0	0.00	6	25.00	6	10.53
3.	Yahoo	9	27.27	18	75.00	27	47.37
4.	MSN	9	27.27	0	0.00	9	15.79
5.	Alta Vista	0	0.00	0	0.00	0	0.00
6.	Lycos	0	0.00	0	0.00	0	0.00
7.	Ask.com	0	0.00	0	0.00	0	0.00
8.	Khoj.com	0	0.00	0	0.00	0	0.00
9.	Look Smart	0	0.00	0	0.00	0	0.00

5.14 Search Engine Used for Literature Queries

Table 14 reveals that Google became the most popular search engine for the 33 (100 per cent) UG students for their literature queries. It was followed by 21 (87.5 per cent) and 18 (75 per cent) PG students who used Google and Yahoo for their literature queries, respectively. Thus, Google and Yahoo were the most used search engines for literature queries by the respondents. In their study, Madhusudhan (2010) and Sankaranarayanan and Nagarajan (2012) confirmed that Google was the most commonly and widely used search engine for locating information electronically.

5.15 Impact of EISs on Library Users

Table 15 highlights the impact of EISs on 24 (100 per cent) PG and 30 (90.91 per cent) UG students. On the other hand, three (9.09 per cent) UG students showed that they did not feel any impact of EISs. In addition, majority of the respondents gave their opinion as positive, in terms of the impact of EISs.

5.16 Types of Impact on EISs Accessibility

Table 16 illustrates that 27 (90 per cent) UG students denoted the speediness in services, followed by 15 (50 per cent) and 12 (40 per cent) who denoted the impact on EISs accessibility as

Table 15: Impact of EISs on library users

S.no.	Options	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Yes	30	90.91	24	100.00	54	94.74
2.	No	3	9.09	0	0.00	3	5.56

Table 16: Type of impact

S.no.	Impact	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Speed in services	27	90.00	21	87.50	48	88.89
2.	Fulfill the communication gap	15	50.00	6	25.00	21	38.89
3.	Timeliness	12	40.00	18	75.00	30	55.56
4.	Not much effort required	6	20.00	9	37.50	15	27.78
5.	Economical	9	30.00	6	25.00	15	27.78

Table 17: Adequate instructions in using EISs

S.no.	Adequate instructions	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Strongly agree	3	9.09	9	37.50	12	21.05
2.	Agree	3	9.09	12	50.00	15	26.32
3.	Somewhat agree	9	27.27	0	0.00	9	15.79
4.	Disagree	6	18.18	3	12.50	9	15.79
5.	Strongly disagree	12	36.36	0	0.00	12	21.05

fulfilling the communication gap and timeliness, respectively. Similarly, 21 (87.5 per cent) PG students signified the speediness in services, followed by 18 (75 per cent) and nine (37.5 per cent) denoting the impact as timeliness and not much effort required, respectively. Majority of the respondents expressed the impact of EISs as speed and timeliness in services.

5.17 Adequate Instructions in Using EISs

Table 17 depicts that nine (27.27 per cent) UG students somewhat agreed with the instructions,

while 12 (50 per cent) and nine (37.5 per cent) PG students agreed and strongly agreed with the instructions in using EISs provided by the Library. In addition, 12 (36.36 per cent) UG students strongly disagreed with the provided instructions. A small number of six (18.18 per cent), three (9.09 per cent), and three (9.09 per cent) UG students opined that they disagree, agree, and strongly agree; whereas, three (12.50 per cent) PG students disagreed. Thus, majority of the respondents agreed with the instructions provided in using the EISs.

Table 18: Satisfaction with EISs

S.no.	Satisfaction	No. of respondents					
		UGS	%	PGS	%	Total	%
1.	Strongly satisfied	0	0.00	3	12.50	3	5.26
2.	Satisfied	3	9.09	15	62.50	18	31.58
3.	Somewhat satisfied	15	45.45	3	12.50	18	31.58
4.	Dissatisfied	12	36.36	3	12.50	15	26.32
5.	Strongly dissatisfied	3	9.09	0	0.00	3	5.26

5.18 Satisfaction with EISs

Table 18 shows that a majority of 15 (45.45 per cent) UG and 15 (62.5 per cent) PG students were somewhat satisfied and satisfied, respectively, with the EISs. It was also observed that 12 (36.36 per cent) UG students were dissatisfied with EISs provided by the library. Similarly, a less number, i.e., three (9.09 per cent) and three (9.09 per cent) UG students opined as satisfied and strongly dissatisfied, respectively, while three (12.50 per cent), three (12.50 per cent), and three (12.50 per cent) PG students were found as strongly satisfied, somewhat satisfied, and dissatisfied, respectively. Overall, a majority of the respondents were satisfied and somewhat satisfied with the EISs provided by the Library.

6. Conclusion and Recommendations

The EISs play a vital role in changing the way of seeking and disseminating information. The use of services in electronic environment becomes more apparent when information is more readily available in the electronic format. The major results of the study can be summarized as: a majority of the respondents were well aware of the available EISs, such as the internet, e-mail, and online database through their colleagues; majority of the respondents were using the e-mail, the internet, e-reference, web, and online database services to update knowledge and for

research work; most of the respondents were not using EISs due to the lack of terminals and unfamiliarity with EISs, lack of trained staff and training for not using EISs; internet service and e-mail were the most frequently used EISs by the respondents whereas online databases were also often used by the respondents; majority of the respondents used library databases, bibliographies, and directories for locating e-information while subject term and Boolean logic were the search techniques for finding the required electronic information; the respondents faced technical and internet access problems in searching the e-information but they showed that the retrieval performance of OPAC was good and neutral; Google and Yahoo were primarily used for fulfilling their literature queries; the impact on EISs accessibility as speediness and timeliness in services; respondents agreed, strongly agreed, and strongly disagreed with the instructions provided as well as somewhat satisfied and satisfied with the EISs provided by the Library.

In view of the paradigm shift in services offered throughout the world, the library should ensure better and impressive infrastructural facilities for searching the required information before investing a large amount on the subscription of EISs. The new forms of services have also increased the pressure on librarians to play an intermediary role. It is clear that the librarians and library staff should improve their skills by attending more training programmes on e-information searching and retrieval in

order to train the users more effectively. The study explicitly reveals that the awareness of all available EISs is not too encouraging. Hence, the library must intensify its awareness programmes by introducing a compulsory user education or information literacy programme for maximizing the awareness and usage of EISs. The use of e-mail alert system, pop-up message system, and motivational rewards for those who make maximum use of the available EISs must be considered as methods of promotion by the Library.

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SERIES: A PLANET FOR LIFE



BUILDING THE FUTURE WE WANT

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