Awareness of ICT Enabled Information Services Among Patrons: A Comparative Study of Central University Libraries of Delhi and NCR

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ABSTRACT

The aim of the paper is to survey the central universities and compare the awareness of the patrons regarding the ICT enabled information services provided by the university libraries. Content analysis of the website, structured questionnaires for librarians were used to find out the ICT enabled services facilitated by the libraries. The survey was accomplished through a structured questionnaire for the patrons prepared with the help of review of literature. For the study, universities were selected through the NIRF 2017 of MHRD. Five ICT enabled services were selected and studied keeping in view their benefits to the patrons. Review of earlier researches helped in selecting the services for comparative study. The data was collected through a matrix with three categories as 'Aware and Useful', 'Aware but not useful' and 'Not aware'. The data so collected through these categories also helped the researcher in finding out the usefulness of the ICT information services facilitated by the libraries. The findings revealed that 69.9% of patrons are aware of the selected and studied ICT enabled information services and only 50% of patrons find them useful too.

Keywords - Central universities, Information services, Online databases, Interlibrary loan, OPAC, Current awareness service, user orientation and education, Marketing

1. INTRODUCTION

Information Communication Technology is progressing rapidly. The revolutionary development of ICT has transformed all the libraries into library 2.0 as most of them are now implementing ICT for smooth functioning and to facilitate various information services to their patrons. They are also implementing web 2.0 tools and technologies to be visible online and provide remote access (24 x 7 x 365) access to their patrons. Their collection, resources, products and services are available on the web. ICT enabled information services available on the web are known as web enabled information services. Due to revolutionary changes in the technologies, library and information science professionals are facing the challenge of being equipped with the new technologies and implementing them to provide various innovative services to their patrons sitting at home. The patrons need not visit the library physically and libraries help in saving their time fulfilling the fourth law of Dr.S.R.Ranganathan. Interactive websites are the most important and maximum used tool of web 2.0 to provide these web enabled information services. Technosavvy generation of patrons are more into web information services and demand them from the library professionals. It is important for library professionals to facilitate ICT enabled web information services to the patrons, make them aware of these services and usefulness also.

2. REVIEW OF LITERATURE

(Popoola, 2008) deliberated that information sources and services are underutilised. Even the faculty is unaware of LICs collection and services. It is due to the absence of communication between users and LIC personals, lack of marketing of information and user education efforts.

(Mohamed, 2007) studied the ICT in Special Libraries in Kerala and investigation revealed that though the libraries understudy had the software, hardware, and facilities of communication to some limit but their ICT enabled services and resources were not reaching their patrons to the expected level. Reasons were the lack of funds, lack of skilled professionals, and lack of infrastructure to establish automation of all the activities of library management and implementation of ICT.

(Wang, 2009) deliberated that it is mandatory for university libraries and their professionals to deliver world-class web enabled information services by designing, developing and implementing ICT in traditional services.

(Mathew, 2011), deliberated that Information Communication Technology (ICT) has changed the traditional methods of providing library services. Patrons can access information as per their need and demand. Author expressed that assessment of ICT applications in library information centres is important in the context of changing user needs.

(Seena and Sudhier, 2014), expressed that the ICT tools and services such as web, networks, internet, etc., have influenced the library services. The ICT has made a reasonable impact on library users and the way they want information as it provides new opportunities for information retrieval. The growing impact of ICT and web technologies has compelled the libraries to use these technologies effectively to provide services to the users according to their demands.

(Ibrahim, 2015), reported that the library information centres have accepted the changes and revolutionary advancement in the information and communication technology. They have been automated or in the process of automation and digitization. They are deploying various information communication technologies to provide patrons, varied effective services and to retain the techno savvy generation.

(Sangale, 2015), The Information and Communication Technologies (ICT) have brought revolutionary changes in handling, delivering and storage of information. The transition of traditional library collections to digital or virtual collections presented the librarian with new opportunities and challenges.

(Colepicolo, 2015), suggested to regularly evaluate the satisfaction level of the patrons whenever an e-information service is implemented and used to search and retrieve information for academic research.

(Hossaina and Munshib, 2015) recommended that as per the marketing concept, an organization must find out what the customers want and use this information to create satisfactory services and products. It means to provide excellent services and make every effort to satisfy customer requests.

(Rajanbabu and Murugesapandian, 2017) studied different types of universities in Chennai. They discussed patterns of Information access in the digital environment by the faculty. Majority of their patrons were not aware of the information services and resources facilitated by the studied libraries.

(Patel, 2017) investigated CKSVIM library. The study revealed that patrons are not getting needed guidance, training and assistance from the library professionals. They lack knowledge to search the required and relevant materials. It was recommended that the CKSVIM library hold varied training programmes for the effective and better use of ICT services and resources.

In view of the above, it can be said that patrons will drive maximum benefits from the ICT enabled information services if they are taught to sharpen their information handling skills. They need to be taught to use library resources effectively and without any intervention of library staff. Traditional library services are getting obsolete as information can now be accessed from the library website and other online platforms like various social networking sites. It is also found that patrons are unaware of the varied ICT enabled information services of their libraries.

In view of this, the researcher is interested in studying, comparing and ranking the university libraries on the basis of the awareness of their patrons of ICT enabled information services provided by central university libraries of Delhi and NCR.

3. OBJECTIVES
Three research objectives of this study are:
- To study and analyse the awareness of the patrons along with the perception of patrons' towards the usefulness of the selected information services.
- To assess the overall awareness of three University libraries and five information services.
- To compare and rank the Universities on the basis of the awareness of their patrons.

4. SCOPE AND POPULATION
For completion of the research study on time, the scope of the study is confined to the following limitations:
- Geographically, the area covered is universities of Delhi and NCR. The Delhi & NCR encompasses the entire NCT (National Capital Territory) of Delhi and several districts surrounding it. Major cities of NCR included in the study are Delhi, Ghaziabad, Faridabad, Gurgaon, Noida & Meerut.
- There are many universities (Central, State, Deemed and Private) on the website of the University Grant Commission (UGC)[13] Only central universities were considered for the study.

● The central universities of Delhi and NCR were selected from the list of top hundred universities of India available on National Institute Ranking Framework (NIRF-2017)[11] of Ministry of Human Resource Development (MHRD). The three central universities of of the above list are as follows (Table 1)

Table 1: List of universities with NIRF ranking

S. No.	University & their link of the website	NIRF rank	Abbreviation
1	Jawaharlal Nehru University, Delhi, http://lib.jnu.ac.in/	2	JNU
2	University of Delhi, Delhi, http://crl.du.ac.in/	8	DU
3	Jamia Millia Islamia, Delhi, http://jmi.ac.in/zhlibrary	12	JMI

5. METHODOLOGY

Official websites of the selected universities were searched through Google search engine. All the websites of the universities had a link to the web pages/s of the university libraries. Content analysis of websites, survey of the librarians and review of literature helped in the selection of services for the study. All the information services were selected keeping in view the perception of patrons towards their usefulness. Review of earlier studies helped in the preparation of the structured questionnaire for the data collection from the patrons. Study was conducted during the period of March 2018 to August 2018. Random sampling method was used to collect the data. Fraternity consisted of students, faculty and other staff also but most of them were students using the library during the study period. Following information services were selected for the study.

● Online Public Access Catalogue (OPAC);
● Current awareness service (CAS);
● User Orientation/Education;
● Online databases; and
● Interlibrary Loan (ILL).

Hundred questionnaires were distributed in each library personally by the researcher and data was collected for the study. The researcher also prepared a web form to collect the data remotely from the patrons and this data was merged with the data collected through hard copy of the questionnaires. Observation and interview methods were also used to collect and supplement the data collected through questionnaires. The five selected services were studied on the scale of three, which are **'Aware and useful'; 'Aware but not useful'** and **'Not aware'.**

The response rate is 82.33% (247 out of 300). The highest number of responses were received from JNU (88%), followed by DU (82%), and lowest from JMI (77%).

6. FINDINGS AND ANALYSIS

6.1. Research Objective - 1

To study and analyse the awareness of the patrons along with the perception of patrons' towards the usefulness of the selected information services.

6.1.1. Online Public Access Catalogue

The library catalogue, the mirror of library collection is a very basic service to connect patrons with its resources. The implementation of ICT has converted it into OPAC, www and the internet have transformed it into Web OPAC accessible remotely.
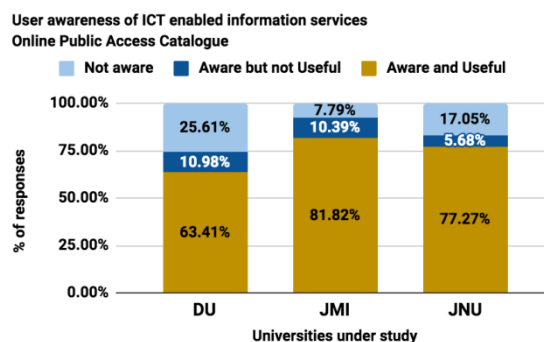
Figure 1: User awareness of OPAC-University analysis

The data analysis of (Figure 1: User awareness of OPAC-University analysis) presents that in the category "Aware and useful", the highest number of patrons (81.82%) are of JMI, followed by JNU with (77.27%) and the lowest number is of DU (63.41%). In the next category 'Aware but not useful', the highest Responses were submitted by patrons of DU (10.98%) followed by patrons of JMI (10.39%). The lowest number of patrons of JNU (5.68%) are in this category. In the category 'Not Aware', the highest number of patrons are of DU (25.61%), followed by patrons of JNU (17.05%) and the minimum of JMI (7.79%). Considering the infrastructure and facilities provided by these university libraries, the numbers are quite high in this category. High number of patrons of DU being not aware of OPAC is a startling discovery and is a matter of concern.

Irrespective of the usefulness of the service, the University wise analysis shows that the JMI with (92.21%) aware patrons is leading, followed by JNU (82.95%) and the lowest number of patrons of DU (74.39%) are aware of the service.
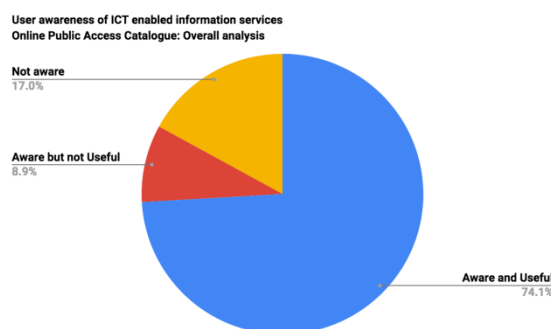

Figure 2: Overall awareness of users of OPAC

(Figure 2: Overall awareness of users of OPAC) Overall analysis highlights that (74.1%) patrons are in the category of 'aware and useful', (8.9%) are in the category of 'aware but not useful' and (17%) are in the category of ''not aware' of the OPAC. Collectively (83%) patrons are "aware" of the service and 74.1% find them useful.

6.1.2. Current Awareness Service

It is another important service from the point of view of patrons. This service is facilitated to make patrons aware of the new resources acquired by the library. Other than that it is also used to publicise library services, products and any new technology being used by the libraries. Any event, seminar or workshop etc being organized by the library may also be publicized through this service. E-mail is the most convenient tool for the service to be provided. Nowadays interactive websites and various web 2.0 tools are also being used. The provision of this service to a specialised group of people is known as SDI. It is normally facilitated through Federated search engines.
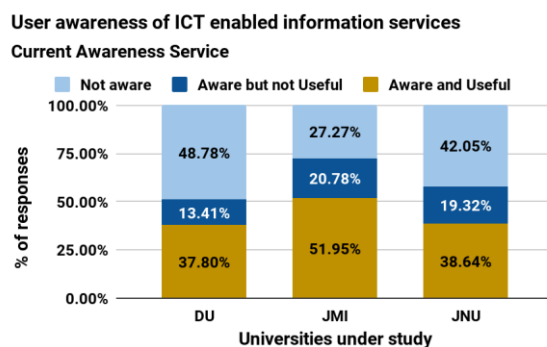
Figure 3: User awareness of CAS-University analysis

The category analysis of data (Figure 3: User awareness of CAS-University analysis) reveals that in the category of 'Aware and useful', the maximum number is (51.95%) of patrons of JMI, followed by JNU with (38.64%) patrons and the minimum is (37.80%) patrons of DU. In the category 'Aware but not useful', the maximum of (20.78%) patrons of JMI, followed by JNU with (19.32%) and the minimum is of DU (13.41%). In the category of "Not aware", the maximum number is (48.78%) patrons of DU, followed by JNU with (42.05%) and the minimum is (27.27%) patrons of JMI. Such a big number of patrons of DU in the 'not aware' category is a startling finding and it means the need to publicise the library at regular intervals.

Irrespective of the usefulness, the university analysis shows that collectively that the JMI with (72.73%) aware patrons is leading, followed by JNU (57.96%) and the lowest number of patrons of DU (51.21%) are aware of the service, which is approximately 50% of their patrons only.
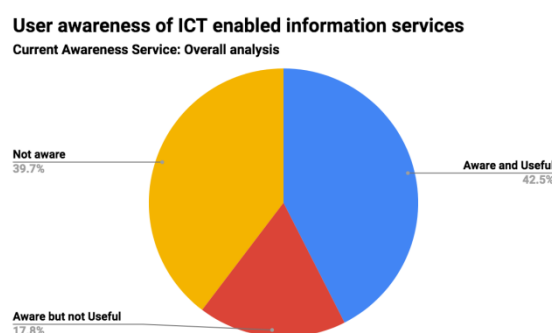

Figure 4: Overall awareness of users of CAS

The analysis of (Figure 4: Overall awareness of users of CAS highlights that overall only (42.5%) patrons of university libraries under study are in the category 'aware and useful'. While (17.8%) are in the category 'aware but not useful'. While a huge number of patrons (39.7%) are in the category 'not aware'. Collectively only (60.3%) patrons are 'aware' of the service and only 42.69% find them useful. Libraries need to work on marketing their CAS.

6.1.3. User Orientation/Education

Various user orientation and education programmes are organized by the university libraries to orient and educate their patrons. This service helps in making patrons aware of all the resources, services and products of the university libraries. Implementation of ICT has transformed all the services of the libraries and same is the case with this service. Now it is made available to the patrons through their interactive website and various other web 2.0 tools.
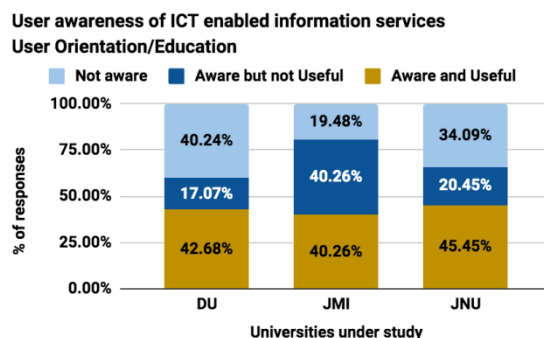
User awareness of ICT enabled information services
User Orientation/Education

Figure 5: User awareness of user orientation/education-University analysis

The category wise analysis (Figure 5: User awareness of user orientation/education-University analysis presents that in the category of 'Aware and useful', the maximum number of patrons are of JNU (45.45%), followed by patrons of DU (42.68%) and the minimum (40.26%) are of JMI. In the category "Aware but not useful', the maximum number of patrons are of JMI (40.26%), which is quite a large number of patrons of JMI who are aware of the service but do not find it useful. There may be scope of improvement in the service as per the need of the patrons. JMI is followed by patrons of JNU (20.45%) and the minimum number is (17.07%) of DU. In the category 'Not aware", the highest number of patrons are of DU (40.24%), followed by patrons of JNU (34.09%) and the lowest number of patrons are of JMI (19.48%).

The university wise analysis presents that irrespective of the usefulness of the service, collectively JMI with (80.52%) aware patrons is in the lead, followed by JNU (65.90%) and the lowest number of patrons of DU (59.75%) are aware of the service.
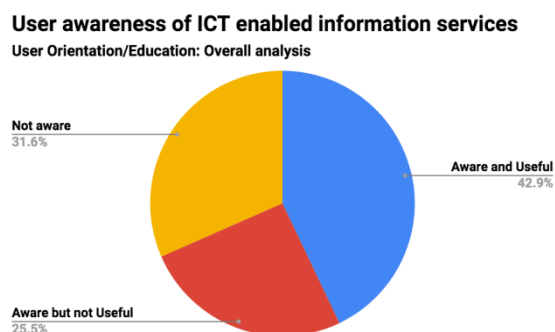
User awareness of ICT enabled information services
User Orientation/Education: Overall analysis

Figure 6: Overall awareness of user orientation/education

(Figure 6: Overall awareness of user orientation/education) presents that overall only (42.9%) patrons are in the category of 'aware and useful, (25.5%) are in the category 'aware but not useful', while a large number (31.6%) patrons are 'not aware' of the service. Collectively (68.4%) patrons are 'aware' of the service and (42.6%) find the services useful.

6.1.4. Interlibrary Loan

It is a service facilitated to the patrons to borrow books, documents or any other resource from other libraries. The service is feasible through a library network or through cooperative resource sharing. A union catalogue is prepared which has the bibliographic details of resources of all the libraries for lending to other member libraries. E.g. Delnet and INflibnet etc.
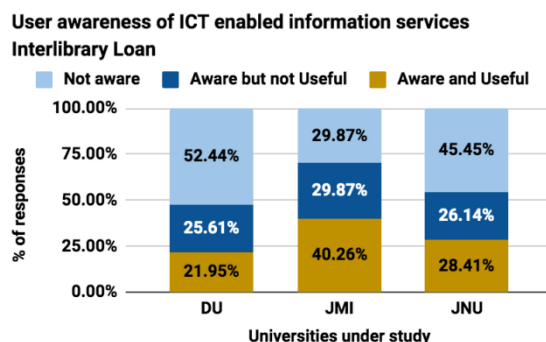
Figure 7: User awareness of ILL-University analysis)

The category wise analysis (Figure 7: User awareness of ILL-University analysis) presents that in the category 'Aware and useful', the maximum number of patrons are of JMI (40.26%), followed by patrons of JNU (28.41%) and the minimum are (21.95%) patrons of DU. In the category 'Aware but not useful', the maximum patrons are of JMI (29.87%), followed by patrons of JNU (26.14%) and the minimum are (25.61%) of DU. In the category 'Not aware", the highest number of patrons are of DU (52.44%), followed by patrons of JNU (45.45%) and the lowest number of patrons are of JMI (29.87%).

The university wise analysis presents that irrespective of the usefulness of the service, collectively the JMI with (70.13%) aware patrons is leading in this service also. It is followed by JNU (54.55%) and the lowest number of patrons of DU (47.56%) are aware of the service.
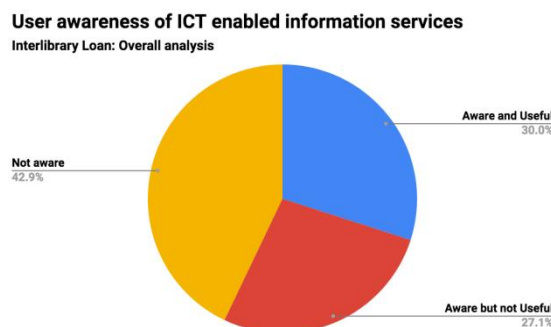

Figure 8: Overall analysis of Interlibrary Loan

The overall analysis (Figure 8: Overall analysis of Interlibrary Loan) presents that (30%) of patrons are in the category of 'aware and useful', only (27.1%) patrons are in the second category 'aware but not useful', while (42.9%) patrons are 'not aware' of it, which is quite high in number. Overall only (57.1%) patrons are 'aware' of the service and only 30% find it useful.

6.1.5. Online Databases

An online database is generally a bibliographic database, indexing abstracting (LISA), or a full text database. In the present information age, online databases are a very important resource for the patrons. Present generation is a net savvy generation and the majority of them want to access the information through the internet on the world wide web. They also want the services of the libraries to be available on the web to be accessed remotely. Facility og federated search facilitate searching all the databases through a single window.
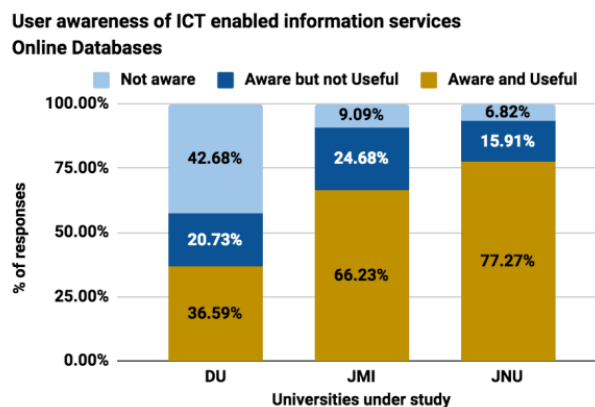
Figure 9: User awareness of Online databases-University analysis

The category wise analysis (Figure 9: User awareness of Online databases-University analysis) presents that in the category 'Aware and useful', the maximum patrons are of JNU (77.27%), followed by patrons of JMI (66.23%) and the minimum number are (36.59%) patrons of DU. In the category of 'Aware but not useful', the maximum patrons are of JMI (24.68%), followed by patrons of DU (20.73%) and the minimum are (15.91%) of JNU. In the 'Not aware' category, the highest number of patrons are of DU (42.68%), followed by patrons of JMI (9.09%) and the lowest number of patrons are of JNU (6.82%).

The university wise analysis presents that irrespective of the usefulness of the service, collectively JNU with (93.18%) aware patrons is leading in this service. JNU is followed by JMI with (90.91%) and the lowest number of patrons of DU (57.32%) are aware of the services.
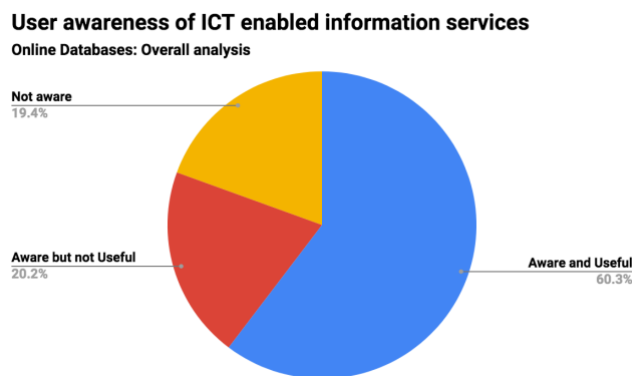

Figure 10: Overall user awareness of Online databases

(Figure 10: Overall user awareness of Online databases) depicts that overall (60.3%) patrons are in the category of 'aware and useful'. (20.2%) patrons are in the category of 'aware but not useful' while (19.4%) patrons are in the category of 'not aware'. University libraries are spending a huge amount of money in subscribing to the online databases and they need to take more pain in making efforts to educate the patrons about them and also about its usefulness. Overall (80.5%) patrons are 'aware' of the online databases and only 60.3% find them useful.

6.2. Research Objective - 2

To assess the overall awareness of three University libraries and five information services.

The following figures present the overall analysis of the five ICT enabled information services of the three universities understudy in the three categories:
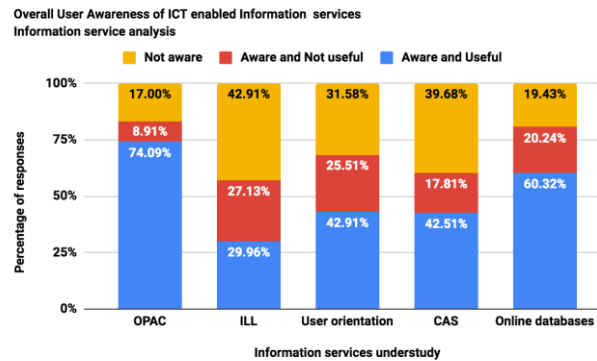
Figure 11: Overall user awareness-Information service analysis

Overall information service wise analysis of data (Figure 11: Overall user awareness) highlights that in the category 'Aware and useful', the highest number of responses are for OPAC (74.09%) followed by Online databases (60.32%), User orientation/education (42.91%), CAS (42.51%) and the lowest are for ILL (29.96%) information service.

In the category, 'Aware but not useful', the maximum number of responses are for ILL (27.13%), followed by User orientation & education service (25.51%), Online databases (20.24%), CAS (17.81%) and the minimum number of patrons are aware of OPAC (8.91%). It is very startling to find that respondents do not find ILL useful. The libraries need to market the service and make them aware about other online services also.

In the category, 'not aware', the maximum number of responses are for ILL (42.91%), followed by CAS (39.68%), User orientation & education (31.58%), Online databases (19.43%), and the minimum number of responses are for OPAC (17%).

Irrespective of the usefulness of the service, collectively the highest number of patrons are aware of OPAC (83%) followed by Online databases (80.56%), User orientation (68.42%), CAS (60.32%) and lowest number of patrons are aware of ILL (57.09%).
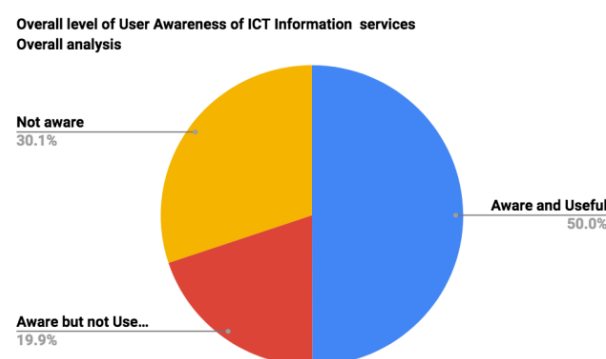

Figure 12: Overall user awareness analysis

The data analysis Figure 12: Overall user awareness analysis shows that overall (50%) respondents have responded in category **'Aware and useful'**. (19.9%) respondents are in category **'Aware but not useful'**. While a large number of (30.1%) respondents are in the category '**Not aware**'. Overall **(69.9%)** patrons are aware of the ICT enabled information services and only 50% respondents find the ICT enabled information services **'useful'.**

6.3. Research Objective – 3

To compare and rank the Universities on the basis of the awareness of their patrons.
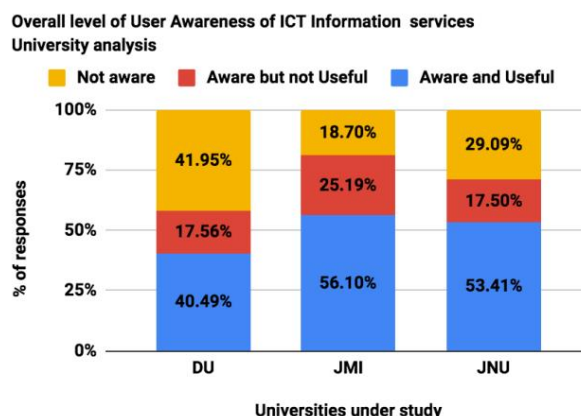

Figure 13: Overall analysis: University wise

The overall analysis of the above (Figure 13: Overall University analysis) shows that in the category of 'Aware and useful', the highest number of patrons are of JMI (56.10%), followed by JNU (53.41%), and the lowest number is of DU (40.49%). In the category of 'Aware but not useful', the highest percentage of patrons are from JMI (25.19%), followed by DU (17.56%) and the lowest number of patrons are of JNU (17.50%). These patrons are aware of the studied services but do not find information services useful. The highest percentage of patrons (41.95%) of DU, followed by JNU (29.09%) and lowest (18.70%) of JMI is in the category of 'not aware' of the ICT enabled information services

Irrespective of the benefits, it is easily assessed that collectively JMI has the highest percentage of aware patrons (81.29%), followed by JNU (70.91%) and the lowest is of DU (58.05%).

It can be interpreted that JMI is at rank number one, followed by JNU at rank number two and DU at rank number three as per this comparative study.
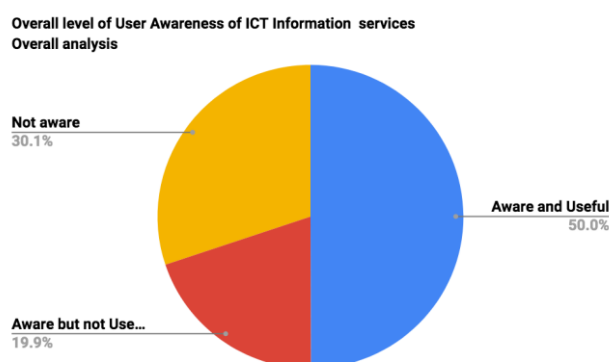

Figure 14: Overall analysis

The analysis of (Figure 14: Overall analysis) highlights that in total, 50% of patrons understudy are in the category 'aware and useful' of ICT enabled information services provided by their university libraries, while 19.9% of patrons are in the category of 'aware but not useful'. 30.1% of patrons are in the category of 'not aware'. Irrespective of the usefulness, 69.9% of patrons are aware of the ICT enabled information services

7. DISCUSSION

This comparative study was to find out the awareness of patrons of central university libraries of Delhi and NCR of the ICT enabled information services. The researcher also studied the usefulness of these services taking into consideration the viewpoint of the patrons. The analysis highlights that all the university libraries are providing information services but a large number of patrons are either unaware of the services or do not find them beneficial. Highest number of patrons of DU in 'not aware' category is a matter of concern for them. Despite having a sturdy infrastructure and other resources still a large number of patrons are unaware of the services being provided. Except online databases, JMI is leading in all the information studied for the topic. Which may be interpreted as that JMI library is marketing their resource, services in a better way than the other central libraries. JNU is leading in information service of 'Online databases' only and lagging behind in others. DU library is lagging behind in all the information services studied for this paper. Their very high number of patrons are not aware of the information services being provided by their library. JNU and DU both need to educate and orient their patrons more and frequently organize these kinds of sessions. A high number of patrons 'not aware' of ILL and CAS information services needs improvement on the part of the university libraries. They need to promote them and make them more popular by different strategies. They might take help of the teaching fraternity to popularize them and make patrons aware of them as the majority of the patrons are students of respective universities. University libraries need to convert unaware patrons into aware patrons and also deliberate on the usefulness of the services.

Though information is considered as an important resource, the use of ICT tools to collect and disseminate information has been in a slow pace in the majority of the University libraries. This may be due to various factors like insufficient funds, inadequate staff trained in handling computers and software packages, administrative concerns etc

8. RECOMMENDATION AND CONCLUSION

It is recommended to the university libraries to promote their ICT enabled information services so that to increase the awareness of patrons and their usage also. The marketing may be through user orientation and education, various information literacy tutorials, organizing various events, seminars and hands-on workshops for the patrons will support the cause of promotion of ICT enabled information services. Various tools and technologies of web 2.0 (vix. Youtube, facebook, blogs, instant messaging, social media platforms) may be used to promote the university library resources and services. These activities and technologies may be used to outreach the patrons, make them aware about the advantages of using these services. Feedback must be taken from the patrons about the services so as to remove any shortcoming as well as to innovate and improve them.

Revolutionary transformation in ICT has given a valuable chance to the library professionals for better control, coordination of the services and more improvement in the services. They need to update themselves with the changes in the technologies.

This comparative study concludes that irrespective of the usefulness of the ICT enabled information services being provided by university libraries, overall their only 69.9% patrons are aware of them. University analysis presents that 81.29% patrons of JMI are aware of the services, followed by 70.91% of JNU and only 58.05% patrons of DU are aware of the information services studied for this paper. They all need to make efforts and improve the scenario by marketing and promotional activities. They need to be more visible online to their tech savvy generation of patrons.

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