

# USABILITY OF THE LIBRARY PORTAL: A CASE STUDY OF IIT DELHI LIBRARY

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**Abstract** *This paper evaluates the level of awareness and use of library portals by the PG Students and Research Scholars of IIT Delhi. Data was collected through a structured questionnaire distributed to the Postgraduate Students and Research Scholars of various departments at IIT Delhi. The present study was undertaken to determine the awareness about library portal, frequency of their use, and mode of access to the library portal. Relevancy of the resources available on library portal, value of portal, use of information sources and services provided and overall satisfaction for library portal were also find out by the investigator. The survey found that the majority of the students use library portals. The study also found that the reasons for not using the library portal were lack of awareness, training and guidance, and the lack of contents on the library portal. The analysis reveals that majority of the respondents also expressed that they needed instructions and help for the effective utilisation of resources on the library portal.*

**Keyword:** *Portals, User Studies, Library Portal, IIT Delhi.*

## INTRODUCTION

The academic and research library and information centers being the knowledge hub and disseminators of information need to be on the accessible map by the society at large for seeking information. This accessibility in the best interest of users can be met by hosting a library website. Libraries provide information resources and services to students, faculty, and staff in an environment the support learning, faculty, and staff in an environment that supports learning, teaching, and research. The libraries are supposed to contribute significantly to students' progress and learning outcome as well as to scholars' achievements. Libraries have to prove their usefulness and have to justify the money invested in their resources such that their services are effectively transformed into the results. To answer these challenges, they have to move their services and resources onto web.

A portal is a location on the world wide web (WWW) usually containing a collection of hyperlinked documents and files. A library portal has a unique uniform resource locator (URL), which normally, but not necessarily, points to the entry page or home page for the library site. In the last decade library websites have become the first point of contact. It has become increasingly important for libraries to evaluate the usage of portal to verify that the information being provided to their users is pertinent, clearly presented, and internally consistent. It is important to see that the resources and services provided by library Portal are well utilised by the user communities.

Library websites are crucial in delivering data, research tool, and instruction to students, faculty, staff, and community

patrons. Today, the website connects users with article citation and databases, library catalogues, full text journals, magazines, newspapers, books, video, DVD's, e-books, encyclopedias, streaming music and much more. The web is playing a dynamic role in diverse application domains such as business, education, industry, and entertainment. The present study focuses on the usage of the library portal by the Postgraduate students and Research Scholars; and the library to improve the contents available on its portals.

## REVIEW OF LITERATURE

Astroff(2002) home page design of library portal of more than 100 colleges have common patterns indicating genre development; a number of university home pages with no direct links to the library webpages disrupted user expectation.

A study conducted by Breckbill and Baldwin(2002) revealed that some academic libraries displayed a main library webpage as the default home page of their websites.

Booth(2004) in his study aimed at the practical issues involved in providing a website that meets the needs of diverse users.

Comeaux(2003) indicated that despite an increase in accessibility, only 50 to 60 per cent of the websites were free of Bobby-detectable errors.

This is the only study that provides trend information about the accessibility of a broader set of library and library school websites. Usability of the academic library portal was assessed by Elaine and Louise (2001).

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The purpose of their study was to access usability of an academic library website and to understand how faculty and students complete typical task using library portal. The authors found that library websites failed to take into account how people approach the information problem.

Li(1999) examined the geographic distribution of users and usage patterns of the library Web page, the peak usage times, and the computer environment which included type of Web browsers, operating systems, screen resolutions, and screen colours, etc. In addition, the study also compared usage statistics gathered before and after the library's Web page promotion activities, to measure the effectiveness of these business management and library marketing efforts.

Pearson, Green and Pearson(2007) investigated the relative importance of five key criteria for assessing Web usability. These criteria are navigation, download speed, personalisation, ease of use, and accessibility. This study utilised a scenario-based, multi-criterion decision making approach. The research indicated that, as expected, ease of use was the criteria that the respondents considered most important in assessing Web usability. The findings from this study have practical implications for website designers and the results indicated that less effort/resources should be devoted to personalisation and customisation, and more in making sure that websites are easy.

Shemberg(2002) found that it is often difficult to locate the library portal from the university name. Information that is essential on every library website includes postal address with zip codes and Web master e-mail contact when this information is not readily available. It was found that academic library sites were often difficult to navigate.

Tranis and Elaina(2004) examined how students use electronic research libraries. Major finding of this study showed that design features website can drastically affect the success of the students doing research.

Xue(2002) attempted to evaluate a government publications library website by studying its usage statistics. It examined organisation, including access, search ability, and structure, of electronic government information in subject directory format. This study revealed that a subject directory website is an important tool for distributing electronic government information, but it requires continuous development. The usage statistics are useful in monitoring search engine ranking, improving display, structure, and search ability.

## OBJECTIVES OF THE STUDY

The study has the following major objectives:

- To find out the level of awareness and use of library portal by the students.
- To find out the type of information sources and services used by the students through library portal.
- To know the purpose and frequency of use of library portal.
- To ascertain users' opinion regarding usefulness and adequacy of contents/ resources on library portal
- To know the problems encountered by the students in using library portal.

## SCOPE AND LIMITATIONS

The study is intended to give an overview of the use of library websites by the PG Students and Research Scholars of IIT Delhi at their own library portals. The present study covered the PG Students and Research Scholars of various departments at IIT Delhi for the academic year 2010-2011.

## RESEARCH METHODOLOGY

The data related to the study was collected using a structured questionnaire. The gap was filled through informal interview with the respondents and observation in the library. Secondary sources of information were gathered through a comprehensive review of the relevant literature available on the internet.

## SIZE AND SAMPLE OF THE POPULATION

100 questionnaires were personally distributed among the randomly selected Postgraduate (PG) students and Research Scholars (RS) of various departments at IIT Delhi. A total of 85 filled in questionnaire were received, out of which, only 80 questionnaires were taken for the study, 5 questionnaires were rejected due to incomplete responses. The overall response rate was 80 per cent.

## ANALYSIS AND INTERPRETATION OF DATA

The data collected through questionnaire, observations and informal interviews was thoroughly organised and tabulated

**Table 1:** Distribution of the Respondents

S. No.	Category of User	Questionnaires	
		Number	Percentage
1.	P.G. Students	54	67.5%
2.	Research Scholars	26	32.5%

using simple statistical methods, tables and percentage. The table and graphs were generated using MS-Excel-2007. The findings of the study are presented below:

### Distribution of the Respondents

Table No.1 shows the distribution of the respondents. In the overall respondents, 54 (67.5%) were PG students and 26 (32.5%) were Research Scholars.

### Awareness about the Library Portal

Table No. 2 depicts the awareness about the library portal. It shows that a high percentage of PG Students, i.e., 94.45% as well as Research Scholars, i.e., 92.30% were aware about IIT Delhi library portal. Only a few percentages of the respondents were not aware about the library portal.

### Use of the Library Portal

Table No. 3 depicts the use of the library portal. It indicated that 88.9% PG Students and 88.46% Research Scholars used library portal to accessing and gathering the information.

### Frequency of use of Library Portal

Respondents were asked to indicate frequency of their use of library portal. The frequency of PG students varied regarding the use of library portal. Table 4 shows that majority of PG Students (44.45%) used the Library Portal two to three times in a week; followed by 22.23% everyday; 14.81% once a week and 11.12% only a few times throughout the year.

As far as Research Scholars are concerned, 38.46% used it every day; followed by 30.76% two to three times in a week; 15.38% once a week and 7.69% Research Scholars used it only a few times throughout the year.

### Mode of Access to Library Portal

Table 5 shows that majority of the PG students i.e. 33.34% followed a link to the library portal from another page on the Web; followed by 25.92% who searched it by type in URL to go directly to the site, and 16.67% searched for it by name through a Web search engine. Only 9.25% bookmarked it on their Web browsers as a favorite site.

The 15.38% Research Scholars on the other hand used their personal home pages links directly to site; followed by the

**Table 2:** Awareness about the Library Portal

S.No.	Awareness about the Library Portal	Responses	
		Yes	No
1.	P.G. Students (n=54)	51(94.45%)	3(5.56%)
2.	Research Scholars (n=26)	24(92.30%)	2(7.69%)

**Table 3:** Use of the Library Portal

S.No.	Use of the Library Portal by the respondents	Responses	
		Yes	No
1.	P.G. Students (n=54)	48(88.9%)	6(11.1%)
2.	Research Scholars (n=26)	23(88.46%)	3(11.53%)

**Table 4:** Frequency of use of Library Portal

S.No.	Frequency	Response	
		P.G. Students (n=54)	Research Scholars (n=26)
1.	Everyday	12(22.23%)	10(38.46%)
2.	Once a week	8(14.81%)	4(15.38%)
3.	2-3 times in a week	24(44.45%)	8(30.76%)
4.	At every 2 to 3 weeks	4(7.40%)	2(7.69%)
5.	Only a few times throughout the year	6(11.12%)	2(7.69%)

11.53% who bookmarked on my Web browser as a favorite site. The same percentage of Research Scholars search for it by type in URL to go directly to the site. A high percentage (30.76%) of Research Scholars indicated that they follow a link to the site from another page on the Web and also search for it by name through a Web search engine.

### Relevancy of the Resources Available on Library Portal

Table 6 shows that 38.89% of PG Students and 46.15% of Research Scholars are strongly agreed with the resources available on the library portal whereas 33.34% PG Students and 30.76% Research Scholars are agreed with the relevancy of resources available. Further, 33.34% PG Students and 30.76% Research Scholars disagreed regarding the relevancy of resources available on the library portal.

### Value of Library Portal

Table 7 depicts the value of library portal. It shows that majority of PG Students (40.74%) and Research Scholars (38.46%) give high value to the library portal. Whereas on the other hand 22.23% PG students and 30.76% Research Scholars gave it a very high and high value. 25.92% PG students and 15.38% Research Scholars gave it an average value. Only 5.56% PG students and 7.69% Research Scholars feel that value of library portal is very low.

### Need for Training and Guidance

The above table describes the need for training and guidance. It is discernible from the Table 8 that majority of PG Students (38.89%) and Research Scholars (38.46%) agreed with the opinion that the training and guidance can

**Table 5: Mode of Access to Library Portal**

S.No.	Opinion	Response	
		P.G. Students (n=54)	Research Scholars (n=26)
1.	My personal home pages links directly to site	8(14.81%)	4(15.38%)
2.	I follow a link to the site from another page on the Web	18(33.34%)	8(30.76%)
3.	It is bookmarked on my Web browser as a favorite site	5(9.25%)	3(11.53%)
4.	I search for it by name through a Web search engine	9(16.67%)	8(30.76%)
5.	I type in URL to go directly to the site	14(25.92%)	3(11.53%)

**Table 6: Relevancy of the Resources Available on Library Portal**

S.No.	Opinion	Response	
		P.G. Students (n=54)	Research Scholars (n=26)
1.	Strongly agree	21(38.89%)	12(46.15%)
2.	Agree	18(33.34%)	8(30.76%)
3.	Neutral	12(22.23%)	4(15.38%)
4.	Disagree	3(5.56%)	2(7.69%)
5.	Strongly disagree	-	-

**Table 7: Value of Library Portal**

S.No.	Opinion	Response	
		P.G. Students (n=54)	Research Scholars (n=26)
1.	Very high	12(22.23%)	8(30.76%)
2.	High	22(40.74%)	10(38.46%)
3.	Average	14(25.92%)	4(15.38%)
4.	Low	3(5.56%)	2(7.69%)
5.	Very low	3(5.56%)	2(7.69%)

improve the efficiency of use of library portal. While 24.07% PG Students and 15.38% Research Scholars strongly agreed with the need of instruction, only a few disagreed with this opinion.

### Use of Information Sources and Services Provided Through Library Portal

Table 9 shows the frequency of use of information sources & services provided through library portal. It was observed that among all the information sources and services majority of PG students (51.85%) very often used Full text E-resources and Browse WebOPAC; followed by the Access to E-Journals Backfiles (50%) and Access to Bibliographical E-resources(44.45%); often Access to E-Books(29.62%); occasionally access to faculty publications(33.34%), Institutional

Repository(40.74) and DELNET database(42.59%). Only few percent of PG Students respond that they never used the sources and services provided through library portal.

On the other hand Research Scholars very often Access to E-Journals Backfiles (46.15%), Access to Full text E-resources (38.46%), Access to Bibliographical E-resources (46.15%) Institutional Repository(38.46%); occasionally Browse WebOPAC (50%), access to E-Books (65.38%) DELNET database(38.46%). Only few percent of Research Scholars expressed that they never used the sources and services provided through IITD library portal.

The investigators felt that the PG students and Research Scholars may not be aware about the different types of resources and services provided on the portal and also the material may not be useful to them or the provision of information is not adequate on library portal. It is also felt by

**Table 8:** Need for Training and Guidance

S.No.	Opinion	Response	
		P.G. Students (n=54)	Research Scholars (n=26)
1.	Strongly agree	13(24.07%)	4(15.38%)
2.	Agree	21(38.89%)	10(38.46%)
3.	Neutral	12(22.23%)	8(30.76%)
4.	Disagree	8(14.81%)	4(15.38%)
5.	Strongly disagree	-	-

**Table 9:** Use of Information Sources and Services Provided Through Library Portal

Questionnaire Item	Very Often		Often		Occasionally		Never	
	PGS*	RS**	PGS	RS	PGS	RS	PGS	RS
Access to E-Books	16 (29.62)	2 (7.69)	18 (33.34)	5 (19.23)	17 (31.48)	17 (65.38)	3 (5.55)	2 (7.69)
Access to E-Journals Backfiles	27 (50.00)	12 (46.15)	17 (31.48)	9 (34.61)	8 (14.81)	4 (15.38)	2 (3.70)	1 (3.84)
Access to Full text E-resources	28 (51.85)	10 (38.46)	18 (33.34)	10 (38.46)	6 (11.12)	5 (19.23)	2 (3.70)	1 (3.84)
Access to Bibliographical E-resources	24 (44.45)	12 (46.15)	12 (22.23)	9 (34.61)	14 (25.92)	3 (11.53)	4 (7.40)	2 (7.69)
Access to Faculty publications	12 (22.23)	13 (50.00)	16 (29.62)	8 (14.81)	18 (33.34)	4 (15.38)	8 (14.81)	1 (3.84)
Browse WebOPAC	28 (51.85)	8 (14.81)	16 (29.62)	13 (50.00)	9 (16.67)	3 (11.53)	1 (1.85)	2 (7.69)
Institutional Repository	6 (11.12)	10 (38.46)	18 (33.34)	8 (14.81)	22 (40.74)	6 (11.1)	8 (14.81)	2 (7.69)
DELNET database	8 (14.81)	6 (11.1)	9 (16.67)	8 (14.81)	23 (42.59)	10 (38.46)	4 (7.40)	2 (7.69)

PGS\* - P.G. Students, RS\*\* - Research Scholars

the investigators that the PG students and Research Scholars need training and assistance to enhance the use of the library portal.

### Overall satisfaction for Library Portal

To know the overall satisfaction regarding the quality, contents and arrangement of links of the Central Library IIT Delhi portal, students were asked the questions like image quality, layout, arrangement of hyperlinks and ease of use, etc. Above table shows that 46.29% PG students are highly satisfied by the Access to E-Journals Backfiles; followed by the Access to Full text E-resources, Access to Bibliographical E-resources, Access to E-Books, Arrangement of Hyperlinks, Image quality and Layout. A high percentage of the PG Students respondents were moderately satisfied with the Arrangement of Hyperlinks, Ease of Use, Access to E-Books and Access to Faculty publications with 51.85 %; followed by the Image quality, Layout of the library portal, Webopac, etc. On the other hand it was found that a very less percentage of respondents were neutral and dissatisfied.

The Table also indicates that only 46.15% Research Scholars were highly satisfied with the Access to E-Journals Backfiles through library portal; followed by the Access to Full text E-resources, Access to Bibliographical E-resources, Ease

of Use, Image quality, Arrangement of Hyperlinks Access to Faculty publications, Image quality, Arrangement of Hyperlinks etc.

Where as a high percentage (50%) of Research Scholars were satisfied with the Web-OPAC, Arrangement of Hyperlinks; followed by the Ease of Use with 46.15% and 38.46 % are satisfied with Image quality and Access to Full text E-resources, etc. Majority of Research Scholars were neutral the questions regarding the access to E-Books; followed by the Layout of the library portal and Access to Faculty publications with 38.46%. A few of respondents were dissatisfied with Access to E-Journals Backfiles, the Access to Full text E-resources, Web-OPAC, etc.

### FINDINGS AND OBSERVATIONS OF THE STUDY

Following are the findings and some of the observations of the study:

- i. As regards the use of the library portal. It indicated that approximately 88 % PG Students and Research Scholars used library portal.
- ii. The data were analyzed to know the frequency of their use of library portal. The frequency of PG students varied regarding the use of library portal. It was ob-

**Table 10:** Overall Satisfaction for Library Portal

Questionnaire Item	Highly satisfied		Satisfied		Neutral		Dissatisfied	
	PGS*	RS**	PGS	RS	PGS	RS	PGS	RS
Layout	8 (14.81)	6 (11.1)	22 (40.74)	8 (30.76)	18 (33.34)	10 (38.46)	6 (11.12)	2 (7.69)
Image quality	9 (16.67)	8 (30.76)	23 (42.59)	10 (38.46)	14 (25.92)	6 (11.1)	8 (14.81)	2 (7.69)
Arrangement of Hyperlinks	12 (22.23)	8 (30.76)	28 (51.85)	13 (50.00)	9 (16.67)	3 (11.53)	5 (9.25)	2 (7.69)
Web-OPAC	6 (11.12)	8 (30.76)	18 (33.34)	13 (50.00)	22 (40.74)	4 (15.38)	8 (14.81)	1 (3.84)
Ease of Use	6 (11.12)	9 (34.61)	28 (51.85)	12 (46.15)	18 (33.34)	3 (11.53)	2 (3.70)	2 (7.69)
Access to E-Books	16 (29.62)	2 (7.69)	28 (51.85)	5 (19.23)	9 (16.67)	17 (65.38)	1 (1.85)	2 (7.69)
Access to E-Journals Backfiles	25 (46.29)	12 (46.15)	14 (25.92)	9 (34.61)	14 (25.92)	4 (15.38)	1 (1.85)	1 (3.84)
Access to Full text E-resources	24 (44.45)	10 (38.46)	12 (22.23)	10 (38.46)	14 (25.92)	5 (19.23)	4 (7.40)	1 (3.84)
Access to Bibliographical E-resources	22 (40.74)	10 (38.46)	11 (20.37)	8 (30.76)	18 (33.34)	6 (11.1)	3 (5.55)	2 (7.69)
Access to Faculty publications	12 (22.23)	8 (30.76)	28 (51.85)	6 (11.1)	9 (16.67)	10 (38.46)	5 (9.25)	2 (7.69)

PGS\* - P.G. Students, RS\*\* - Research Scholars

- served that majority of PG Students (44.45%) used the Library Portal two to three times in a week; followed by 22.23% everyday; 14.81% once a week and 11.12% only a few times throughout the year. Whereas Research Scholars are concerned, 38.46% used it everyday; followed by 30.76% two to three times in a week; 15.38% once a week and 7.69% Research Scholars used it only a few times throughout the year.
- iii. To know the Mode of Access to Library Portal it has been observed that majority of the PG students followed a link to the library portal from another page on the Web; followed by 25.92% who searched it by type in URL to go directly to the site, and 16.67% searched for it by name through a Web search engine. Only 9.25% bookmarked it on their Web browsers as a favorite site.
  - iv. It was also found that Research Scholars on the other hand used their personal home pages links directly to site, followed by the 11.53% who bookmarked on my Web browser as a favorite site. The same percentage of Research Scholars search for it by type in URL to go directly to the site. A high percentage of Research Scholars indicated that they follow a link to the site from another page on the Web and also search for it by name through a Web search engine.
  - v. The survey depicts that 30-40% of PG Students and Research Scholars are strongly agreed with the resources available on the library portal whereas 30-35% PG Students and Research Scholars are agreed with the relevancy of resources available. Further, 33.34% PG Students and same percentage of Research Scholars disagreed regarding the relevancy of resources available on the library portal.
  - vi. It has also been observed that majority of PG Students and Research Scholars agreed with the opinion that the training and guidance can improve the efficiency of use of library portal. While 24.07% PG Students and 15.38% Research Scholars strongly agreed with the need of instructions. Only a few disagreed with this opinion.
  - vii. The data were analyzed to know the frequency of use of information sources and services provided through library portal by the students. It was observed that among all the information sources and services majority of PG students very often used Full text E-resources and Browse WebOPAC with 51.85%; followed by the Access to E-Journals Backfiles (50%) and Access to Bibliographical E-resources(44.45%); often Access to E-Books(29.62%); occasionally access to faculty publications(33.34%), Institutional Repository(40.74) and DELNET database(42.59%). only few percent of PG Students respond that they never used the sources and services provided through IITD library portal. On the other hand Research Scholars very often Access to E-Journals Backfiles(46.15%), Access to Full text E-resources (38.46%), Access to Bibliographical E-resources (46.15%) Institutional Repository (38.46%); occasionally Browse WebOPAC (50%), access to E-Books (65.38%) DELNET database (38.46%). only few percent of Research Scholars expressed that they never used the sources and services provided through IITD library portal.
  - viii. The investigators felt that the PG students and Research Scholars may not be aware about the different types of resources and services provided on the portal and also the material may not be useful to them or the provision of information is not adequate on library portal. It is also felt by the investigators that the PG students and Research Scholars need training and assistance to enhance the use of the library portal.
  - ix. To know the overall satisfaction regarding the quality, contents and arrangement of links of the library portal, students were asked the questions like image quality, layout, arrangement of hyperlinks and ease of use, etc. It was observed that 46.29% PG students are highly satisfied by the Access to E-Journals Backfiles; followed by the Access to Full text E-resources, Access to Bibliographical E-resources, Access to E-Books, Arrangement of Hyperlinks, Image quality and Layout.
  - x. More than 50% PG Student were moderately satisfied with the Arrangement of Hyperlinks, Ease of Use, Access to E-Books and Access to Faculty publications; followed by the Image quality, Layout of the library portal, Webopac, etc. On the other hand it was found that a very less percentage of respondents were neutral and dissatisfied.
  - xi. Over 45% Research Scholars were highly satisfied with the Access to E-Journals Backfiles through library portal; followed by the Access to Full text E-resources, Access to Bibliographical E-resources, Ease of Use, Image quality, Arrangement of Hyperlinks Access to Faculty publications, Image quality, Arrangement of Hyperlinks etc.
  - xii. It has also been observed that 50% Research Scholars were satisfied with the Web-OPAC, Arrangement of Hyperlinks; followed by the Ease of Use with 46.15% and 38.46 % are satisfied with Image quality and Access to Full text E-resources, etc. Majority of Research Scholars were neutral the questions regarding the access to E-Books; followed by the Layout of the library portal and Access to Faculty publications with 38.46%. Less number of respondents were dissatisfied with Access to E-Journals Backfiles, the Access to Full text E-resources, Web-OPAC, etc.

## CONCLUSION

The websites have become an indispensable tool of educational institutions which add stature to their visible faces. It is a marketing tool designed to promote academic activities and services through the Internet. They are now an important learning device for the entire campus community and primary communication tool for present day students, research scholars, faculty, alumni and the society in general.

Library portal has become one of the most commonly used media for effective and efficient delivery of information as it not only offers information about policies, staff, opening hours, library members and services available in the library, but also conveniently deliver electronic resources such as electronic books, electronic journals, online databases, online dictionary, encyclopedia, bibliography, electronic directory, biography directly to the users on their computer screens. The study found that majority of the students use library portals but not on a regular basis. The investigators found that the reason for not using the library portal was lack of awareness and lack of training and guidance. Therefore, it is the need of hour that more and more information literacy programmes should be conducted by the libraries to enable the effective use of library portal.

By evaluating the usability aspects of the library portal we can improve the usability of the website. Webmaster should pay more attention to the Library web design and content to make them more attractive to the user community. This study has been exploratory and there is a scope for future usability research in this area. This study mainly focuses on the PG Students and Research Scholars at various department of IIT Delhi the similar studies on faculty members at various department of IIT Delhi, and a comparative study may also be conducted between other IIT System.

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