Web-based Library Services provided to the Users in University College of Technology, Osmania University: A Study

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Abstract

Library and information services in 21st century are drastically changed with the recent developments in the technologies like web. In the Internet revolution era, Internet, is playing a vital role where every individual accessing their required information on their hands. By applying these Web technologies in libraries provide Web-based Library and information services to their users around the clock on Web. The traditional library services are now moving to Web-based library services. Now days, the libraries are user centric with the technology based atmosphere and by providing value added services to them. E-learning has become a new paradigm which creates a new learning environment. The main purpose of this paper presents what are the web-based library services provided to the users of college of technology, O.U.

Keywords

Web-based library services, e-Resources, Database.

Electronic access
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Introduction

Libraries have faced new opportunities and problems as a result of technological advancements in the creation, marketing, diffusion, and storage of information. The library is one of many institutions that is undergoing transformation as a result of technological advancements. As a result, new library services and deliverables have been developed, as well as a transition from face-to-face human contact to human-machine interaction, from paper to electronic delivery, from text-centered mode to multimedia, and from physical presence to virtual presence. The internet has become a commonplace around the world, serving as a natural supplement to traditional library services while also developing new ways to meet customers' information demands. Using web technologies, traditional online services have evolved into web-based services. The main point of access to library websites has evolved into a catalyst for new web-based library services.

Web-based library services

Web-based library services are those that are given utilising the Internet as a medium and a library website as a gateway, all through the use of a library management system. Web-based library services, such as online textbooks, databases, tutorials, and a virtual library containing links to other valuable resources from the user's perspective. It offers a one-of-a-kind service that links to full-text publications while also integrating library housekeeping operations, library policies, staff listings, and other features for quick assistance.

The purpose is to address the demand for easy access to electronic reference sources from their PCs 24 hours a day, seven days a week. Electronic document delivery services, electronic current awareness services, electronic SDI services, web-based reference tools, electronic research guides, and virtual reference desk/ask-a-librarian are among the web-based reference services offered to their clients.

Resources for web- based library services

Today, users may have access a variety of textual information resources. There are different kinds of web- based reference resources and services for accessing information from libraries such as:

- OPAC
- News letters

- Institutional Repository
- Gateways
- Portals
- Subject Portals
- E-Resources
- Online Databases
- Subject Directories
- Blogs
- Virtual Library Tours
- Ask-A-Librarian
- Real Time Services
- Bulletin Boards
- Web-based User Education

Review of literature

Arora, J. (2001), "Web-based digital resources and services: trends and innovations Web-based library services are modified versions of existing services and technology-driven library services, or they are transformed from traditional library services to include new services that are unique to the web environment, emphasising the importance of web-based library services for changes in library information systems paradigms". According to Bharathi, K (2011) "Web-Based information Resources in Library and Information Science: A Study" the study explored web-based information resources in LIS. It also found that different types of web-based resources, its advantages and its advantages and disadvantages and also discussed about web 1.0 and web 2.0. Sadeh, T.(2007), "Time for change: new approaches for a new generation of library users Libraries have a wide range of users that use their collections and services, and some of them will continue to use the library interface regardless of how well it meets their needs. The majority of today's library users, on the other hand, are individuals who were born in the internet era and whose scholarly research habits are inextricably linked to their total internet experience". Stephens, M. and Collins, M. (2007), "Web 2.0, Library 2.0, and the hyperlinked library, within the online community, Web 2.0 allows communication, conversation, information exchange, and cooperation. In comparison to other types of libraries, academic libraries are swiftly becoming key participants in adopting and incorporating Web2.0 technologies into their offerings. RSS feeds, for example, can notify library users about new library activities, while blogs allow the library to aggregate knowledge from users, and setting up a subject-based blog gives helpful tools to help readers explore and apply technology".

Objectives of the Study

1. To find out what web-based Library services are offered in University College of Technology, O.U.
2. To find out the search methods adopted by the users in retrieving information through Web-based services.
3. To find out the problems faced by the users in using web-based library services.
4. To find out whether any user awareness programs/training programs are conducted by the university college of technology, O.U.

Methodology

The basic method of research employed for carrying out the study is 'Survey Method'. It is an exploratory survey of Web-based Library Services provided by the college of technology, O.U. Sample is selected on the basis of simple random sampling technique. The data collection tool used for collecting data is structured questionnaire which is served to the Faculty members, Research Scholars and P G Students of the College of technology.

Data Analysis

Use of Web-based library services

Table 1: Browsing of library website

Browsing	Type of user			Total
	Faculty	Research Scholar	Student	
Yes	10 (40.0%)	5 (20.0%)	10 (40.0%)	25 (100.0%)
No	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	**10** (40.0%)	**5** (20.0%)	**10** (40.0%)	**25** (100.0%)

Table 1 shows the browsing of Library website by the users of College of Technology. All the respondents 25 (100.0%), stated that they are browsing the library website of their respective college.

Table 2: Library provide web-based services

Library provide WBLS	Type of user			Total
	Faculty	Research Scholar	Student	

Yes	10 (40.0%)	5 (20.0%)	10 (40.0%)	25 (100.0%)
No	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	**10** (40.0%)	**5** (20.0%)	**10** (40.0%)	**25** (100.0%)

The web based library services provided by the College of Technology, O.U. are presented in Table 2 All the respondents 25 (100.0%), stated that the Engineering colleges of Osmania University are providing web based library services.

Table 2a: Type of WBLS used by the Respondent

Sl. No.	Service	Rank Responded						Not
		I	II	III	IV	V	VI	
a.	e-resources	13 (52.0%)	8 (32.0%)	1 (4.0%)				3 (12.0%)
b.	Web OPAC	6 (24.0%)	8 (32.0%)		4 (16.0%)			7 (28.0%)
c.	Digital Library	4 (16.0%)	6 (24.0%)	3 (12.0%)	2 (8.0%)	1 (4.0%)		9 (36.0%)
d.	Blogs			5 (20.0%)	2 (8.0%)			18 (72.0%)
g.	News Clippings		1 (4.0%)	3 (12.0%)				21 (84.0%)
J.	CAS				3 (12.0%)			22 (88.0%)
k.	SDI				1 (4.0%)	3 (12.0%)		21 (84.0%)
p.	Library timing			5 (20.0%)	4 (16.0%)	1 (4.0%)		15 (50.0%)

Table 2a shows that web-based services using in College of Technology, O.U. The preferences of the users are presented in ranking system, as per the opinion of the respondents, out of 25 respondents majority of the respondents opted their choice as 1st rank for e-resources with 13 (52.0%) the 2nd rank was given to Web OPAC 8 (32.0%) and Digital Library 6 (24.0%), the respondents given 3rd rank to the Blogs and Library timings 5 (20.0%) News clipping 3 (12.0%), the respondents given the 4th rank to the CAS .

Table 3: Available facilities and services of e-Resources/Databases at Library

Sl. No	Facilities & Services	Type of user						Total	
		Faculty		Research Scholar		Student			
		Yes	No	Yes	No	Yes	No	Yes	No
1	Subscribed e-journals	9 (36.0%)	1 (04.0%)	4 (16.0%)	1 (04.0%)	10 (40.0%)	0 (0.0%)	23 (92.0%)	2 (8.0%)
2	Subscribed e-books	9 (36.0%)	1 (04.0%)	3 (12.0%)	2 (08.0%)	3 (12.0%)	7 (28.0%)	15 (60.0%)	10 (40.0%)
3	Subscribed database	6 (24.0%)	4 (16.0%)	0 (0.0%)	5 (20.0%)	4 (16.0%)	6 (24.0%)	10 (40.0%)	15 (60.0%)
4	Access to e-resources through consortium (Ex. E-Shodhsindhu)	3 (12.0%)	7 (28.0%)	1 (04.0%)	4 (16.0%)	5 (20.0%)	5 (20.0%)	9 (36.0%)	16 (64.0%)

Table 3 illustrates the available facilities and services of e-resources/ databases at College of Technology, O.U. Most of the respondents are stated that availability of facilities like e-journals 23 (90.0%), e-books 15 (60.0%), and less no. of respondents stated that Subscribed database 10 (40.0%) and 9 (36.0%).

Table 4: Access of Engineering Databases at the College Library

Engineering Databases for Access		Type of user						Total	
		Faculty		Research Scholar		Student			
		Yes	No	Yes	No	Yes	No	Yes	No
1.	Elsevier	8 (32.0%)	2 (08.0%)	2 (08.0%)	3 (12.0%)	0 (0.0%)	10 (40.0%)	10 (40.0%)	15 (60.0%)

2.	IEEE Xplore Digital Library	6 (24.0%)	4 (16.0%)	4 (16.0%)	1 (04.0%)	7 (28.0%)	3 (12.0%)	17 (68.0%)	8 (32.0%)
3.	ASCE Digital library	2 (20.0%)	8 (32.0%)	2 (08.0%)	3 (12.0%)	7 (28.0%)	3 (12.0%)	11 (44.0%)	14 (56.0%)
4.	ASME Digital Library	2 (08.0%)	8 (32.0%)	3 (12.0%)	2 (08.0%)	8 (32.0%)	2 (08.0%)	13 (52.0%)	12 (48.0%)
5.	Springer link	5 (20.0%)	5 (20.0%)	2 (08.0%)	3 (12.0%)	0 (0.0%)	10 (40.0%)	7 (28.0%)	18 (72%)
6.	J-Gate Engineering & Technology	5 (20.0%)	5 (20.0%)	0 (0.0%)	5 (20.0%)	0 (0.0%)	10 (40.0%)	5 (20.0%)	20 (80.0%)

Table 4 describes the database provided by College of Technology, O.U. for accessing. Out of 25 respondents, the findings reveal that majority 17(68.0%) of the respondents access the Information through IEEE Xplore Digital Library and 13 (52.0%) ASME Digital Library and less no. of respondents access ASCE Digital library 11 (44.0%), Elsevier 10 (40.0%), Springer link 7 (28.0%) and J-Gate Engineering and Technology 5 (20.0%).

Table 5: OPAC at Engineering College Libraries

OPAC services	Type of user									Total		
	Faculty			Research Scholar			Student					
	Yes	No	Not responded	Yes	No	Not responded	Yes	No	Not responded	Yes	No	Not responded
I. OPAC service	8 (32.0%)	2 (08.0%		4 (16.0%)	1 (04.0%)		10 (40.0%	0 (0.0%)		22 (88.0%	3 (12.0%)	
II.If yes, name of the service												
(a)Reservation of books and other documents	6 (24.0%)	2 (08.0%	2 (08.0%)	2 (08.0%)	2 (08.0%)	1 (20.0%)	0 (0.0%)	10 (40.0%	0 (0.0%)	8 (32.0%)	14 (56.0%	3 (12.0%)
(b)Renew of Loan	3 (12.0%	4 (16.0%	3 (30.0%)	0 (0.0%)	4 (08.0%)	1 (20.0%)	0 (0.0%)	10 (40.0%	0 (0.0%)	3 (12.0%)	18 (72.0%)	4 (16.0%)
(c)New arrivals as Newsletters	3 (12.0%	5 (20.0%	2 (20.0%)	2 (08.0%	2 (08.0%	1 (20.0%)	0 (0.0%)	10 (40.0%	0 (0.0%)	5 (20.0%)	17 (68.0%)	3 (12.0%)
(d)View circulation history of item	2 (08.0%	6 (24.0%	2 (20.0%)	2 (08.0%	2 (08.0%	1 (20.0%)	1 (04.0%	9 (36.0%)	0 (0.0%)	5 (20.0%)	17 (68.0%)	3 (12.0%)
(e)Library membership	6 (24.0%	2 (08.0%	2 (20.0%)	4 (16.0%	0 (0.0%)	1 (20.0%)	5 (20.0%	5 (20.0%	0 (0.0%)	15 (60.0%)	7 (280.0%)	3 (12.0%)

Table 5 shows the OPAC services at College of Technology, O.U. Out of 25 respondents, most of the respondents 22 (88.0%) have stated that library provides OPAC Services. At college library The following OPAC services are available to the users: (1) Reservation of Books and other Documents, (2) Renew of Loan, (3) New arrivals as Newsletters, (4) library Membership etc. Among these majority of the users get the services of Library membership 15 (60.0%), Less number of respondents getting the services like Reservation of books 8 (32.0%), New arrivals and Newsletters 5 (20.0%).

Use of Search Techniques

Table 6: Search elements used for information retrieval

	Search elements	Type of user						Total	
		Faculty		Research Scholar		Student			
		Yes	No	Yes	No	Yes	No	Yes	No
1.	Author	7	3	5	0	8	2	20	5

		(28.0%)	(12.0%)	(20.0%)	(0.0%)	(32.0%)	(08.0%)	(80.0%)	(20.0%)
2.	Title	10 (40.0%)	0 (0.0%)	5 (20.0%)	0 (0.0%)	9 (36.0%)	1 (04.0%)	24 (96.0%)	1 (4.0%)
3.	Keywords	6 (24.0%)	4 (16.0%)	5 (20.0%)	0 (0.0%)	7 (28.0%)	3 (12.0%)	18 (72.0%)	7 (28.0%)
4.	Phrase	1 (04.0%)	9 (36.0%)	0 (0.0%)	5 (20.0%)	0 (0.0%)	10 (40.0%)	1 (4.0%)	24 (96.0%)

Table 6 describes the search elements used for information retrieval by the respondents. The following search elements are available to retrieve the information from web (1) Author, (2) Title, (3) Keywords, (4) Phrase, etc. Out of 25 respondents in the present study, most of the respondents retrieve the Information by Title 24 (96.0%), Author 20 (80.0%) and 18 (72.0%) keywords. Therefore, it is found that all the respondents are retrieving the Information through Author, Title and Keywords elements.

Table 7: Search technique used to access the information

Sl. No.	Search techniques	Type of user						Total	
		Faculty		Research Scholar		Student			
		Yes	No	Yes	No	Yes	No	Yes	No
1.	Basic search	9 (36.0%)	1 (04.0%)	4 (80.0%)	1 (20.0%)	10 (100.0%)	0 (0.0%)	23 (92.0%)	2 (8.0%)
2.	Advanced search	2 (08.0%)	8 (32.0%)	0 (0.0%)	5 (100.0%)	0 (0.0%)	10 (100.0%)	2 (8.0%)	23 (92.0%)
3.	Federated search	0 (0.0%)	10 (40.0%)	0 (0.0%)	5 (100.0%)	0 (0.0%)	10 (100.0%)	0 (0.0%)	25 (100.0%)

Table 7 Illustrates the search technique used to access the information by respondents at College of Technology, O.U. From the above study, it is found that majority of the respondents 23 (92.0%) access the information through "Basic search".

Table 8 : Limitations/Drawbacks while accessing WBLS

Limitations/ Drawbacks	Type of user						Total	
	Faculty		Research Scholar		Student			
	Yes	No	Yes	No	Yes	No	Yes	No
(a)Slow internet connectivity	10 (40.0%)	0 (0.0%)	3 (12.0%)	2 (8.0%)	2 (8.0%)	8 (32.0%)	15 (60.0%)	10 (40.0%)
(b)Insufficient time	2 (8.0%)	8 (32.0%)	1 (4.0%)	4 (8.0%)	4 (16.0%)	6 (24.0%)	7 (28.0%)	18 (72.0%)
(c)Inadequate computers access	2 (8.0%)	8 (32.0%)	2 (8.0%)	3 (12.0%)	4 (16.0%)	6 (24.0%)	8 (32.0%)	17 (680.0%)
(d)Lack of systems	3 (12.0%)	7 (28.0%)	2 (8.0%)	3 (12.0%)	1 (4.0%)	9 (36.0%)	6 (24.0%)	19 (76.0%)

Table 8 illustrates the Limitations/Drawbacks while accessing Web-Based Library Services provided by College of Technology, O.U. Out of 25 respondents, majority of the respondents 15 (60.0%) are unable to access the Web-Based Library Services due to slow internet connectivity.

Training of WBLS

Table 9: Need of training on the use of WBLS

Item	Type of user			Total
	Faculty	Research Scholar	Student	

Need of training				
(a) Yes	10 (40.0%)	5 (20.0%)	10 (40.0%)	25 (100.0%)
(b) No	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
If yes, User awareness training Programmes conducted				
(a) Yes	4 (16.0%)	2 (8.0%)	7 (28.0%)	13 (52.0%)
(b) No	5 (20.0%)	2 (8.0%)	2 (8.0%)	9 (32.0%)
(c) Not responded	1 (4.0%)	1 (4.0%)	1 (4.0%)	3 (12.0%)

Table 9 Illustrates the Need of training on the use of Web-Based Library Services. Out of 25 respondents, all the users are stated that there is a need of training on Web-Based Library Services and Conduction of User awareness training Programmes by College of Technology, O.U.

Table 10: Attended any orientation programme on WBLS

Attending of orientation programme	Type of user			Total
	Faculty	Research Scholar	Student	
Attended	3 (12.0%)	0 (0.0%)	2 (20.0%)	5 (20.0%)
Not attended	7 (28.0%)	5 (20.0%)	8 (32.0%)	20 (80.0%)

Table 10 shows whether respondents attended the orientation programs conducted by the College of Technology, O.U. Out of 25 respondents, most of the respondents 20 (80.0%) were not attended any orientation Programmes on WBLS.

Table 11: Usefulness of WBLS Programmes

Usefulness	Type of user			Total
	Faculty	Research Scholar	Student	
(a) Useful	10 (40.0%)	5 (20.0%)	10 (40.0%)	25 (100.0%)
(b) Not useful	0 (00.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

Table 11 describes the Usefulness of Web-Based Library Services programs to the Users. Out of 25 respondents, all the respondents 25 (100.0%) stated that the user awareness and orientation programs are very much useful in accessing the Web-Based Library Services.

Findings

(1) Use of Web-Based Library Services

(a) It is found that all the respondents are using college library website for browsing the academic information/literature.

(b) All the faculty, research scholars and students stated that the College of Technology, O.U. is providing web-based library services. The preferences of the users are presented in ranking system, according to the table (2.3a), out of 25 respondents majority of the respondents opted their choice as 1st rank for e-resources with 13 (52.0%) the 2nd rank was given to Web OPAC 8 (32.0%) and Digital Library 6 (24.0%), the respondents given 3rd rank to the Blogs and library timings 5 (20.0%) News clipping 3 (12.0%), Newspaper 2 (8.0%) and the respondents given the 4th rank to the CAS 3 (12.0%) and Remote access 1 (4.0%) and the respondents given the 5th rank to the SDI 3 (12.0%).

(c) Majority of the respondents are stated that College of Technology, O.U. are providing the facilities/services of Subscribed to e-journals 23 (92.0%) and subscribed e-books 15 (60.0%) and less number of respondents stated that facilities/Services of Subscribed database 10 (40.0%) and access to e-resources through Consortium 9 (36.0%) .

(d) Most of the respondents are accessing the information through IEEE xplore Digital library 17 (68.0%) and 13 (52.0%) from ASME Digital Library.

(e) It is found that all the respondents are getting the services like Library membership and reservation of books.

Use of Search Techniques

(a) It is found that all the respondents are retrieving the Information through Author, Title and Keywords elements.

(b) Most 23 (92.0%) of the respondents are accessing the information through Basic search.

(c) It is found that majority 15 (60.0%) of the respondents are unable to access the Web-Based Library Services due to slow internet connectivity.

Training on WBLS

(a) All the respondents opined that there is a need of training on the use of WBLS and majority of the respondents 13 (52.0%) stated the User awareness and training Programmes were conducted.

(b) The findings reveal that majority of the respondents 19 (76.0%) stated that orientation programs be conducted rarely.

(c) All the respondents stated that the User awareness and training programs are very much useful in accessing WBLS.

Conclusion

The transformation of conventional library services to web-based library services in a present post pandemic scenario has made the users to reach their information needs on their go at any time. Internet has become a very important part for our day-today activities. The study found that the University college of technology is providing web-based library services to their users, most of the users are accessing the information through Basic search by giving the keywords: Title and Author, the problems are faced by the users are due to slow internet connectivity the users are unable to access the information and most of them are recommended to conduct awareness and training Programmes.

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