

**Use of Web Resources for Scholarly Research in Language and Literature: A Study among  
Research Scholars in Aligarh Muslim University, India**

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**Abstract**

*This paper assesses the level of awareness and use of web resources by the research scholars of languages and literature in Aligarh Muslim University, India. Further the paper aims to highlight the problems faced by research scholars while accessing web resources, their opinion about the features and usefulness of the e-resources. The study was conducted through a well structured questionnaire administered among the research scholars in the department of English, Hindi, Arabic, Urdu, Persian, Modern Indian Languages and Comparative literature and Culture. A random sample of 250 respondents collected during the months of June to August 2011 has been taken for analysis. This paper restricts the study exclusively to use of web resources by research scholars of Language and Literature in Aligarh Muslim University. The scope of the study can be extended to other Indian Universities also. The study reveals that web resources have become an essential part of the research works in AMU. Almost all the services and resources available on Web are utilized by the researchers and Google is the widely used search engine in the University. Many attempts have been made to study the use of e-resources by research scholars in various universities in India, but this is the first of its kind among the researchers of Language and Literature with some suggestions for improvement of web resources and services.*

**Keywords:** Web Resources, Research, e-resources, user studies, language, literature, university, India, AMU



## **Introduction**

The greatest contribution of Tim Berners-Lee to the humanity was the development of World Wide Web (WWW) in 1989 which became the largest source of information in current world. The WWW or Web provides a common platform for the researchers to disseminate the output without any delay and for the publishers without much effort. When Dale Dougherty of O'Reilly Media Inc. coined the term Web 2.0 with reference to the technologies which facilitate a more socially connected web where everyone is able to add to and edit the information space, the second era of electronic publishing started (Eve, 2009). The concept of social networking, open access movement, and digital archiving enriched the web with more valuable and useful information for each and every researcher, in any discipline at anywhere, anytime. With the successful practice of web, hundreds of digitization project were carried out around the world. Languages and literature is the mirror of culture of any society, with fatal influence on the growth of any civilization. The WWW and Internet host a massive amount of information on different languages and its literature.

The present study is an enquiry into the usage of web resources for research activities in various languages and literature in Aligarh Muslim University, Aligarh, India. The purposes of the study were to learn the awareness of researchers about the web resources, how much it is used, what and why used. Along with this, the study aims to find out the problems and obstacles faced by the research scholars in accessing the web resources, the influence of web resources on research, researchers' experiences with the features of web resources and their opinion about the content.

## **Review of related literature**

Many studies have been conducted recently on the use of e-resources as well as web resources among different group of users in various part of the world. The web is influencing the development of new modes of scholarly communication and new electronic resources that have emerged and become powerful media of communication for university libraries (Chopra, 2008). There was an increasing preference for the electronic to the detriment of printed format (Borrego et al, 2007). Satyanarayana and Mishra (2001) found that 80 percent of users in the Central Library of Lucknow University, India make use of internet however they further concluded that 90 percent of users wanted training for effective use of web resources. The study among the research scholars of Kurukshetra University, India conducted by Madhusudhan (2010) reveals

that electronic resources have become an integral part of the information needs of research scholars. The study suggests that e-resources can be good substitutes for conventional resources, if the access is fast, and more computer terminals are installed to provide fast access to e-resources.

Most of the researchers frequently use and prefer electronic format, irrespective of their rank or age (Bar Ilan and Fink 2005, Rogers 2001). The electronic journals have become indispensable for scientists and social scientists (Voorbij, 2006). Although the use of paper journals increased with the advent of e-journals, a shift in use patterns has occurred and patrons now favor electronic format (Brady 2006). The research scholars use internet for research purpose, entertainment as well as for job search (Khare 2007). There is a statistically significant relationship between computer literacy and the use of electronic information sources and services (Majid 1998). The study conducted by Raza and Upadhyay (2010) reveals most of the researchers are aware of e-resources and most of the researchers use them for their research purpose. It is however found that lack of training is the obstacle in proper and full utilization of e-resources.

The most common obstacle to use of electronic information was lack of knowledge about resources (Adams and Bonk 1995, Dilek-Kayaoglu 2008). Too much retrieval of irrelevant information creates problems to use electronic resources (Sujatha and Mudhol 2008, Haridasan and Khan 2010, Jacobson and Cohen 2000). Google is the most preferred search engine (Mannan and Ahmad 2009, Kumar et al 2008). The majority of the academic communities are aware about e-resources (Bar-Ilan 2003, Ali 2005). Electronic journals were mostly used for research needs and PDF was the most preferred format in Indian Institute of Science. The fact that users have free access to electronic journals at all hours from their own computers seems to be the most appealing feature (Moghaddam, Galyani and Talawar (2008). The earlier studies reveal that the web based information sources have gained momentum and wide popularity among the researchers and academic community.

### **About Aligarh Muslim University**

Aligarh Muslim University (AMU) is the largest residential academic institution in India, located in the city of Aligarh, Uttar Pradesh, India. It was established in 1875 by Sir Syed Ahmed Khan and in 1920 it was granted a status of Central University by an Act of Indian Parliament.

Modeled on the University of Cambridge, it was among the first institutions of higher learning set up during the British Raj. Aligarh Muslim University offers more than 250 Courses in traditional and modern branch of Education. Sir Syed Ahmed Khan, a great social reformer of his age felt the need for modern education and started a school in 1875 which later became the Mohammedan Anglo Oriental College and finally Aligarh Muslim University in 1920. This is a premier Central University with several faculties and maintained institutions and draws students from all corners of the world, especially Africa, West Asia and South East Asia. In some courses, seats are reserved for students from SAARC and Commonwealth countries. The University is open to all irrespective of caste, creed, religion or gender. A recent study conducted by National Institute of Science Communication and Information Resources (NISCAIR) ranked AMU as the 8<sup>th</sup> among the top 100 research institutions in India.

### **Research Objectives**

The following objectives had been set to study the levels of use of web resources by the researchers of language and literature in AMU:

- Assess the awareness of web resources among research scholars.
- Find out the purposes of using web resources.
- Learn various factors discouraging researchers from using web resources.
- Identify the various techniques adopted to locate relevant web resources.
- Assess the level of satisfaction with existing web resources.
- Learn the impact of web resources on research activities in language and literature.
- Identify the problems faced by the researchers while using web resources.
- To know the opinion of research scholars regarding the features of web resources.
- Suggest the ways and means for effective use of web resources for research in language and literature.

### **Research Methodology**

A structured questionnaire was used to conduct this study among the research scholars of different departments in the Faculty of Arts. Fifty (50) each filled in questionnaire from the department of English, Arabic, Urdu, Hindi and Persian (total number = 250) (Figure 1) are

collected and considered for study. The filled in questionnaires received from the departments of Modern Indian Language and Comparative Study of Indian Language and Culture have not been considered because of the incomplete and insufficient information provided.

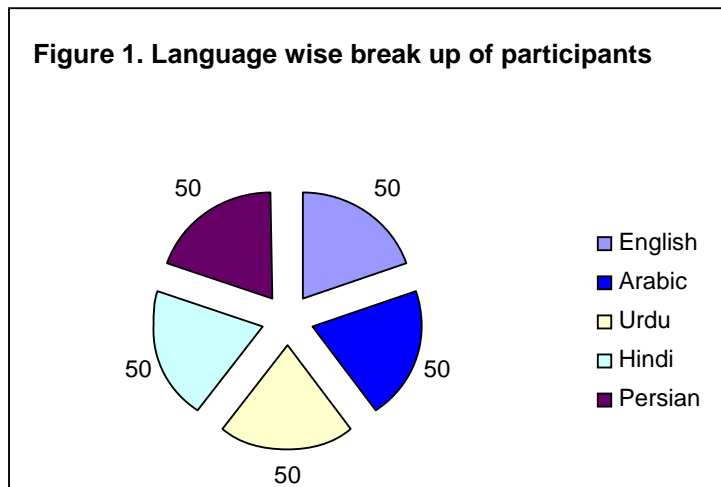
The questionnaire was administered among the researchers during the months of June to August 2011. The response received from the research scholars to 14 questions were analyzed, classified and tabulated by employing statistical methods. The data received through questionnaire is presented in the form of tables and figures.

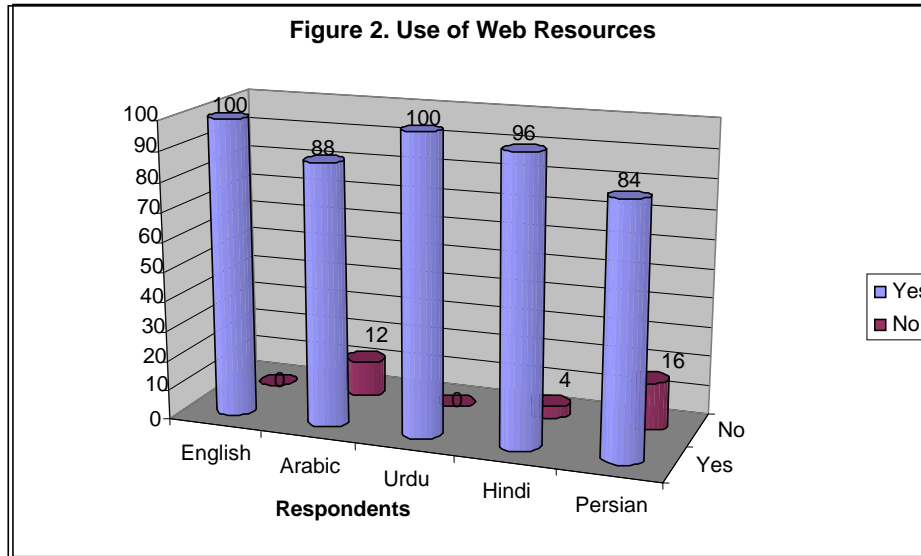
### Data Analysis and Findings

#### *Language wise break-up of Web users*

Figure 2 shows the language wise distribution of web users. Hundred percent English and Urdu Researchers use web resources followed by Hindi (96%), Arabic (88%) and Persian (84%).

The study reveals that 93.6 percent researchers use Web in Aligarh Muslim University which was 89.84 percent in October 2007 (Mannan and Ahmad 2009). Results of these two studies evince that there is a significant growth in the use of web resources for research activities.





**Frequency of Internet Use**

The department wise analysis of frequency of internet use, shown in table 1, reveals that the research scholars from the department of English (84%) is the highest daily users followed by Arabic (56%) and Hindi (50%). The lowest frequency is of the Persian scholars that a 64 percent of them use internet weekly only.

**Table 1 : Frequency of Internet Use**

Respondents	Daily	Twice in a week	Weekly
English	42(84 %)	06(12 %)	02(4%)
Arabic	28 (56%)	17(34%)	05(10%)
Urdu	15(30%)	10(20%)	10(20%)
Hindi	25 (50%)	10(20%)	15 (30%)
Persian	08(16%)	10(20%)	32(64%)

**Use of Various Internet Services**

Internet services such as E-mail, E-Journals, Newspaper, Data base, Web sites, and Bibliography are popular among the respondents. 86.4 percent respondents (n=216) use internet for various research purposes. Websites are used by 58.8 percent (n=147) and online news paper is used by 58 percent researchers (n=145) and 44.8 percent respondents (n=112) use online journals. Online

database (8%) and bibliography (4.8%) are the other internet services chosen by the research scholars.

Among the departments, English and Arabic researchers are the top two groups to use internet services. The detailed data is provided in table 2.

**Table 2: Internet Services used**

Services	English	Arabic	Urdu	Hindi	Persian	Total
E-mail	50(100%)	41(82%)	45 (90%)	32 (64%)	48 (96%)	216(86.4%)
E-Journals	42 (84%)	38 (76%)	10 (20%)	10 (20%)	12 (24%)	112(44.8%)
Newspaper	48 (96%)	40 (80%)	38 (76%)	25 (50%)	34 (68%)	145 (58%)
Data base	15 (30%)	-	--	5 (10%)	--	20 (8%)
Web sites	38 (76%)	27 (54%)	32 (64%)	25 (50%)	32 (64%)	147(58.8%)
Bibliography	12 (24%)	--	--	--	--	12(4.8%)

*Multiple answers were permitted*

#### ***Awareness of e-Resources available on Internet***

The table 3 evinces the level of awareness of respondents about the electronic resources available, such as E-book (50.8%), E-journals (51.2), E-Newspaper (82.4%), E-dictionary (45.6) and E-encyclopedia (33.2). Other resources which are mentioned by the respondents are online databases (15.6%), e-theses (22 %) and Web OPAC (19.2%).

The department wise analysis shows that the department of English and Hindi are more aware about various kinds of web resources followed by Arabic and Persian. Among the respondents E-newspaper is the most familiar web resource (English 96%, Arabic 88%, Urdu 92%, Hindi 60%, Persian 76%) followed by e-journals and e-book.

**Table 3 : Awareness of E-Resources on Web**

Resources	English	Arabic	Urdu	Hindi	Persian	Total
E-Book	34 (68%)	32(64%)	22(44%)	15(30%)	24(48%)	127(50.8%)
E-Journal	38(76%)	36(72%)	10(20%)	15(30%)	29(58%)	128(51.2%)
E- Dictionary	28(56%)	28(56%)	5(10%)	20(40%)	28(56%)	114(45.6%)

E-Encyclopedia	18(36%)	16(32%)	15(30%)	20(40%)	14(28%)	83(33.2%)
E-Theses	17(34%)	18(36%)	--	15(30%)	5(10%)	55(22%)
E-Newspaper	48(96%)	44(88%)	46(92%)	30(60%)	38(76%)	206(82.4%)
Online database	32(64%)	--	--	5(10%)	2(4%)	39(15.6%)
Web OPAC	38(76%)	--	--	10(20%)	--	48(19.2%)

*Multiple answers were permitted*

### ***Purpose of using Web Resources***

Table 4 shows that the researchers use the web for various purposes. Majority of the researcher (62.8%) use it for study and research; and 53.6 percent to prepare for competitive examinations like National Eligibility Test (NET) conducted by University Grants Commission (UGC) which is an essential qualification for appointment as assistant professors in Indian universities and colleges. Improving the knowledge is another motive for 37.6 percent researchers. The Web is also used by 28.4 percent respondents for job search as well as entertainment.

Table 4 also states that 80 percent researchers in English department, 68.18 percent in Arabic, 70 percent in Hindi, 64 percent in Persian and 54 percent in Urdu use web resources for study and research purposes. Preparation for competitive examinations is important for all departments. The web is used for this purpose by 88 percent English, 75 percent Arabic, 52 percent Hindi, 48.64 percent Urdu and 26 percent Persian scholars. Another significant reason is job search, for which 42 percent English, 47.70 percent Persian and Arabic, 27 percent Urdu, 20 percent Hindi and 18 percent Persian respondents use the Web.

**Table 4 : Purpose of use of Web resources**

<b>Purpose</b>	<b>English N=50</b>	<b>Arabic N=44</b>	<b>Urdu N=50</b>	<b>Hindi N=48</b>	<b>Persian N=42</b>	<b>Total N=234</b>
Study and Research	40 (80%)	30 (68.18%)	20 (54%)	35 (70%)	32 (64%)	157 (67.09%)
Improving knowledge	18 (36%)	28 (63.63%)	7 (18.9%)	30 (60%)	11 (22%)	94 (40.17%)



Job search	21 (42%)	21 (47.72%)	10 (27%)	10 (20%)	9 (18%)	71 (30.34%)
Entertainment	23 (43%)	11 (25%)	8 (21.62%)	15 (30%)	14 (28%)	71 (30.34%)
Preparing for competitive examinations	44 (88%)	33 (75%)	18 (48.64%)	26 (52%)	13 (26%)	134 (57.26%)

*Multiple answers were permitted*

### ***Reason for not using web resources***

Sixteen researchers among the respondents had stated that they do not use web resources (table 2). The reasons were asked why they do not use these fast growing information resources for research. Table 5 shows that researchers from only three department said that they do not use web resources due to some reasons like non-availability of full text (81.28%) unfamiliarity with web resources (75%), non-availability of useful material (87.5%) and lack of training (56.25%) in use of web resources. Slow down loading speed (31.25%) and lack of sufficient computer and Internet facility (37.5) are also become reasons for not using web resources.

In these departments, 7 research scholars (87.5%) from Persian department said that non-availability of full text is the main problem which prevents them from using the web followed by non-availability of useful materials and unfamiliarity with the web (75%). Lack of training is a problem for 62.5 percent researchers in this department. Non-availability of useful material is a reason for 100 percent Arabic and Hindi researchers. Unfamiliarity with web resources (Arabic 83.33 % and Hindi 50%) and non availability of full text (Arabic 66.66%, Hindi 100%) are other reasons.

The reasons mentioned by the respondents, like non- availability of full text and useful materials has to be given serous concern by the researchers and academicians world wide. Ample facility for using web and proper training can be provided locally in the university.

**Table 5: Reason for not using Web Resources**

<b>Reason</b>	<b>Arabic N=6</b>	<b>Hindi N=2</b>	<b>Persian N=8</b>	<b>Total N=16</b>
Unfamiliar to web resources	5 (83.33%)	1(50%)	6(75%)	12(75%)
Non availability of full text	4(66.66%)	2(100%)	7(87.5%)	13(81.25%)
Lack of training	3(50%)	1(50%)	5(62.5%)	9(56.25%)
Slow downloading speed	2(33.33%)	--	3(37.5%)	5(31.25%)
Lack of computer/internet facility	1(16.66%)	1(50%)	4(50%)	6(37.5)
Non availability of useful material	6(100%)	2(100%)	6(75%)	14(87.5%)

*Multiple answers were permitted*

***How do search and access web resources?***

The methods followed by the research scholars to access to web resources are variant, they access through links on library website/portal, links on publishers' website, using search engines or directly to e-journals websites. Using the search engines to access the web resources is the most used method among respondents. 44 percent of English, 42 percent of Urdu, 30 percent of Hindi, 40 percent of Persian and 20 percent of Arabic researchers use this method. A good number of the Arabic (42%) and Urdu (32%) researchers use publishers' websites directly. Links on library website and other methods are comparatively less used as shown in table 6.

The study reveals that the selection of access method is depending upon the language of research; the researchers of Arabic prefer publishers' websites at the same time English, Urdu, Hindi and Persian use search engines.

**Table 8: How do search and access web resources?**

	<b>English n=50</b>	<b>Arabic n=50</b>	<b>Urdu n=50</b>	<b>Hindi n=50</b>	<b>Persian n=50</b>	<b>Total n=250</b>
Link through library website/portal	10 (20%)	6 (12%)	--	8 (16%)	4 (8%)	28 (11.2%)
Link through publishers' websites	8 (16%)	22 (42%)	16 (32%)	13 (26%)	12 (24%)	71 (28.4%)

Directly to e-journals web sites	10 (20%)	13 (26%)	5 (10%)	9 (18%)	14 (28%)	51 (20.4%)
Link through search engine	22 (44%)	10 (20%)	21 (42%)	15 (30%)	20 (40%)	88 (35.2%)
Other			8 (16%)	5 (10%)		13 (5.2%)

*Multiple answers were permitted*

### ***Search Engines Used***

The enormous collection of information and ever increasing number of websites forced to use search engines to locate the right information.

Table 7 shows that 207 research scholars (82.8%) use Google as search engine, followed by Yahoo! (30%), MSN (17.6%), and Ask.com (12.8%). Alta Vista is used by only eight percent of researcher, who are from English department.

Department wise break-up reveals that 100 percent (n=50) Hindi researchers use Google, followed by 96 percent English, 92 percent Persian, and 90 percent Urdu. Yahoo search is used by the 50 percent researchers from Hindi, 42 percent English, 24 percent Persian, 20 percent Urdu and 18 percent Arabic. MSN and Ask.com have a minimum use among the scholars. A small group of researchers from Arabic (26%) and Hindi (20%) said that they use other search engines without mentioning the names.

**Table 7: Search Engines used**

<b>Search Engines</b>	<b>English n=50</b>	<b>Arabic n=50</b>	<b>Urdu n=50</b>	<b>Hindi n=50</b>	<b>Persian n=50</b>	<b>Total n=250</b>
Google	48(96%)	18(36%)	45(90%)	50(100%)	46(92%)	207(82.8%)
Alta Vista	4(8%)	--	--	--	--	4(1.6%)
Yahoo Search	21(42%)	9(18%)	10 (20%)	25(50%)	12(24%)	77(30.8%)
MSN Search	12(24%)	4(8%)	5(10%)	15(30%)	8(16%)	44(17.6%)
Ask.com	11(22%)	6(12%)	5(10%)	10(20%)	--	32(12.8%)
Others		13(26%)		10(20%)	--	23(9.3%)

*Multiple answers were permitted*

### ***Search Tools***

Locating the information is not an easy task in this era of information explosion. Various search tools are used to overcome this hurdles. Key words, title of book/ article, name of author, subject and title of journals are the popular tools used in AMU to search the required information/ document.

Table 10 indicates that majority of the research scholars from English (84%) like to search by *author* followed by *name of journal* (70%). Twenty eight respondents (56%) from Arabic department like *journal* search. In the department of Hindi, sixty percent prefer *keyword* search, at the same time *title search* is more preferable for sixty percent of Urdu researchers. In case of Persian researchers, *keyword* (42%) and *subject* (30%) search are preferred.

**Table 8: Search Tools used**

<b>Search Tools</b>	<b>English n=50</b>	<b>Arabic n=50</b>	<b>Urdu n=50</b>	<b>Hindi n=50</b>	<b>Persian n=50</b>	<b>Total n=250</b>
Key word	32(64%)	5(10%)	15(30%)	30(60%)	21(42%)	103(41.2%)
Title	13(26%)	9(18%)	30(60%)	20(40%)	4(8%)	76(30.4%)
Author	42(84%)	8(16%)	10(20%)	10(20%)	8(16%)	78(31.2%)
Subject	21(42%)	--	15(30%)	25(50%)	15(30%)	76(30.4%)
Title of journal	35(70%)	28(56%)	6(12%)	10(20%)	2(4%)	81(32.4%)

*Multiple answers were permitted*

### ***Experiences with special features of Web resources***

Table 9 shows that many feature like multimedia attachments and hyperlinks to related database are not used by the respondents or they are not aware of it. The study result reveals that features like hyperlink from one article to a cited article in different journal without any additional payment is considered as useful by 142 researchers (56.8%) while 97 respondents (38.8%) have not used it. Hyperlink from one article to a cited article in the same journal is also treated as ‘useful’ by 137 respondents (54.8%) but 109 researchers (43.6%) had no experience with this feature. Facility to contact authors via e-mail provided with the article is a ‘useful’ feature of the web for 128 researchers (51.2%) at the same time, ten percent respondents said it is ‘not useful’ and 97 researchers (38.8 %) have never used it.

Links to databases is mentioned as ‘helpful’ by 30 percent respondents only; majority of them (56%, n=140) are not familiar/ used it. This study shows that in the field of language research, the role of video or animated graphics is not recognized as in other disciplines like sciences. Only 33.2 percent respondents (n=83) considered it as ‘helpful’; 20 percent opined that it was ‘not useful’ while a major part of respondents (58.8%) have never used or aware about this feature.

It is clear that the researchers in languages prefer to use the hypertext than other types of media attached with e-articles even though the number of audio clips and video files are growing in various forms and formats and available on the web.

**Table 9. Experience with features of web**

<b>Features</b>	<b>Useful</b>	<b>Not useful</b>	<b>Never Used / Don't Know</b>
Links from one article to a cited article in the same journal	137 (54.8)	4 (1.6%)	109 (43.6%)
Links from one article to a cited article in different journal at no charge	142 (56.8%)	11 (4.04%)	97 (38.8%)
Links from one article to a database in your subject	75 (30%)	35 (14%)	140 (56%)
Links from one article to author's e-mail ID	128 (51.2%)	25 (10%)	97 (38.8%)
Video or animated graphics attached with article	83 (33.2%)	20 (8%)	147 (58.8%)

***Rating of the content of the Web***

In case of research, content of the materials is very important. In the Google search engine, a query for a term list millions of results, the same term gets one thousand or so result in Google Scholar. Even in this result, useful content may be fewer as the usefulness of the content is depending upon the researcher and his/her research area.

Table 10 shows how the researchers of language and literature in AMU rate the content of web resources. The majority of researchers (45.6%) opined that the content of web resources are helpful. 30.4 percent rated web resources as ‘most helpful’ and 18.8 percent as ‘least helpful’. Thirteen researchers (5.2%) believe that web resources are ‘not helpful’ at all. Fifty percent researchers from Hindi (n=25) and forty two percent from English (n=21) rated the web resources as ‘most helpful’. The fifty four percent (n=24) English, forty six percent (n=23) Arabic, forty four percent (n=22) each from Urdu and Persian and forty percent (n=20) Hindi researchers rated web resources as ‘helpful’. Five researcher from Urdu (10%), and eight from Persian (16%) departments rated web resources as ‘not helpful’.

It is clear from the study that web resources are a helpful source of information for the research in the field of Language and Literature like any other discipline.

**Table 10 : Rating of the information content of Web resources**

<b>Rating</b>	<b>English n=50</b>	<b>Arabic n=50</b>	<b>Urdu n=50</b>	<b>Hindi n=50</b>	<b>Persian n=50</b>	<b>Total n=250</b>
Most helpful	21(42%)	16(32%)	8(16%)	25(50%)	6(12%)	76(30.4%)
Helpful	27(54%)	23(46%)	22(44%)	20(40%)	22(44%)	144(45.6%)
Least helpful	2(4%)	11(22%)	15(30%)	5(10%)	14(28%)	47(18.8%)
Not helpful	--		5(10%)		8(16%)	13(5.2%)

***Influence of Web Resources on Language Research***

To assess the influence of web resources on the efficiency of researchers, a question was asked. The responses go as shown in table 11. Forty eight percent (n=119) researchers said that the web resources have improved the search process. Thirty three percent (n=83) said the web resources help to access up-to-date information. Quick access to information (32.4%), improvement in the professional competency (17.2%) and easy access to wide range of information (23.02%) are the other major influences made by web resources. Among the different language researchers, sixty four percent of both English and Arabic said that the web resources improve the search process. Sixty percent of English and Forty percent of Urdu researchers confirmed the improved access to up-to-date information. The feature ‘quick access to information’ has influence on 28 English

(56%), 12 Arabic (24%), 26 Urdu (52%), 5 Hindi (10%) and 10 Persian (20%) researchers. All the respondents, except Arabic researchers agree that the web resources have improved the professional competency. Access to wider range of information is the least influential character of web resources among the respondents; only fourteen (28%) each researchers from English and Arabic, Ten (20%) from Hindi, sixteen (32%) from Urdu and four (8%) from Persian department confirm the its influence.

The study evince that the web resources have very vital influence in the research capability of respondents.

**Table 11: Influence of Web resources**

<b>Influence</b>	<b>English n=50</b>	<b>Arabic n=50</b>	<b>Urdu n=50</b>	<b>Hindi n=50</b>	<b>Persian n=50</b>	<b>Total n=250</b>
Improve the search process	32 (64%)	32 (64%)	19 (38%)	20 (40%)	16 (32%)	119 (47.6%)
Access to up-to-date information	30 (60%)	6 (12%)	20 (40%)	15 (30%)	12 (24%)	83 (33.2%)
Quick access to information	28 (56%)	12 (24%)	26 (52%)	5 (10%)	10 (20%)	81 (32.4%)
Improve professional competency	12 (24%)	--	8 (16%)	15 (30%)	8 (16%)	43 (17.2%)
Access to wider range of Information	14 (28%)	14 (28%)	16 (32%)	10 (20%)	4 (8%)	58 (23.2%)

*Multiple answers were permitted*

***Problems faced while accessing web resources***

There are number of problems to use web resources for research works in language and literature. The research scholars were requested to furnish the details regarding problems faced

whenever they used web resources. Table 12 presents the major obstacles faced by researchers while using web resource in AMU.

The problems are varied. Eighty eight proponents (35.2%) said that limited access to full text is their main problem, followed by problems of displaying various language fonts, especially the regional languages (30%), twenty six percent opined that using the web is time consuming. Fifty seven researchers (22.8%) complained the slow internet speed in AMU.

Lack of proper knowledge for effective use of computer/internet (28%) information overflow (18.8) while searching for a specific term and insufficient computer terminals (13.2) in their respective departments are other problems faced by the language researchers. Department wise statements about the problems have been given in table 14.

The study reveals that the overflow of (irrelevant) information, problems of regional language font display, lack of proper training to use web resources effectively, insufficient number of computers and slow internet speed create obstacles for the research activities in language and literature in Aligarh Muslim University.

**Table 12 : problems faced while accessing Web**

<b>Rating</b>	<b>English <i>n=50</i></b>	<b>Arabic <i>n=50</i></b>	<b>Urdu <i>n=50</i></b>	<b>Hindi <i>n=50</i></b>	<b>Persian <i>n=50</i></b>	<b>Total <i>n=250</i></b>
Too much information retrieval	22 (44%)	--	--	25(50%)	--	47(18.8%)
Time consuming	18(36%)	12(24%)	18(36%)	10(20%)	7(14%)	65(26%)
Limited access to full text	15(30%)	17(34%)	27(54%)	10(20%)	19(38%)	88(35.2%)
Slow internet speed	8(16%)	8(16%)	10(20%)	25(50%)	6(12%)	57(22.8%)
Language fonts display problem	--	20(40%)	20(40%)	15(30%)	20(40%)	75(30%)
Insufficient computer	12(24%)	11(22%)	--	10(20%)	--	33(13.2%)



terminals						
Lack of computer/internet knowledge	3(6%)	18(36%)	21(42%)	10(20%)	18(36%)	70(28%)

*Multiple answers were permitted*

### **Recommendations**

Based on the suggestions given by the respondents and on the findings of the study, the following of suggestions are put forward to improve and maximize the optimum utilization of web resources for the research in languages and literature.

- At regular intervals, the university should organize orientation/training programs for the effective use of web resources.
- The concerned departments may organize workshops on various web resources related to their specific languages and literature.
- Fundamentals of computer, internet and search techniques (ICT Application) should be taught as part of course work at the beginning of the PhD courses.
- University need to subscribe more e-resources with full text access and conduct more awareness programmes about open access journals.
- More high speed computer terminals with broadband connectivity should be installed in each departments, department libraries, computer centre and Moulana Azad Library, the central library of AMU. The Wi-Fi connectivity in the campus (including hostels) will enhance the habits of using web resources among the researchers.
- A standard Unicode with internet compatibility for each regional language should be developed by the Department of Information and Broadcasting in the country. And arrangement may be taken to follow this standard by each publisher.
- The researchers' requirements and suggestions should be taken into consideration while subscribing to web resources.
- The Internet based services like, Article Alert Service (AAS), Content Alert, Mailing Lists and Discussion Groups may be introduced by AMU central library (Moulana Azad Library).

- The library web page should provide an online guide to web resources and various search options to e-resources. This will help the users to find the desired information and augment the use of web resources.
- The library staff in the Moulana Azad Library and department libraries must be skilled to assist the researchers when they face any problem in accessing web resources.
- Information regarding latest websites, e-journals and other web resources with URL should be displayed regularly on the notice board of the library, or send to the researchers via e-mail or mailing groups.
- Users' surveys may be conducted by the library to assess the usage of web resources and to foresee the future needs of research community and add more and more web resources in various languages and disciplines.

## Conclusion

The study revealed that the researchers in Aligarh Muslim University widely use web resources to support their research. Electronic resources on languages and literature are comparatively lesser than of other discipline like science and technology. Even though, many digitization projects world wide, like project Gutenberg, contribute amazing amount of content on the Internet. Full length reading of a novel or a literary work on computer screen may be tiresome but the latest review or study on a piece of literature is more expedient.

In Aligarh Muslim University, the recent infrastructural developments, installing the latest computers with high speed internet connectivity in every department, irrespective of the disciplines entice and instigate the researchers to exert the web resources in recent years. The studies conducted earlier by Raza and Upadyay (2006), Mannan and Ahmad (2009), Ahmad and Fatima (2009) and Musheer and Sudharma (2010) on various aspects of e-resources among different faculties give a clear picture of gradual growth in usage of electronic/web resources in AMU. This shows that e-information sources will continue to be necessary components of the research community.

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