

# EVALUATION OF INDIAN INSTITUTE OF MANAGEMENT BANGALORE LIBRARY WEB OPAC: A CASE STUDY

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**Abstract Purpose:** This study aims to evaluate the various features and functionality of web-based Online Public Access Catalogue (OPAC) of IIMB-Library in context of competency present generation library catalogues of Library and Information Science Field.

**Design/Methodology/Approach:** Planned to undertake the case study of examining IIMB-Library's web based OPAC with the help of appraisal checklist and the users' acutities. The checklist of B Ramesh Babu and Ann O'Briens is the base for this evaluation. And around 100 questionnaires were distributed to lure the users' opinions at other side.

**Findings:** The papers revealed that users satisfaction level is 'Good' rather 'Excellent' and highlights many problems such as; lacking of searching knowledge, limited search features, lack of training, poor database index, and non-accessibility of other IIMs OPACs. The users expressed that there is no provision for cancel book reservation from OPAC. Same ways there are upgradable suggestions to improvise.

**Originality/Value:** The paper would be the primary source to emerging library professionals to embark present ICT based catalogue service and also software vendors who wish to improve, design the functionality, inner working layouts their products.

**Keywords:** Online Catalogue, OPAC, Web-OPAC, IIMB-Library, Evaluation

## INTRODUCTION

Simply it is stated, a Web OPAC is a library catalog on the Web or Internet. Users can search the required information by connecting to Uniform Resource Locator (URL) of Web OPAC anytime during the day and from anywhere in the world. The various definitions can be seen on the Internet according to which a 'WEB OPAC is an independent program intended discretely from the Library Program. It is automated to facilitate the library's members to access the OPAC, through their own search, for the comfort of borrowing, instead of searching through the card catalog. In addition, members would also be able to appeal for the information about borrowing, reservation, etc., related to their library automation facilities. The concept of Web OPAC is very well established and practiced successfully in developed countries especially in USA and UK. Majority of their libraries are well equipped with it and offer consistent service to their library members. The development of Web OPAC deeds can be seen as evolution of OPAC activities into Web OPAC. Further its philosophy, desire to overcome hitches arising out from information explosion, availability of state of the art technology and proficient attitude towards

work, which converts their dreams into reality. Web OPAC is technology intensive, involving high-speed networks like LAN, WAN, Internet, and Intranet with broad bandwidth, extensively web server-based application. According to Dempsey without building richly inter-connected services, based on emerging content infrastructure, libraries will not provide effective services within that space and they will betray their longstanding legacy. Technology alone cannot help to bring the required changes; attitudes, practices and policies need to be changed, if the librarians in India are to benefit themselves and their community of users by the application of new technologies. Finally to fully utilize the potential of web technologies, we must keep discovering new areas for improving library services, More often than not, ideas are to be implemented in stages, depending on the needs of the user community.<sup>36</sup>

## REVIEW OF LITERATURE

There have been many studies conducted in the field of Library web OPAC since from the 1980's and some of them are listed below into two categories;

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## Checklist Based Evaluation Studies

Ramesh and O'Brien (2000) have examined six popular web OPAC's interfaces, search capabilities of UK academic libraries (Talis, Innopac, Webcat, Voyager, Geoweb and ALEPH) in detail. Ibrahim, A E (2005) evaluated the compliance of bilingual Arabic scripts in web OPACs in the Gulf Co-operative Council, highlighted the challenges facing in exchange of bibliographical records, resources in Arabic script Web OPAC's. Kantha Kapoor and O P Goyal (2007) have done comparative analysis on functionalities of the Five web based OPACs available in Indian Academic Libraries, found that users are unable to customize the display format, searches are usually not ranked and lack of federated search option. Khalid Mahmood (2008) studied the features, functions of indigenous web OPACs of Academic, Special and National libraries of Pakistan, The paper finds out indigenous Web OPAC are at initial stage of development and only offer basic facilities, they don't offer MARC formats and Z39.50 protocol and only few OPACs can accommodate non-Roman scripts like, Urdu etc. Luong and Liew (2009) have also investigated usability features of 13 academic libraries Web OPACs in New Zealand, All the features have been discussed in scores. Madhusudhan and Shalini (2011) have tested various features and components of Web OPACs of IIT Libraries in India. The evaluation approach taken was similar that of Luong and Liew's study.

## Survey (Questionnaire) Based Evaluation Studies

Hoesop Kim and Others (1999) studied the correlation between user characteristics (age, gender, qualification, computer skills and OPAC usage experience) and their preferred features (Interaction style, browsing & navigation styles, etc.) on selected 264 University libraries Web OPACs in UK. M S Sridhar (2004) drawn a comparative study on subject searching in OPACs and Card Catalogues in the ISRO Satellite Center (ISAC) library, Bangalore-India, Discussed that steady decline in the use of subject searching by users at both the services. M S Sridhar (2004) in another study reported the user behavior on use of OPACs and compared the results with the findings of the study (on use of card catalogues) conducted in 1985. Virginia Ortiz- Repiso and Others (2006) evaluated the use made by researchers of the OPACs of the library network of the Spanish Council for Scientific Research, The largest research institution in Spain. Elahe Kanizabihi and Gheorghita Ghinea (2007) conducted the study to determine the users' suggestions for three UK Universities OPACs. An experiment (four tasks and six steps) was undertaken to find out the features

that users prefer to have in OPACs. Navazat Ozel and Tolga Cakmak (2010) conducted Web based survey of 179 OPAC's users (Students & Faculties) at Ankara University and Hacettepe University libraries of Turkey to reveal their expectations about the idea of reconstructing OPACs by social network applications. Shiv Kumar and Ranjana Vohra (2011) conducted a questionnaire based survey on use of OPAC at A C Joshi library on use, purpose, ease of use, satisfaction level etc., Among faculty members, Research Scholars, PG Students; Lack of basic skills among users was found to be the major reason for not utilizing full features of OPAC. Maidul Islam and Zabed Ahmed (2011) assessed Dhaka University Students perceptions of ease of use and their satisfaction with University libraries OPACs. Mann-Whitney and Kruskal-Wallis tests are used for the results. Shiv Kumar (2011) consulted a survey on users search behavior in OPACs of three selected Universities of the Panjab region and also discussed how the web searching effects on the OPAC search. Devendra and Khaiser Nikam (2012) studied the 256 users (Law students & Staffs) perceptions towards the use of OPAC in Law University libraries in Karnataka State-India. Survey shows that not all the users are fully satisfied with the existed OPACs. Hilal Ahmed and Others (2012) studied the usage of search strategies in OPACs of IIT-Delhi, IIT-Kanpur, and Kashmir University. Shiv Kumar (2012) investigated the influence of user's demographic characteristics on the impact of usage of search engines and OPACs of three major Universities (Panjab University, Panjabi University, and Guru Nanak Dev University) of Northern India; further Shiv Kumar and Ranjan Vohra (2013) done the comparative study same universities. Hemlatha Vasudevan and Muhommod Ibrahim (2013) focused on providing OPAC service to University (Asia Pacific University Technology Park, Malaysia) students via mobile phone and further they discussed about students opinion, mobile content design guidelines for developing MOS, Prototype application for non-smart phone users.

## Indian Institute of Management Bangalore Library - An overview

IIMB Library is housed in an independent building of 55,000 square feet spread across four levels abutting the amphitheater. Its collection comprises predominantly literature on Business, Management, and the allied areas. Resource development policies and services are mandated by Institute's teaching; research and learning objectives. All house-keeping operations are automated using State - of - the - art library management system i.e. VTLS- Virtua. It has electronic collection about 79 resources accessible 24 x 7 on and off campus to its faculty, research scholars and students.

It also receives about 17 online resources as a beneficiary of e-Shodh Sindhu Consortium under MHRD, Government of India. Computing facilities, access to resources in the Data center and electronic content is for IIMB community only. It provides Remote accessibility and Online Public Access catalogue services for the registered member community.

## EVALUATION OF LIBRARY WEB-OPAC

Author used the two fold evaluation methods; the checklist (of B Ramesh Babu and Ann O'Briens) is observed by the scholar during Jan 2016 to Jun 2016, and structured print questionnaires were distributed personally among the PGP students at IIMB campus during July 2016 to Dec 2016.

**Table 1: Checklist Evaluation**

General		Provides name authority control	√
Requires log on/user ID/password if desired	√	Provides subject authority control	√
Customization of the features as per the library requirements	√	Supports cross-references	√
Has time out feature, if desired	√	Provision for copy location	√
Facility for updating or adopting later versions	√	Provides name authority control	√
Explains the contents and coverage in the OPAC	√	Search strategy	
Provides log off instruction, if desired	√	Displays search strategy	√
Type of Searches		Provides examples under each type of search	√
Offers several types of searches such as Simple, complex or advanced	√	Option for search history	√
Has full search facility on predictable access points such as keyword/author/ subject heading/class number/ ISBN/ ISSN, etc.	√	Search limits/search refinement features	
Provision of browsing capabilities	√	Provision for comprehensive search limits i.e year, language, type of publication, location, publication status, etc.	√
Provision for Boolean search	√	Facility for sorting records.	√
Provision for truncation	√	Ranks output by relevance	√
Provision for word adjacency and/or word proximity operators	√	Provision for comprehensive search limits such as year, language, type of publication, location, publication status, etc.	√
Hypertext links in full bibliographic record display	√	Display	
Access Points		Provision for brief/long bibliographic displays or both.	√
The interface provide access through the following author (personal name/corporate name)	√	Display levels (customizable display screens).	√
Title	√	Limiting the number for the display of records (output control)	√
Key word	√	Entry structure	
Subject heading	√	Support for MARC formats	√
Keyword in Title	√	Provision for library-structured entry format	X
Keyword in Subject	√	Both MARC formats and library structured format	√
combined search such as author /title; author/keyword	√	Output	
Class Number	√	Provision for exporting/downloading of retrieved records	√
ISBN	√	Provision for the transmission of retrieved records through e-mail.	√
ISSN	√	Provision for storing retrieved records	√
Series	√	External links	
Barcode Number	√	Links to electronic sources	X
Services/facilities		Access to Z39.50	√
Interface with the circulation system	√	Links to external sources	X
Provision for options such as ILL, renewal, reservations, etc.	√	Layout	
	√	Simple layout	√

General		Provides name authority control	√
Provision of online mailboxes for user comments or suggestions	√	Instructions on the screen are simple, clear and inviting	√
Linguistic capabilities		Use of less technical jargon and codes	√
Facility to accommodate multilingual libraries, if desired	√	Physical features	√
Provision to accommodate non-Roman scripts, if desired	√	Frames version	√
User assistance	√	Non-frames version	√
Provision of contextual help messages	√	Both frames and non-frames versions	√
Provision for procedural learning/training	√	High graphic version	√
Requires little intervention by the staff	√	Low graphic version	√
Others		Both high and low graphic versions	√
Provision for drop-down menus or pull-down menus	√		
Provision for shadow catalogue, if desired	√		

IIMB library Web-OPAC satisfies all the major criteria's of the checklist except links to electronic/external resources which are made it available at library portal not at Web-OPAC features.

### Evaluation of Users Opinion on IIMB Library Web OPAC

The part 'A' of the questionnaire covers Demographic Information i.e. Name, Age, Gender, Status, course/department, and OPAC usage experience. Name and Age fields are not taken into discussion.

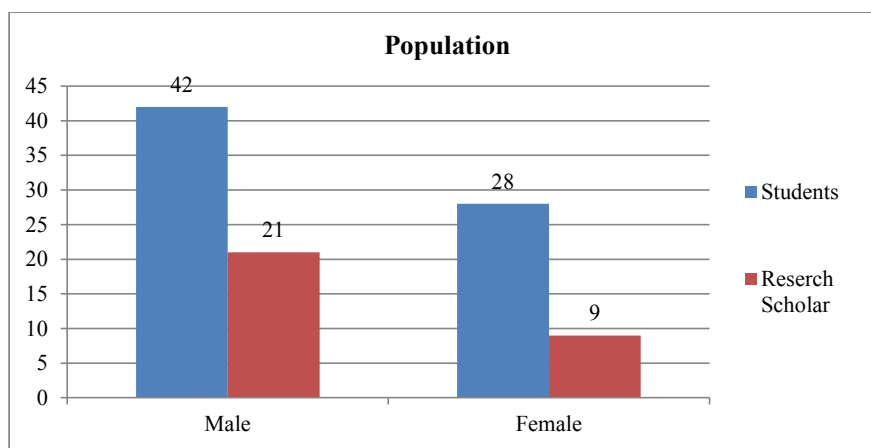


Fig. 1: Population for the Survey

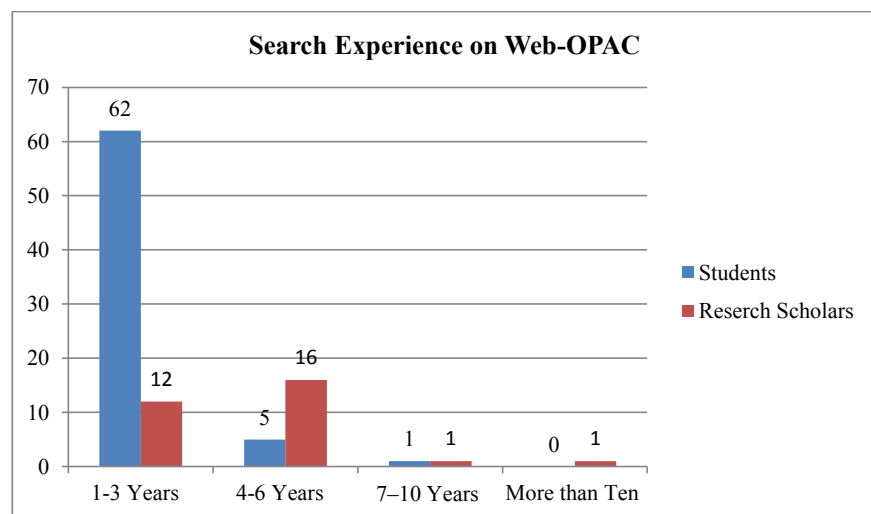
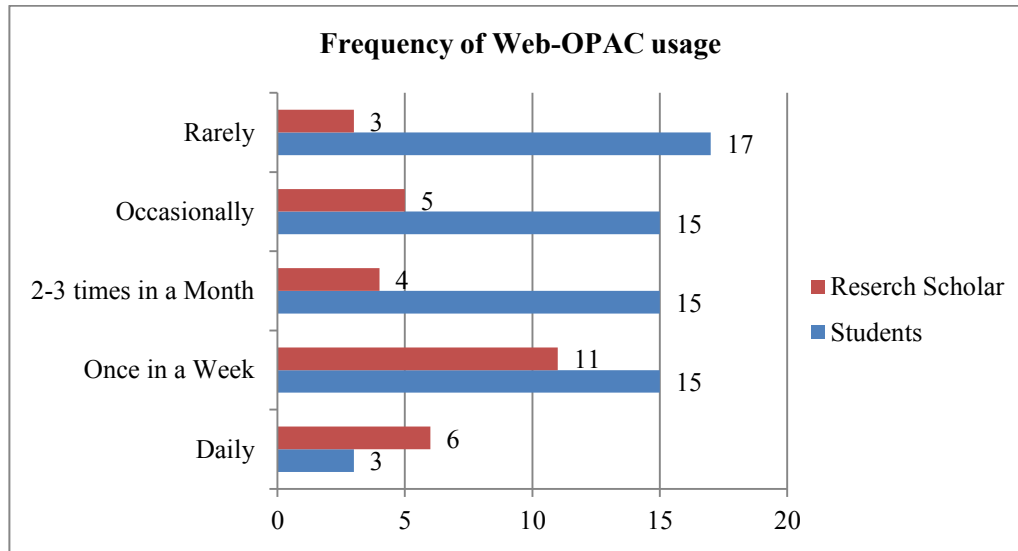


Fig. 2: OPAC Usage Experience

The survey was targeted to 100 users of IIMB and taken the feedback from seventy students of the Post Graduate Program in Management and thirty research scholars of various disciplines. 88.5% of students are having 1-3 years of

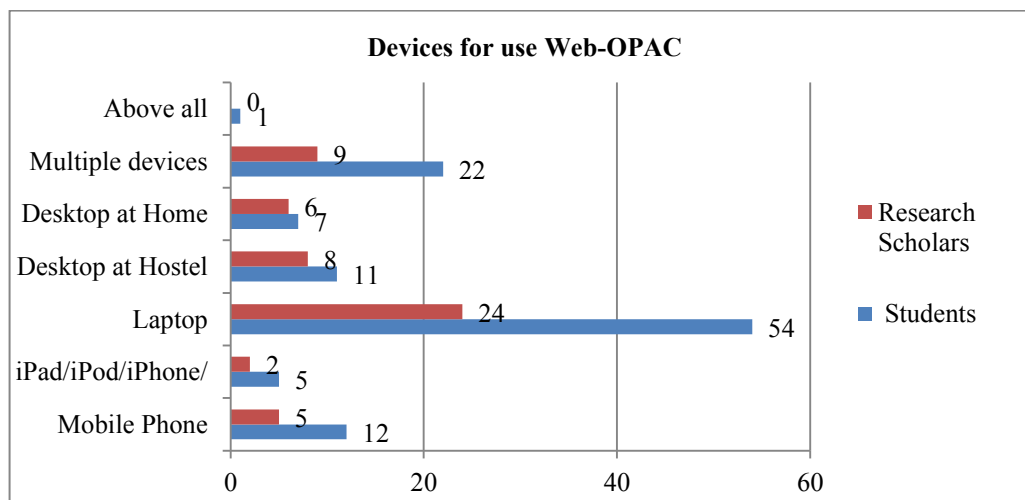
experience on Web-OPAC. And 53.3% of Research Scholars are having the 4-6 years of experience which is indicated from Fig. 1 and 2.



**Fig. 3: How Frequently Do You Use the Library Web-OPAC**

Fig. 3 depicts the views of the users who responded to the question related to their frequency of use of IIMB library Web-OPAC. It is apparent that 23.2% Students uses rarely,

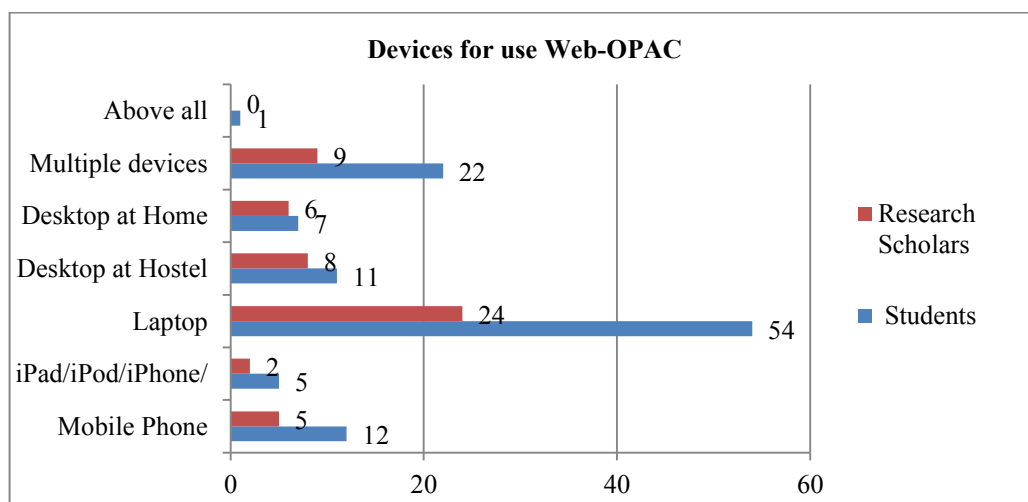
21.4% occasionally, 2-3 times in a Month, Once in a Week respectively. And 25.6% of Research Scholars uses One in a Week.



**Fig. 4: How Do You Use the Library Web-OPAC**

Fig. 4 shows the channels from where students and research scholars access the Web-OPAC. 77.1% of students and 80% of research scholars access from their Laptop. 17.1% of students use their Mobile Phones. 10% of the students

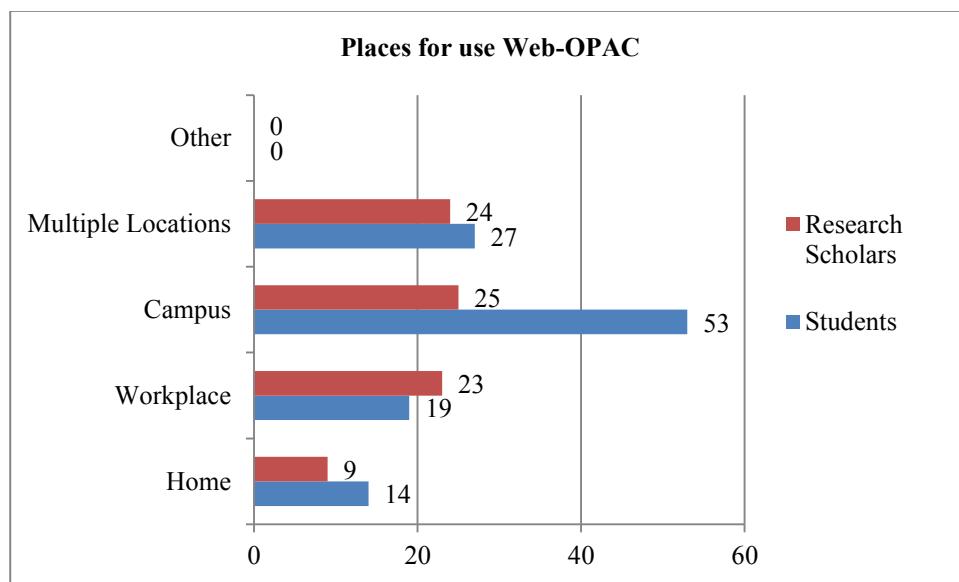
and 09% of the research scholars use their Desktop at Home. 31.4% students and 30% of research scholars use the multiple devices mentioned above.



**Fig. 4: From Where Do You Search Library Web-OPAC**

75.7% of students and 83.3% of research scholars access the Web-OPAC at IIMB Campus itself. 27% of students access from their departments (workplace) 76.6% of research

scholars' access from their workplace. And further 38.5% of students, 80% of Research Scholars access from multiple locations like Campus, Workplace, and Home.



**Fig. 5: How Did You Start to Use Library Web-OPAC initially**

Respondents were asked that which method they used for access Web-OPAC initially is presented in Fig. 5. 31.4% students expressed that they took Guidance from their friends, 66.6% of research scholars used the Instruction on

the Screen. 25.7% of students said they learnt from Library Orientation and 56.6% of research scholars used Trail & Error Method. 44.2% of students, 76.6% of research scholars used multiple options mentioned above.

**Table 1: What are the Major Purposes to Use Library Web-OPAC**

Purposes	Strongly Disagree		Disagree		Neutral		agree		Strongly Agree	
	Students	Research Scholar	Students	Research Scholar	Students	Research Scholar	Students	Research Scholar	Students	Research Scholars
To check availability of source	3 (4.29)	0	7 (10)	0	3 (4.29)	1 (3.33)	19 (27.14)	5 (16.67)	27 (38.57)	22 (73.33)
For comprehensive list on topic	1 (1.43)	0	7 (10)	4 (13.33)	14 (20)	5 (16.67)	23 (32.86)	14 (20)	9 (12.86)	6 (20)
To know my transaction status	13 (18.57)	2 (6.67)	13 (18.57)	5 (16.67)	8 (11.43)	3 (10)	12 (17.14)	11 (15.71)	8 (11.43)	6 (20)
For project/dissertation work	3 (4.29)	1 (3.33)	7 (10)	1 (3.33)	8 (11.43)	3 (10)	14 (20)	3 (4.29)	21 (30)	20 (66.67)
For preparation to the classes	2 (2.86)	3 (10)	9 (12.86)	1 (3.33)	17 (24.29)	1 (3.33)	19 (27.14)	7 (10)	9 (12.86)	16 (53.33)
For primary search before Google	4 (5.71)	2 (6.67)	18 (25.71)	3 (10)	12 (17.14)	14 (46.67)	13 (18.57)	3 (4.29)	6 (8.57)	4 (13.33)
To search Model question papers	11 (15.71)	16 (53.33)	17 (24.29)	2 (6.67)	6 (8.57)	3 (10)	15 (21.43)	2 (2.86)	4 (5.71)	2 (6.67)
For keeping up to date on a topic	17 (24.29)	11 (36.67)	17 (24.29)	7 (23.33)	5 (7.14)	1 (3.33)	8 (11.43)	4 (5.71)	4 (5.71)	3 (10)
For my research work	10 (14.29)	1 (3.33)	16 (22.86)	2 (6.67)	10 (14.29)	3 (10)	10 (14.29)	12 (17.14)	7 (10)	6 (20)
For Online Books, Journals	5 (7.14)	0	10 (14.29)	4 (13.33)	10 (14.29)	4 (13.33)	17 (24.29)	4 (5.71)	19 (27.14)	19 (63.33)
For Rare Notes, Diagrams, Graphs	5 (7.14)	3 (10)	2 (2.86)	1 (3.33)	11 (15.71)	3 (10)	16 (22.86)	13 (18.57)	21 (30)	8 (26.67)

The Data in Parentheses Represents Percentage.

It is observed from Table 1, the students and Research scholars are asked to what are their major purposes to use the Web-OPAC; 73.33% of Research Scholars and 38.57% of students strongly agreed that they use to check availability of source in the library. Since there is no model question papers on the web-OPAC that's the reason 53.33% Research scholars and 15.71% of students strongly disagree the

purpose "To search the Model Question Papers", Finally 63.33% scholars and 27.14% students' use for searching the "Online Books and Journals" (e-resources).

Part 'C' covers search features and users attitudes toward their library web-OPAC. Five questions have been asked in the questionnaire to articulate the users' awareness and their attitudes.

**Table 3: Understanding of Available Web-OPAC Features**

Web-OPAC Features	Average of Students	Average of Research Scholars
AACR2 Display format	07	04
Author	58	26
Auto keyword generation	08	04
Automatic Indexing facility	03	02
Basic Search	54	22
Book Renewal option	24	11
Boolean Search	10	08
Call Number	13	12
CCC Display Format	03	01
CCF Display Format	01	00

Web-OPAC Features	Average of Students	Average of Research Scholars
Content Search	10	08
Current availability status	24	11
Customized Search	11	11
Dublin Core Display Format	01	01
E-Mail option	16	09
Federated/Power Search	04	03
Hyperlinks facility to the E-resources	10	06
ISBN,ISSN, DOI	20	12
Key word search	54	25
Link to Bibliographical Databases	09	04
Links to catalogued items	06	04
Links to Digital Library	09	06
Links to other OPAC's (other IIMs)	11	06
Links to Search Engines	05	05
MARC21 Display Format	11	06
Multi-lingual Catalogues	03	02
Proximity Search	05	04
Relevancy ranking of search results	10	07
Reservation	23	10
RSS Feeds	05	02
Search Save option	12	09
Show Similar/related resources	09	04
Stemming of words	01	03
Stop word removal	02	02
Subject Headings	16	11
Subject wise Tree Structure	02	03
Subject/Department	44	22
Title	55	26
To modify search	20	07
Grand Total	14.725	7.975

From Table 3 it is observed that the understanding level of students and research scholars on their library existed Web-OPAC features. They only aware of Title, Author, subject, Basic search and keyword search facility, Current

availability status, Book renewal option, remaining features are not using by them while searching the Web-OPAC. Overall 14.72% of students and 7.97% of research scholars are known by all the above listed search features.

**Table 2: Under Which Entry Do You Search Most in Library Web-OPAC**

Search Entries	Strongly Disagree		Disagree		Neutral		agree		Strongly Agree	
	Students	Research Scholar	Students	Research Scholar	Students	Research Scholar	Students	Research Scholar	Students	Research Scholars
Topical key words	6 (8.57)	0	4 (5.71)	0	1 (1.42)	1 (3.33)	12 (17.14)	4 (13.33)	25 (35.71)	22 (73.33)
By Title	4 (5.71)	0	4 (5.71)	1 (3.33)	3 (4.28)	1 (3.33)	18 (25.71)	14 (46.67)	26 (37.14)	13 (43.33)
By Author name	39 (4.29)	0	3 (4.28)	6 (20)	11 (15.71)	6 (20)	14 (20)	6 (20)	21 (30)	9 (30)

Search Entries	Strongly Disagree		Disagree		Neutral		agree		Strongly Agree	
	Students	Research Scholar	Students	Research Scholar	Students	Research Scholar	Students	Research Scholar	Students	Research Scholars
By Subject wise	5 (7.14)	0	7 (10)	4 (13.33)	10 (14.28)	2 (6.67)	17 (24.28)	16 (53.33)	7 (10)	5 (16.67)
By Call numbers	129 (17.14)	12 (40)	17 (24.28)	7 (23.33)	8 (11.42)	2 (6.67)	3 (4.28)	3 (10)	4 (5.71)	2 (6.67)
By ISBN/ISSN, Accession No's	159 (21.43)	8 (26.67)	12 (17.14)	10 (33.33)	8 (11.42)	5 (16.67)	7 (10)	1 (3.33)	2 (2.85)	1 (3.33)
By Publisher name	12 (17.14)	7 (23.33)	11 (15.71)	1 (3.33)	11 (15.71)	12 (40)	9 (12.85)	1 (3.33)	2 (2.85)	2 (6.67)
By Editor	11 (15.71)	15 (50)	8 (11.42)	3 (10)	11 (15.71)	2 (6.67)	9 (12.85)	1 (3.33)	6 (8.57)	3 (10)
By Year wise	7 (10)	7 (23.33)	18 (25.71)	6 (20)	7 (10)	2 (6.67)	10 (14.28)	8 (26.67)	4 (5.71)	2 (6.67)
By Record/Control numbers	12 (17.140)	8 (26.67)	11 (15.71)	6 (20)	12 (17.14)	4 (13.33)	6 (8.57)	3 (10)	2 (2.85)	2 (6.67)

The data in parentheses represents percentage

Table 2 shows that 73.33% of research scholars and 35.71% of students strongly agreed that they search “Topical key words” And 43.33% of research scholars, 37.14% of students search by “Title”. Majority of students and research scholars disagree and strongly disagree for ‘Search by Call numbers, ISBN/ISSN, Publisher name, and editor name. It is

observed that user community is not aware of these entries also help them in tracing the sources form the Web-OPAC. Sometimes library science nomenclatures also may go from users understanding. Further it is found that 40% of research scholars and 15.17% of students are neutral in case of searching by ‘Publisher Name’ entry. It is also caused by the lack of awareness among target group on publisher’s name.

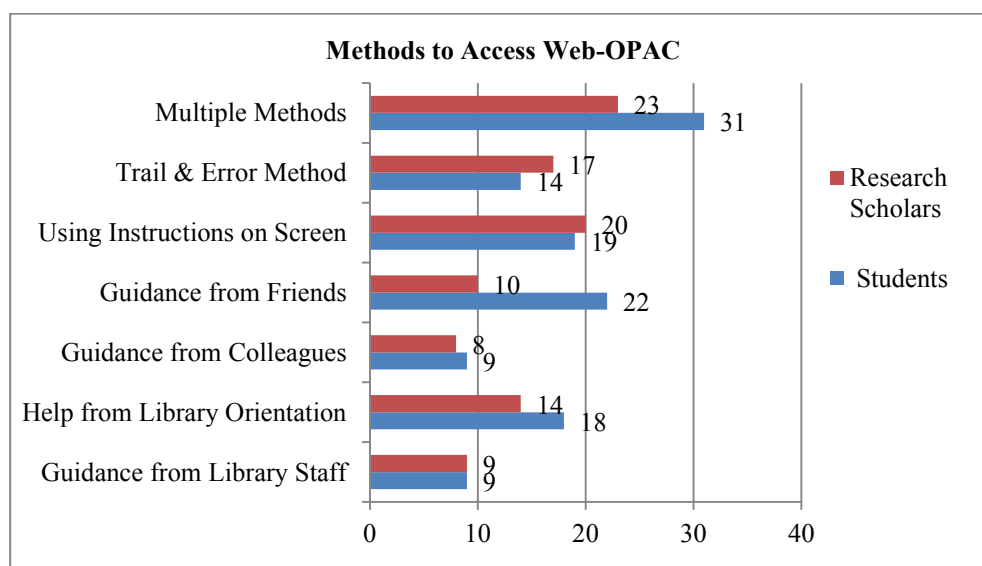


Fig. 6: Degree of Satisfaction with Existed Web-OPAC

Figure 6 reveals the users satisfactory level on Web-OPAC, 35.71% of students and 17.14% of research scholars expressed ‘Good’ and 20% of students and 23.33% research scholars says ‘An average’.

11.42% of students, 23.33% research scholars opined that Web-OPAC is ‘Poor’. Only few people have stated it is ‘Unsatisfactory and Excellent’.

**Table 3: Ratings of Statements on Web-OPAC**

Statements	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars
It is Easy and Fun to use	01 (1.43)	0	10 (14.29)	01 (3.33)	16 (22.85)	08 (26.67)	20 (28.57)	08 (26.67)	08 (11.43)	12 (40)
Helps in finding documents faster	03 (4.29)	0	07 (10)	01 (3.33)	07 (10)	03 (10)	28 (40)	18 (60)	12 (17.14)	07 (23.33)
It displays more items than expected	03 (4.29)	03 (10)	08 (11.43)	06 (20)	15 (21.42)	06 (20)	19 (27.14)	08 (26.67)	09 (12.85)	05 (16.67)
I'm comfortable with search features	0	02 (6.67)	09 (12.85)	02 (6.67)	16 (22.85)	10 (33.33)	20 (28.57)	11 (36.67)	11 (15.71)	04 (13.33)
All features are clear and understandable	01 (1.43)	0	10 (14.29)	04 (13.33)	11 (15.71)	04 (13.33)	22 (31.42)	16 (53.33)	09 (12.85)	04 (13.33)
Result display format is comfortable	02 (2.86)	0	11 (15.71)	06 (20)	07 (10)	06 (20)	20 (28.57)	09 (30)	13 (18.57)	07 (23.33)
It displays irrelevant results sometimes	02 (2.86)	01 (3.33)	12 (17.14)	04 (13.33)	19 (27.14)	03 (10)	14 (20)	16 (53.33)	09 (12.85)	04 (13.33)
I can create my personal profile	01 (1.43)	02 (6.67)	12 (17.14)	07 (23.33)	28 (40)	0	08 (11.43)	18 (60)	03 (4.29)	02 (6.67)
I can check my transaction status	0	10 (33.33)	06 (8.57)	02 (6.67)	20 (28.57)	01 (3.33)	17 (24.28)	10 (33.33)	08 (11.43)	04 (13.33)
It displays circulars are helpful	04 (5.71)	03 (10)	09 (12.85)	12 (40)	26 (37.14)	03 (10)	09 (12.85)	10 (33.33)	02 (2.86)	0
The RSS Feeds on OPAC are helpful	04 (5.71)	03 (10)	09 (12.85)	05 (16.67)	28 (40)	12 (40)	10 (14.29)	07 (23.33)	01 (1.43)	0
The "HELP" link is really helpful	04 (5.71)	06 (20)	13 (18.57)	09 (30)	24 (34.28)	08 (26.67)	08 (11.43)	05 (16.67)	01 (1.43)	0
It's very difficult to use	14 (20)	06 (20)	20 (28.57)	09 (30)	15 (21.42)	09 (30)	02 (2.86)	03 (10)	03 (4.29)	0
It's very confusing to use	14 (20)	04 (13.33)	18 (25.71)	12 (40)	15 (21.42)	05 (16.67)	06 (8.57)	06 (20)	03 (4.29)	01 (3.33)
It has limited features	12 (17.14)	02 (6.67)	15 (21.42)	05 (16.67)	16 (22.85)	07 (23.33)	07 (10)	09 (30)	06 (8.57)	06 (20)
It should have more flexible interfaces	06 (8.57)	0	11 (15.71)	04 (13.33)	17 (24.28)	05 (16.67)	13 (18.57)	15 (50)	05 (7.14)	03 (10)
ISBN,ISSN, Call no are not useful	06 (8.57)	01 (3.33)	09 (12.85)	04 (13.33)	18 (25.71)	05 (16.67)	09 (12.85)	06 (20)	07 (10)	12 (17.14)
Provision for feedback is required	01 (1.43)	0	08 (11.43)	03 (10)	22 (31.42)	07 (23.33)	10 (14.29)	09 (30)	08 (11.43)	06 (20)

The data in parentheses represents percentage

Table 3 reports that 60% of research scholars and 40% of students agree with the statement 'it helps in finding documents faster' further 53.33% of research scholars agree with the statements 'All features are clear and understandable & It displays irrelevant results sometimes'. And 50% of research scholars and 18.57% of students agreed with the

statement 'It should have more flexible interfaces'. For the remaining statements both the user community expressed 'Neutral' (more than 10%), which shows the uncertainty of students and research scholars on the statements because of lack knowledge on Web-OPAC or they have not come across all the features available.

**Table 4: Important Features to Add on Web-OPAC**

Features	Useless		Less Useful		Partially Useful		Useful		Very useful	
	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars
Step by step search instructions	01 (1.43)	01 (3.33)	0	01 (3.33)	01 (1.43)	02 (2.86)	0	15 (50)	0	09 (30)
Search by any words on titles	0	0	02 (2.86)	02 (2.86)	0	03 (10)	0	16 (53.33)	0	08 (26.67)
Search by any words on subjects	0	0	0	01 (3.33)	0	03 (10)	0	16 (53.33)	0	08 (26.67)
Search by year of publication/publisher	0	0	0	01 (3.33)	0	05 (16.67)	0	12 (40)	0	09 (30)
Limiting the search by languages	0	01 (3.33)	0	04 (13.33)	0	06 (20)	0	13 (43.33)	02 (2.86)	05 (16.67)
Provision for use abbreviations	0	01 (3.33)	0	5	0	03 (10)	01 (1.43)	13 (43.33)	0	05 (16.67)
Search by Accession, Call numbers	01 (1.43)	01 (3.33)	0	04 (13.33)	01 (1.43)	04 (13.33)	0	13 (43.33)	0	06 (20)
Information on Book locations & status	0	0	0	03 (10)	0	03 (10)	0	11 (36.67)	0	10 (33.33)
Search results with Abstract/Summary	1 (1.43)	0	0	02 (2.86)	0	04 (13.33)	0	12 (40)	0	10 (33.33)
Search results with Table of Contents	02 (2.86)	01 (3.33)	0	04 (13.33)	0	0	0	15 (50)	0	08 (26.67)
Spelling Algorithms	0	01 (3.33)	01 (1.43)	01 (3.33)	0	03 (10)	0	15 (50)	01 (1.43)	08 (26.67)
Display with Relevancy ranking	0	01 (3.33)	0	03 (10)	0	03 (10)	0	16 (53.33)	0	06 (20)
Tag clouds and tagging	0	01 (3.33)	0	02 (2.86)	0	06 (20)	01 (1.43)	12 (40)	0	07 (23.33)
Provision for Personalized Profile	0	02 (6.67)	0	03 (10)	0	02 (2.86)	0	12 (40)	0	09 (30)
RSS Feeds and E-Mail Notifications	0	01 (3.33)	0	02 (2.86)	0	01 (3.33)	0	14 (46.66)	0	10 (33.33)
Automatic Error correction	0	01 (3.33)	0	02 (2.86)	0	04 (13.33)	0	14 (46.66)	0	06 (20)
User-friendly On-screen Help	0	01 (3.33)	0	0	0	02 (2.86)	0	18 (60)	0	08 (26.67)
Search results with material image	0	0	0	02 (2.86)	0	03 (10)	0	14 (46.66)	0	09 (30)
Display of library circulars	0	0	0	0	0	04 (13.33)	0	14 (46.66)	0	10 (33.33)
Links to Google, Google scholar	0	01 (3.33)	01 (1.43)	01 (3.33)	01 (1.43)	01 (3.33)	0	14 (46.66)	0	12 (40)
Links to online vendors catalogues like, Flipkart, Amazon	0	0	0	04 (13.33)	0	0	01 (1.43)	17 (56.66)	0	07 (23.33)
Online tutorials to learn how to use	0	0	01 (1.43)	01 (3.33)	01 (1.43)	02 (2.86)	0	18 (60)	0	07 (23.33)
Provision for Suggestions/Feedback	0	0	01 (1.43)	02 (2.86)	01 (1.43)	03 (10)	0	15 (50)	0	08 (26.67)

The data in parentheses represents percentage.

The results in the Table 4 demonstrated that 30% of the research scholars expressed 'very useful' for the important features to add on their web-OPAC, those are; Step by step

search instructions, Information on Book locations & status, Search results with Abstract / Summary, Search results with Table of Contents, RSS Feeds and E-Mail Notifications and

Display of library circulars. Further it shows 60% of the research scholars opined ‘Useful’ for User-friendly Onscreen Help and Online tutorials to learn how to use’. More than 56% of research scholars shown useful for ‘Links to online vendors catalogues such as Flipkart and Amazon etc.

It is observed that many students have not answered for this question instead all the research scholars have answered.

And whatever the features received (46%) ‘Useful’ are all not available features in IIMB Library Web-OPAC that’s reason they experienced and expressed useful.

Part ‘D’ of the Questionnaire comprises questions on Web-OPAC structural designs, and style of interactions do the users prefer.

**Table 5: Preferable Style of Interactions on Web-OPAC**

Styles	Not Preferable		Less Preferable		Neutral		Preferable		Most Preferable	
	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars
Menu Based Interaction	04 (5.71)	01 (3.33)	02 (2.85)	04 (13.33)	06 (8.57)	03 (10)	23 (32.85)	13 (43.33)	21 (30)	06 (20)
Graphical Direct Manipulation	02 (2.85)	0	03 (4.28)	02 (6.66)	10 (14.28)	01 (3.33)	22 (31.42)	15 (50)	13 (18.57)	06 (20)
Command based interaction	09 (12.85)	03 (10)	10 (14.28)	07 (10)	15 (21.42)	01 (3.33)	14 (20)	11 (36.66)	01 (1.42)	03 (10)
Function Key style	04 (5.71)	02 (6.66)	16 (22.85)	05 (16.66)	17 (24.28)	03 (10)	08 (11.42)	12 (40)	01 (1.42)	02 (6.66)
Natural Language Dialogue style	07 (10)	0	09 (12.85)	06 (20)	18 (25.71)	02 (6.66)	07 (10)	13 (43.33)	02 (2.85)	04 (13.33)
Question-Answer type	04 (5.71)	01 (3.33)	15 (21.42)	14 (46.66)	11 (15.71)	03 (10)	12 (17.14)	04 (13.33)	06 (8.57)	04 (13.33)
Character & Image on screen	01 (1.42)	0	07 (10)	12 (40)	10 (14.28)	0 (0)	22 (31.42)	05 (16.66)	07 (10)	06 (20)
Browsing & Navigation style	03 (4.28)	01 (3.33)	02 (2.85)	11 (36.66)	09 (12.85)	0	19 (27.14)	11 (36.66)	16 (22.85)	04 (13.33)
Above all	03 (4.28)	01 (3.33)	02 (2.85)	01 (3.33)	05 (7.14)	02 (6.66)	14 (20)	05 (16.66)	06 (8.57)	04 (13.33)

The data in parentheses represents percentage.

The result presented in the Table 5 reveals that 30% of students and 20% of research scholars said ‘Menu Based Interaction’ is the most preferable. And 50% of research scholars said that only preferable for ‘Graphical Direct Manipulation style of interaction’ and 43.33% for ‘Menu based Interaction’. It means these two styles are helpful and for remaining styles majority students they stood neutral,

but research scholars opined that those are less preferable. Further only 20% of students and 16% of research scholars shown preferable interest for all the styles.

Part ‘E’ of the questionnaire highlights about problems faced by the users while using Web-OPAC. Scholar asked the users on major constraints and report.

**Table 6: Hindrances While Searching Web-OPAC**

Hindrances	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars	Students	Research Scholars
Limited search features	05 (7.14)	01 (3.33)	15 (21.42)	08 (26.66)	14 (20)	06 (20)	14 (20)	08 (26.66)	03 (4.28)	05 (16.66)
Lack of knowledge on searching	03 (4.28)	01 (3.33)	10 (14.28)	04 (13.33)	07 (10)	07 (23.33)	19 (27.14)	12 (40)	14 (20)	03 (10)
Time consuming	06 (8.57)	01 (3.33)	14 (20)	05 (16.66)	12 (17.14)	13 (43.33)	14 (20)	07 (23.33)	07 (10)	02 (6.66)

Complicated, confusing to use	04 (5.71)	00	18 (25.71)	07 (23.33)	16 (22.85)	10 (33.33)	09 (12.85)	08 (26.66)	06 (8.57)	02 (6.66)
No output, null retrieves	04 (5.71)	01 (3.33)	23 (32.85)	07 (23.33)	14 (20)	11 (36.66)	06 (8.57)	06 (20)	05 (7.14)	02 (6.66)
Connectivity problems	08 (11.42)	04 (13.33)	22 (31.42)	07 (23.33)	12 (17.14)	06 (20)	06 (8.57)	09 (30)	04 (5.71)	02 (6.66)
Lack of on-screen help	08 (11.42)	02 (6.66)	21 (30)	05 (16.66)	12 (17.14)	06 (20)	13 (18.57)	12 (40)	02 (2.85)	03 (10)
Lack of user friendly	04 (5.71)	00	16 (22.85)	06 (20)	16 (22.85)	11 (36.66)	13 (18.57)	08 (26.66)	06 (8.57)	03 (10)
Lack of training	03 (4.28)	01 (3.33)	11 (15.71)	05 (16.66)	15 (21.42)	07 (23.33)	13 (18.57)	07 (23.33)	13 (18.57)	07 (23.33)
Bandwidth problem/slow speed	14 (20)	03 (10)	20 (28.57)	08 (26.66)	09 (12.85)	08 (26.66)	07 (10)	07 (23.33)	05 (7.14)	03 (10)
Item display problem	11 (15.71)	02 (6.66)	25 (35.71)	10 (33.33)	10 (14.28)	08 (26.66)	06 (8.57)	06 (20)	02 (2.85)	02 (6.66)
Languages problem	15 (21.42)	03 (10)	23 (32.85)	10 (33.33)	09 (12.85)	07 (23.33)	06 (8.57)	06 (20)	02 (2.85)	02 (6.66)
Typographic/orthographic problems	08 (11.42)	0 (3.33)	23 (32.85)	08 (26.66)	10 (14.28)	10 (33.33)	07 (10)	04 (13.33)	05 (7.14)	02 (6.66)
Doesn't show to access other IIMs OPAC	03 (4.28)	02 (6.66)	14 (20)	08 (26.66)	10 (14.28)	07 (23.33)	15 (21.42)	08 (26.66)	10 (14.28)	03 (10)
No links to Facebook, Twitter etc..	10 (14.28)	05 (16.66)	16 (22.85)	05 (16.66)	08 (11.42)	05 (16.66)	11 (15.71)	09 (30)	08 (11.42)	03 (10)
Database Index is very poor	08 (11.42)	05 (16.66)	21 (30)	04 (13.33)	10 (14.28)	05 (16.66)	12 (17.14)	10 (33.33)	05 (7.14)	04 (13.33)
Don't know how to broaden/precise search	03 (4.28)	03 (10)	19 (27.14)	06 (20)	10 (14.28)	06 (20)	14 (20)	07 (23.33)	05 (7.14)	05 (16.66)
Can't cancel my book reservation at OPAC	07 (10)	02 (6.66)	13 (18.57)	07 (23.33)	14 (20)	06 (20)	10 (14.28)	08 (26.66)	05 (7.14)	04 (13.33)

The data in parentheses represents percentage.

Table 6 elaborates the difficulties of users 21.42% of Students and 26.66% of research scholars Disagree with the statement 'Web OPAC provides Limited Search Features'. But 27.14% of students and 40% of research scholars agreed with 'Lack of Knowledge on Searching' where we should focus proper training arrangements and this is because of Lack of On-screen help, still it is available on Web-OPAC and no awareness. Finally majority users strongly agree with the statements like 'it doesn't provide access to other IIMs, Facebook, twitter and poor database index system. For other statements majority stated 'neutral' because they have not used all the available features of Web-OPAC.

## DISCUSSION AND CONCLUDING REMARKS

It is observed from the evaluation checklist, the IIMB Library Web-OPAC satisfies all the evaluation criteria's but only three factors found absent such as 'links to electrical resources, links to external resources and library structured entry format'. It is required to configure these three at VTLIS-Virtua automation software.

In case of Search experience and frequency of usage, majority of the users having below 04 years of experience and uses 'rarely' and 'once in a week', this is the reason many of the questions unanswered and remarked for Neutral option. It is suggested to create the awareness among the users on all available features.

The laptop is the most helpful and useful device for the accessing Web-OPAC preferably at campus itself, which shows the good internet/bandwidth connectivity at IIMB premises. Majority of the users remarked that they used multiple methods to start using library Web-OPAC and many are dependent upon their friends and colleagues. 56.6% of research scholars still use the Trail & Error method; hence there is requirement of effective library orientation and dedicative guidance from library staffs.

It is learnt from the table 1, major purposes of the users on Web-OPAC are; 'To check availability of source' and 'for comprehensive list on topic'. But 53.33% of research scholars and 15.71% of students disagree with the statement 'to search model question papers' if Web-OPAC provides that also which would be enhanced the usage and creates another purpose.

It is found from Tables 2 & 3 users are lack of knowledge on all available search features of Advance search and they haven't used at all except Basic search. Here also we urged for the training sessions. Figure 6 show users level of satisfaction with Web-OPAC that is 'Good' further they suggested to add all the features listed at Table 4, except initial five features. Then satisfaction level should reach 'Excellent' among the users.

Users shown their preferred style of interaction on Web-OPAC in Table 5; they preferred most 'Menu Based and Graphical Style of Interaction' which should be configured on the automation software. Table 6 highlights that users are lacking of searching knowledge, limited search features, lack of training, poor database index, and non-accessibility of other IIMs OPACs. They have also expressed that there is no provision for cancel book reservation from OPAC.

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