Chapter- 2
Review of Related Literature
CHAPTER 2

REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

Literature search is a very significant step of the research process. It presents a critical and evaluative account of the related literature that has been published on a chosen research topic. According to Busha and Harter (1980) literature review is “an attempt to identify, locate, and synthesize the completed research reports, articles, books, and other materials about the specific problem of the research topic”. Goal of the literature review is to bring to the reader’s knowledge an up-to-date and current literature on the topic under the study. Literature review is designed with a purpose of presenting an overview of work that has been done, studies and observations that have been made, arguments that have been presented facts that have been established on a given research area.

Characteristic of a good literature review is that it collects information from variety of information sources from both print and web based, and is well written without any personal biases. Cronin Ryan and Coughlan (2008) described the characteristic of a review as “the review should conclude with a concise summary of the findings that describes current knowledge and offer a rationale for conducting future research and form the basis for another goal, such as the justification for future research in the area”. Literature review should be structured in such a way that enhances the flow and readability of the review. Terminology use in a literature review should be accurate and easy to understand, use of jargon should be avoided.

Busha and Harter (1980) portrayed the functions of literature review as follows:

a) It helps to narrow and more clearly delineate the research problem
b) It reveals overlooked conclusions and facts that ought to be taken into consideration before the initiation of a research project
c) Suggests new approaches for the planning of investigations
d) Uncovers the methodologies that were successfully used by the other researchers.
e) Helps in the determination of the degree to which particular problems have already been investigated
f) Assists investigators to develop firmer understandings of theoretical implications of proposed inquiries.

The literature review for the present study has been organized into different facets to present an insight into various issues and aspects pertaining to the current research investigation. The literature review will be significantly helpful in developing an understanding about the current research topic. The review of related literature for the present study is presented under the following heads:

1. Use of web resources
2. Influences of web resources
3. Gender perspective in the use of web resources
4. Attitude towards the use of web resources
5. Evaluation of the web resources
6. Barriers/ hinderances

2.1 USE OF WEB RESOURCES

Bhat and Ganaie (2016) assessed the use of e-resources and revealed that departments or the office chambers were found to be the most popular place for accessing and using the e-resources as majority of the respondents affirmed it as their preferred place of access on the contrary, library was deemed as the least popular place the lowest percentage of users accepted it as their preferred place for accessing e-resources. The study explored the various gadgets that the respondents preferred to use for accessing e-resources and it was found that majority of respondents accessed e-resources from laptops. Moreover, the mobile phones were found to be quite popular as more than half of the respondents accepted using mobiles for accessing e-resources. Majority of users made use of search engines for searching and accessing e-resources followed by the university’s website. Study further revealed that searching by title was found to be the most popular way of searching for e-resources followed by keyword search and author search. While Boolean search followed by phrase search were revealed as the chief techniques employed by the respondents for refining their search.
Tamrakar and Garg (2016) investigated user perception towards the use of e-resources in IIT Guwahati library and revealed that majority of respondents preferred e-journals to gratify their research needs. Moreover, the study also reported that a considerable percentage of respondents used print journals along with the e-journals where the percentage of faculty members was higher than the other category of users. One of the noteworthy finding of the study is that majority of the respondents agreed that they were asked for their views, i.e. their information needs were taken into consideration on the subscription of e-journals by the IIT Guwahati library.

Kumar (2016) studied the use of e-resources by the medical students. The study presented a comparative analysis of PG and UG student’s use of e-resources. The study reported that PG students had preference for e-resources like e-research reports, ETDs, e-journals, e-books on contrary to UG students who preferred using e-research reports to other e-resources. However, a similarity was observed in case of search strategy used for accessing e-resources where majority of both PG and UG students used title search for searching purposes. Moreover, Undergraduate students spent more time daily in searching and accessing e-resources than the postgraduate students.

Mtega, Dulle, Malekani, and Chailla, (2015) revealed that though majority of respondents accessed e-resources through search engines, however accessing e-resources on CDROMs followed next among the agricultural researchers and related staff in Tanzania. Study concluded that access and usage of e-resources was influenced by individual factors such as age, occupational category and the educational level. The study asserted on the need of information literacy training updates for the effectively exploiting the online information environment.

Bhat, Ganaie and Khazer (2015) revealed that though majority (54.93%) of respondents preferred to access the e-resources from their ‘Department/Division’ however, not much difference was observed in the percentage of user who used e-resources from home (53.52%). Study further revealed that respondents seemed to be less skilled in using the advanced search techniques for searching and retrieving the relevant information as majority of users accepted that they have never used Boolean operators for searching the information and only a small percentage of respondents affirmed that they have sometimes made use of Boolean operators. Besides, the other advanced search techniques such as wild cards, truncation marks, and phrase search were never used by the majority of respondents.
Manhas, Kaur and Rani, S. (2015) assessed the effectiveness of the Internet and electronic information resources as an educational tool. Study reported that majority of the respondents accessed electronic resources at their homes. E-books were revealed to be the most preferred type of e-resource. Study concluded that majority of the respondents opined that, although e-resources have many advantages but they cannot replace the print sources of information rather they can only supplement the print information resources.

De Groote, Shultz, and Blecic (2014) analysed the use of online resources and social media among the health sciences faculty members. The study reported that medical science faculty members started searching for the scholarly articles on MEDLINE (81%) rather than on a general purpose search engine such as Google though, Google Scholar was used by 16.9% of the users on a daily basis. Although the majority of respondents (69%) use library’s web page for accessing e-resources, a noteworthy finding of the study is that a good number of them (41.5%) also accessed it through personal bookmarks on Internet browsers. It was also noted that a very few faculty members made use of social media technologies such as RSS or Twitter, blogs and wikis for keeping up with current development in their field while a majority of them (84%) never utilized any one of these services. Faculty also found that majority of faculty members used email (99.5%) for research collaboration followed by Google Docs (23%) and Dropbox (21%). Study concluded that health sciences academicians prefer to use online resources than print, though they prefer to print out the articles to read them rather than reading them directly on computer screens or other mobile devices.

Amjad, Ahmed & Naeem (2013) gauged the use of electronic resources among research scholars of a university in Pakistan. The study utilized a 5-point Likert scale survey for collecting the data for the study. The study revealed that were some of the frequently used e-resources as depicted by their Weighted Means e-books (Weighted Mean=3.81), e-Newspaper (Weighted Mean=3.74), e-journals (Weighted Mean=3.68), online databases (Weighted Mean=3.62), e-magazines (Weighted Mean=3.55), and e-thesis (Weighted Mean=3.50). While some of the less used e-resources were e-research re-ports, e-digest, OPAC, and e-bibliographic databases with Weighted Means values of 3.13, 2.97, 2.53, and 2.50, respectively. Respondents used the electronic resources for a variety of purposes such as for learning (Weighted
Mean=4.48), education (Weighted Mean=4.32), research (Weighted Mean=4.24), to
update knowledge (Weighted Mean=4.18), accomplishing assignments (Weighted
Mean=4.02), reading articles (Weighted Mean=3.93), writing research proposal
(Weighted Mean=3.89).

Erdamar and Demirel (2013) examined the electronic source preferences of faculty
members. The sample population was stratified into four age groups ranging from
under 30 years to 45 years and the use was found inversely proportional to the age as
the age of the respondents increased the e-source use experience decreased. 83.1
percent faculty preferred e-journals more the print journal while 16.9 percent stated
that they would like to use the print journal if both versions were available. Ease of
access and 24x7 availability were found to be the defining factor for their preference.
Users those who preferred print journals in this study believed that availability of
back issues and ease in reaching and examining print journals were the chief
consideration in their preference for e-journals. A noteworthy finding of the study was
that the majority of staff members preferred electronic sources to print ones.

Ahmed (2013) conducted a comprehensive online survey of 517 faculty members
from eight public universities in Bangladesh. Study found that faculty members were
keen users of electronic resources and majority of them used e- resources on daily
basis. Open source or freely available resources were found to be the most used,
followed by resources subscribed by the university. Along with using open source
resources and subscribed ones a considerable proportion of faculty members also paid
for their sources of interest on their own. Study observed lack of satisfaction among
faculty members regarding electronic resources subscribed by the universities.
Researcher suggested establishing a consortium for university libraries to ensure
affordable access to additional e-resources. Furthermore, they recommended creating
awareness on the use of open access resources.

Uwaifo and Eiriemiokhale (2013) explored the use of Electronic Information
Resources among the faculty members of a university in Nigeria and found that they
are deriving a number of benefits from the use of Electronic Information Resources. It
was revealed that Electronic Information Resources were predominantly used for
research work (98%) the other benefits that followed were using e-resources for
gaining subject knowledge (94%), for preparing lectures/teaching (87%), and for
getting news (73%). More than half of the respondents also admitted using Electronic Information Resources for communication purposes.

Chopra and Kaur (2013) studied the use of e-resources by research scholars and found that majority of research scholars preferred to use e-journals for their research work. Study also reported that a considerable percentage of users made use of e-thesis. Study further revealed that majority of research scholars stated that e-resources do not diminish the importance of traditional print resources.

Habiba and Chowdhury (2012) analyzed the status of electronic resource usage at Dhaka University library and explored various aspect related to electronic resources. Electronic journals were found to be the most used source with majority of users i.e. 62.0 percent stating it as a preferred choice, while second highest percentage of users 21.0 percent used electronic books. Majority (56%) of users agreed availability of up-to-date information as the most important feature, free availability of e-resources was deemed important by 21 percent of the users, other significant features included quick retrieval (12%), full-text searching (10%) and link to other resources (1%). Overall picture of benefits from e-resources seemed to be satisfactory. 26.0 percent users accepted they derived excellent benefits from e-resources 27.0 percent agreed them to be good, 37.0 percent users stated benefits from electronic resources as average. A very less percentage of users i.e. 10% remarked benefits level as poor.

Musthafa (2012) reported the level of awareness and use of web resources by the research scholars of languages and literature in Aligarh Muslim University, India. Study revealed that majority of research scholars from the department of English accessed the web daily on contrary, the lowest percentage of research scholar from the Persian department accessed web daily. A higher percentage of research scholars departments of English and Arabic made use of e-journals than the research scholars from departments of Urdu, Hindi, and Persian. Moreover, it was observed that research scholars of languages and literature agreed that use of e-resources have improved the search process.

Tyagi (2011) examined the use of online journals and the databases by the under graduate, postgraduate students, research scholars and faculty members of IIT Roorkee, with the aim of identifying users’ opinion on different features of electronic information sources( EIS), their awareness of the EIS and of INDEST consortium, the
purpose of using EIS and their preferred formats. The results reported a growing interest in EIS among the users at IIT Roorkee, India. The survey revealed that majority of respondents agreed that library possessed useful online journals and databases. Awareness among the users about the availability of EIS was found highly satisfactory. EIS were mostly used for research needs. A very high percentage of the users perceived e-resources as a replacement for print resources in meeting their information needs. The respondents regarded EIS better for accessing current Comprehensive information.

Kim (2011) explored the use of commercial websites and printed materials in addition to the utilization of university libraries web resources in order to offer a holistic view of users’ use of information sources. Findings revealed that use of different sources of information were found to be divergent across different disciplines; users from arts and sciences disciplines utilized university library website resources and printed materials than business users who relied heavily on commercial websites.

Shukla and Mishra (2011) determined the extent to which the research scholars of Institute of Technology, Banaras Hindu University (India) are aware and make use of e-resources, the problems they are facing while accessing e-resources, their views on usefulness of e-resources as compared to print resources, preferred place of information access. Findings of the study revealed that all the researchers of BHU IT are aware of e-resources and are using it for research work, preferred place of access being the department, while low internet connectivity was identified as the major obstacle in the e-resources access.

Swain (2010) analyzed the keenness of business school’s students on the use of e-resources business schools. Study revealed that respondents exhibited keen interest in using e-journals, e-books, e-news papers, e-reports, and e-articles. However, it was found that Web OPAC was not utilized to the fullest by the students as the majority of them used Web OPAC occasionally.

Oduwole and Oyewumi (2010) examined the accessibility and use of web-based electronic databases on the Health InterNetwork access to Research Initiative (HINARI) portal by physicians in the Neuropsychiatric Hospital through a questionnaire survey and the study revealed that physicians working in a psychiatry health institution have access to and use the HINARI database, majority (60 per cent)
of the physicians accessed the portal once every two weeks and PubMed was found to be the most widely used database in the HINARI portal. Study recommend the development of a library portal/gateway and the setting up of links between the resources to which they subscribe as well as training and retraining of physicians in the use of the HINARI portal.

Madhusudan (2010) focused on the use of e-resources by research scholars of Kurukshetra University, Kurukshetra (India) to determine the use of e-resources, users’ skills in handling e-resources, and the purpose of their use. Study also highlighted the problems faced by research scholars in accessing e-resources, their opinions on features of e-resources, and their views on usefulness of e-resources compared to that of conventional sources. The study reported high degree of awareness about the e-resources among the researchers, where all of the respondents were aware about the e-resources and majority of them used e-resources every day. The study presented the use of different types of e-resources by researchers’. Results indicated that 90 percent of research scholars used e-journals, followed by web sites (48 %), search engines (38 %), and online databases (30 %). Only 2 per cent of respondents had preference for CD-ROM databases. The major purpose of using e-resources by researchers’ was apparently for the research work (94 %). 54 percent respondents used them for finding relevant information in their area of specialization, and 42 percent for keeping themselves up-to-date in their subject field and getting current information. Users became aware about the e-resources from a number of sources but the chief source of information was guidance from teachers/friends/colleagues. Other sources were self-instruction, trial and error respectively. Survey recognized “accessibility” (66 %), “availability” (58 %), “accuracy” (52 %), and ease of use” (40%) etc. as some of the important features of the e-resources as rated by the respondents.

Sharma (2009) analysed the use of various e-resources among teachers and research scholars. The highest used e-resources among a variety of resources was revealed to be e-journal as the majority of the teachers 46 (88.46%) and research scholar 28 (93.33%) preferred to use it, while the least used sources were found to be e-maps, e-thesis, e-manuscripts etc. The study also disclosed that the majority of teachers 34 (65.38%) and research scholars 23 (76.67%) are using the library web site as gateway to access the electronic sources. Search engines and e-journals were found to be the
two highly used resources for getting the required information. The study also revealed that majority 27 (51.92%) of faculty members have taken training for accessing e-resources while, majority of research scholars, i.e. 27 (90.00%), didn’t get training in the use of electronic resources.

Bhardwaj and walia (2009) carried out a survey of faculty members of humanities, social sciences and science at St. Stephen’s College, University of Delhi to study various factors related to their use of electronic resources. It was revealed that the faculty members were highly aware of the electronic resources and used them frequently. Literature Searching, teaching & lectures were found to be the main purpose of using electronic resources by faculty members. Use of Boolean operators was found to be the most common technique in search and retrieval of e-resources. Faculty members of the college were asked to reveal the services they use through the library portal, 91.04% of the respondents mentioned that they use online catalogue, while 89.55% stated they use online journals. However, 50.74% respondents indicated they use gateways A higher percentage of humanities and social sciences faculty members (85.71%) felt that training is required to use e-resources than the faculty members from the science discipline (74.62%). Though consensus was found between both the discipline on mode of training for using electronic resources where workshop received the highest percentage as the preferred method of training.

Rao and Choudhury (2009) carried out a survey on available electronic resources at National Institutes of Technology (NITs) libraries across the country. The survey revealed that majority of libraries use 11 to 15 online journals databases, whereas 25% libraries have the facility of more than 16 online journals databases. Very few libraries (20%) indicated that they have less than 10 online journals databases. Eighty five percent of libraries have the facility of e resources on CD-ROMs/DVDs form. About 90 per cent of libraries obtain audio/video course materials. This study also revealed the zone-wise performance among NIT libraries in India with respect to electronic resources availability. The survey findings revealed that the South zone libraries have richer e-resources, followed by the West and North libraries.

McMartin, Iverson, Wolf, Morrill, Morgan & Manduca (2008) conducted a comprehensive study of 4678 respondents in 119 institutions of higher education in the United States and explored the use of digital resources for scholarly purposes. Their survey results indicated that the most popular types of materials used by faculty
members included online scholarly resources (51%) and digital images/visual materials (43%). Majority of respondents (60%) felt that digital resources are of “great value” for the educational purposes. Study revealed reliance of faculty members on search engines such as Google while finding required materials i.e. they started their search through Google.

Manhas (2008) analyzed the patterns of use of Internet and electronic resources, the Internet skills of the dentists, and problems faced by them while using the Internet and electronic resources in dental colleges and hospitals of Punjab, India. The results showed that the most popular method of acquiring the necessary skills to use Internet and electronic resources was via trial and error method. Most of the respondents accessed the Internet from the college or workplace, while 19.3% also accessed from home. 42.6% of the respondents used the Internet and electronic resources for finding health/dental sciences information, followed by using them for patient care. E-Mail was chosen as the most popular Internet service and e-journals as the most popular electronic resource. 36.7% of the respondents found overload of redundant Information on the Internet was the main difficulty in using the Internet. A majority of the respondents felt fully satisfied with Internet services and electronic resources and stated that the internet and electronic resources could not replace the print resources and believed that e-resource only supplemented the print resources.

Islam and Panda (2007) revealed that, although users consider both web based information and printed materials equally popular they still prefer to use printed materials over electronic resources. Respondents regarded web-based information or the internet important to their research work and considered Internet as a replacement for the library also indicating that information on the web was authentic.

Asemi and Riyahiniya (2007) investigated the relationships between awareness and use of digital resources among students in Isfahan University of Medical Sciences, Iran. A total of 250 students were selected randomly as a sample. The results showed that 70 percent of students were aware of digital resources, but only 69 percent of them have used them; 62 percent were aware of offline databases, whereas only about 19 percent used them through the Central Library LAN network. About 70 percent were aware of online databases, accessible via the Central Library web site, and about 53 percent of respondents have used them, in total 87 percent of students felt that the available data resources met their information needs. Students had less use of offline
databases, attributed to factors such as infrequent periodic orientation and lack of education on use of offline databases and fewer terminals connected to the server in the Central Library. Users were faced with problems like low speed connectivity and shortage of hardware facilities.

Liu (2006) explored the user’s preferences and perception with the use of both electronic and print resources. Results revealed that the users preferred to start their search for the required material through the electronic resources as compared to the print resources. Majority of respondents started their search through library’s online information resources followed by the web resources; convenient access and ease in searching were indicated as the possible reason for doing so. While, only a small percentage of users began their search with library’s printed sources. Universal accessibility, round the clock availability, multiple access, search capabilities, and hyperlinks to the related text were cited as some of the notable advantages of the electronic resources.

Renwick (2005) analyzed use of electronic resources, level of computer literacy, training needs etc. among the faculty of medical sciences. Study revealed that largest population of faculty members accessed Internet from home rather from the office. Study observed that the level of computer literacy was average or beyond as felt by the majority (82%) of respondents though, it was found that the youngest group of users exhibited highest level of computer literacy and computer use. Primary purpose of using electronic resources was found to be for communication (86%). Faculty members voted hands on workshop (63%) as the preferred method for training followed by one on one demonstration (45%) and getting the support (32%) regarding e-resources use when needed. Since the majority (83%) of faculty were self-taught, researchers suggested that the need for user training, hands on workshop is imperative.

Ali (2005) examined the use of electronic resources among the users of the Indian Institute of Technology (IIT) Library in Delhi, India. Results disclosed that the majority (47%) of the users became familiar with e-sources through discussion with professional colleagues, followed by Internet. Though the most popular searching method was found to be keyword searching (63 %), quite a few respondents searched by “author” (53 %) for acquiring the needed information. Analysis of barriers faced by the users it was revealed that a large majority (41 per cent) have no difficulties in
using e-resources. Most prominent factor for non use was lack of knowledge about the e-resources followed by guidance/technical (17 per cent) and slow downloading (13 per cent). The major purpose of accessing electronic information was found for research/study purpose as well as to keep abreast with latest development in their fields. Investigator suggested arranging user study programs to know more about electronic information needs of the users.

Tomaiuolo (2005) provided insight into the perceptions of community college and university faculty toward their students’ use of open Web resources as compared to traditional library subscription databases and also assess both the extent of students’ use of open Web resources and library subscription databases and professors’ satisfaction with that use. The study concluded that although library budgets allocate significant funds to offer subscription databases, students often use Web resource rather than the library subscribed resources, though professors responding to this survey, preferred their students to use published information from subscription databases for research paper writing assignments, very few faculty actually prohibit the use of the Web (approximately 3%).

Rehman and Ramzy (2004) conducted a study to explore the nature and extent of use of e-resources among the health professionals. Medline was found to the most frequently used resource as depicted by its mean score (3.22) obtained from a five-point scale of 0-4 ranging from 4 (extensive use) to 0 (no use). Study observed that time constraints hindered medical professionals use of e-resources. Moreover, the lack of searching skills was also perceived as a hindrance in e-resource usage. Study further revealed that majority of the respondents accepted that the ‘self learning mode’ is the most effective learning mode to learn about the use of e-resources, which was followed by the ‘training provided by the librarian’. The results of study indicated that formal training programs can be crucial in facilitating the use of e-resources.

Kelly and Orr (2003) observed significant difference among undergraduates and graduates students in their use of the databases, where graduate students used databases more than their undergraduate counterparts.
2.2. IMPACT OF WEB RESOURCES

Firdaus and Haridasan (2015) explored the use of web resources among the Post Graduate engineering students the study also delved into the impacts of web resources on student’s studies and learning tasks. Study reported that the web resources had positive impact on the student’s academic work as majority of the respondents accepted that the web resources have made it easier to find the needed material, users also agreed that the web resources have extended the range of the material that is available, improved the quality of work moreover, reduced the amount of searching for print information sources in libraries. E-books, e-journals and online databases were identified as some of the important web resources, though the e-books were considered more important type of the web resource than the e-journals and online databases by the Post Graduate engineering students. Study also observed a high level of satisfaction among the Post Graduate engineering students with the use of web resources.

Abubakar and Adetimirin (2015) assessed the influence of computer literacy program on the respondent’s use of web resources and found that computer literate respondents were able to use web resources in a better way. Study further revealed that computer literacy positively influence the use of web resources since, with the increase in computer literacy, respondent’s use of web resources also increased. The study asserted on the need for the provision of computer literacy program for the better utilization of web resources by the users.

Akussah, Asante and Sarkodee (2015) investigated the relationship between the impact of electronic resources and usage in academic libraries. It was found that impact of electronic resources indicated a significant positive relationship with usage among the users. Study concluded that e-resources are having positive impact on the users.

Stephen, Oludare and Modupe (2014) analysed the influence that electronic resources have on the reading culture of university students in Nigeria, and found that majority of users (90.57%) agreed that electronic resources improves their reading habit. A large number of respondents (85.85%) agreed that electronic resources have expanded their reading possibilities. Users also admitted that e-resources make reading more enjoyable and improve their independent and lifelong reading skills. Regarding
reading preferences of the users the survey revealed that the largest number of users preferred reading on their laptops or mobile devices rather than visiting library for reading purpose. Investigators recommended provision of better internet facilities to the students for enhancing reading habit among them.

Chauhan and Mahajan (2014) evaluated the impact of UGC-Infonet electronic resources on social sciences faculty of a number fifty universities and reported a decent extent of awareness among the respondents i.e. 67.6 percent of them were aware about it. The study tried to outline the impact of UGC-Infonet Digital Library Consortium on enhancing social science faculty members’ quality of research, where the majority of users strongly agreed that the UGC-Infonet has certainly improved the quality of social science research in India. As the study reported that 98.1 percent of the faculty members were involved in article writing and research output production a question was raised to them regarding their publication preferences and it was found that the highest percentage (28.03%) of the users liked to publish in peer-reviewed journals and a very low percentage (5.88%) preferred to publish in open access journals. The study also found that the use of simple search technique was preceded by advanced search technique by a very small margin. The majority of social science academicians were aware and have as well participated in the user awareness programs for using e-resources moreover, respondents also agreed that they would like to attend such orientation programs one or twice a year.

Ravan, Mary, Stephen (2013) presented a study examining the attitude of the teachers in engineering college towards the use of digital information resources. One of the main purposes of using internet resources by majority (61.60%) of engineering college teachers was found to be for teaching and learning purposes. Other purposes which followed were for preparing notes, projects, seminars, and research. Majority of teachers used digital information resources for less than five hours in a week. Their main source of information about digital information resources was the guidance from the peers. Teachers believed that digital information resources had a positive impact on their academic development forty five percent of the respondents stated that access to current information as the chief benefit of using digital information resources. Users also stated faster and easier access to the information as the other advantages. Information overload was recognized as the major hindrance in use of digital information resources.
Damilola (2013) assessed factors affecting use of electronic information resources by distance learning students. The study was carried out in two study centres of the National Open Universities in South western Nigeria. The results of the study showed that there was low level of awareness about the availability of electronic information resources at the study centres for distance learners, which invariably had a negative effect on the level of utilization of the electronic resources by the distance learners. Majority of respondents (56.8%) were not aware of the availability of electronic information resources at study centres, while 43.2% claimed that they were aware. Low degree of awareness was attributed to the fact that electronic information resources were not readily available in the surveyed study centres except the CD-ROM which was being packaged for students at the time of admission. The least available e-resource in the study centres was e-journals. It was also discovered that a large proportion of the respondents made use of the cybercafé in order to gain access to the electronic information resources. A very small percent (2%) of the total respondent indicated that they made use of the University Library for accessing e-resources. Majority of the respondents to a great extent made use of the available electronic information resources mostly for knowledge acquisition and learning purposes. Respondents accepted that improvement of quality of academic work, as well as enhancement of research activity as the major factors that influenced their use of electronic information resources. Students regarded poor electricity supply and internet connectivity as hindrance in utilization of e-resources.

Navalur, Balasubramani and Ashok Kumar (2012) explored the perspective of faculty, research scholars and PG students about the e-resources usage. The highest percentage of users among the all three groups used e-resources for research purposes. Though, a difference was observed among all three groups of users among the frequency of different types of resources used. The highest percentage of faculty, research scholars and PG students used bibliographic databases, e-journals and e-mail most frequently respectively. Responding on the influence of electronic resources on research and studies majority of faculty stated that e-resource usage has improved professional competence, while research scholars said that e-resources have expedited the research process, while the PG students believed that e-resource usage has provided access to a wider range of information. Analysis of key constraints that prevented effective use of e-resources revealed lack of user training as a common
problem among both the research scholars and PG students, while faculty identified less number of subscriptions of foreign journals as a limiting factor in the e-resource usage. Investigators suggested organization of orientation and training programs for better usage of the electronic resources.

Naude, Rensleigh and Toit (2010) highlighted the significance of web as an information resource and research tools amongst academicians. Majority of respondents used Web as an information source for academic and research purposes. Responding to the query about their ability to find academic and research information on the web; the highest percentage of them i.e. 39.5% of respondents considered their searching skills good to find information on the Web, while 24.6% respondents rated their skills as very good. Users thought web to be very useful (34.5%) and an important channel and research tool while retrieving information for academic and research purposes. Study concluded that respondents have accepted web as a useful information resource and web search engines as a suitable retrieval tool when looking for information for academic and research purposes indicating to the positive influence of web resources on the respondents.

Collins and Hide (2010) examined the extent to which researchers use Web 2.0 tools and resources. They also identified the factors that influenced their adoption in order to determine whether these resources are changing researcher’s behaviours. Study revealed that users across different academic disciplines utilized different information sources based on the resource's usefulness and relevance.

Haridasan and Khan (2009) analyzed the impact and use of e-resources by the social scientists and explored the various aspects related to the use of e-resources. E-book e-journals, e-mail, online databases were identified as some of the frequently used e-resources among the faculty members and research scholars. It was observed that majority of faculty members and research scholars spent more than one hour for searching/accessing e-resources. The major purpose of using e-resources in case of faculty members was found to be for study and learning purposes while the majority of research scholars used e-resources for research work. It was also found that a higher percentage of faculty members used e-resources for updating knowledge as compared to the research scholars. Furthermore, it was revealed that the social scientists strongly agreed to the need of computer/internet literacy for the better
utilization of e-resources. Study concluded that there is a need to develop adequate computer literacy skills for the better utilization of e-resources.

Kamau and Ouma (2008) explored the impact of e-resources on the provision of health information services in Kenya. Results of this survey indicated that e-resources positively impact the library services and provision of information services would be inefficient and ineffective without the presence of e-resources. A large percentage of the respondents accepted that e-resources are important and can be relied upon for getting relevant and current health and medical science information.

Beard, Dale and Hutchins (2007) revealed that the use of electronic resources has positively impacted the respondents. Users recognized the importance of electronic resources in their learning experience and also admitted that development of skills is necessary for the productive use of e-resources. The study observed a high level of satisfaction with the use of electronic resources among the respondent. Users were satisfied with the different aspect of e-resources such as they were satisfied with the ease of accessing of e-resources, ease of using of e-resources, the range of e-resources that are available.

Appleton (2006) carried out a case study among the faculty and students of three colleges to explore and share their experiences of using electronic library resources. Structured interviews and discussion with teaching staff and students were used as tools to collect data. Analysis of the collected data revealed that teachers came to know about the e-resources from different sources such as college librarian, library services and discussion etc. Students interviewed in the survey said that they were introduced to e-resources through training and discussion groups. Students were asked to express their view on the benefits of electronic learning resources on their learning activities. They acknowledged remote access and the development of learning skills as the advantages possessed by the electronic learning resources. They also believed that e-resources were significant in raising the quality of their academic work, while teaching staff also strongly felt that the use of electronic resources had certainly improved their students’ learning experiences. Investigators concluded that the use of electronic learning resources enhances students’ learning experiences it also develops independent and autonomous learning among the students.
2.3 GENDER PERSPECTIVE IN THE USE OF WEB RESOURCES

Ani, Ngulube and Onyancha (2015) explored the perceived effect of accessibility and utilization of electronic resources on research productivity at Nigerian universities. On analyzing the perceived effect of accessibility and utilization of electronic resources on research productivity from gender perspective it was found that perceived effect of electronic resources on research productivity was gender neutral. However, the study reported a significant perceived positive effect of accessibility and use of electronic resources on research productivity among the respondents of the surveyed Nigerian universities.

Islam and Habiba (2015) reported that majority of male faculty members utilized e-resources for research purpose while the majority of female faculty members used e-resources for learning purpose. E-journals were found to be the most preferred source of information for female faculty members however, in case of male faculty members the highest number of responses were shared by two e-resources that is e- journals and library catalogues.

Samson (2014) compared the differences in the usage of e-resources between on-off campus campus users who are required to authenticate for accessing e-resources with on-campus users who are not required to authenticate. The study revealed that on-campus male and female students accessed library e-resources with the same intensity. However, a significant difference was observed between the gender categories in the off-campus use where the female students used e-resources more than male students.

Maxwell and Maxwell (2014) examined the effect of digital literacy among undergraduate students on the e-resources usage from gender perspective. Respondents were inquired whether their current level of computer literacy enhanced their digital resources and e-library use. The results revealed that a higher percentage of male 72.05% believed that their literacy level enhance use of digital resources and e-library in comparison of females (42.03%). 68.01% males 35.05% females were able to use the Internet and the digital resources with their existing level of computer literacy. Study concluded that there existed gender differences between male and female respondents, where males exhibiting better computer literacy and e-resources usage among the undergraduate students.
Baro, Endouware and Ubogu (2011) revealed that higher percentage of male medical students made use of online information resources for retrieving the related medical literature than the female students. The study concluded that this difference could be due to the variation in level of awareness and skills necessary for the effective use of the e-resources.

Ozoemelem (2009) explored the use of electronic resources by postgraduate students of the Department of Library and Information Science of Delta State University, Abraka, Nigeria and reported that usage of electronic resources by the students is quite high, moreover gender difference in use of electronic resource is quite negligible i.e. both male and female postgraduate students are using e-resources very frequently. Majority of the respondent accessed electronic resources from the cybercafé followed by using them in the department.

Zhang (2001) examined effect of variables such as age and gender and revealed that younger respondents tended to use Internet search engines more frequently than older respondents. Moreover, from gender’s perspective it was reported by the study that female researchers tended to use on-line databases more frequently than male researchers.

2.4 ATTITUDE TOWARDS THE USE OF WEB RESOURCES

Siddike and Islam (2014) studied the medical researcher’s acceptance and use of e-resources. The study reported that the attitude of the medical researchers was found to be very positive regarding the use of e-resources as majority of the researchers stated that e-resources are extremely useful for research purposes. Moreover a very high percentage of respondents agreed that e-resources are easy to use and save their valuable time, availability of search tools was also considered important by the users. While, the main purposes for using e-resources were to gather information on their related topic of interest, to get answers of some specific questions and to write research paper or article.

Gakibayo, Odongo and Obura (2013) suggested that respondents have a positive attitude towards e-resources as majority of them agreed to the benefits that are derived from electronic information resources. Majority of respondents agreed that the use of e-resources have benefitted them by providing access to a wider range of information.
Moreover, e-resources have been significant in providing faster access to current and up to date information.

Alkhanak and Azmi (2011) evaluated the features of information technology usage and assess the attitudes and preferences towards e-learning courses resources among the students at the public University in Malaysia, which offers online courses resources besides the traditional education. A questionnaire survey of the students indicated a strong reliance on university facilities to access the Internet from the campus, and in using the infrastructure facilities and services. Results also revealed that the students’ attitudes and preferences toward online e-learning resources were positive and the availability of information about courses was the most important for the students' attitude toward using e-learning, and for the improvement of their course performance. Furthermore, students prefer taking courses which incorporate the use of Information Technology, and indicated that activities provided in interactive multimedia or e-learning systems are more effective compared to traditional classroom activities.

Deng (2009) investigated the extent to which electronic resources are utilized in higher education in Australia. An online survey was conducted to investigate the pattern and trend of accessing and using electronic resources in university library. The study revealed that the usage of electronic resources is common in university environment with the rapid advance of information and communication technologies. The findings showed that the most frequently used electronic resources were library catalogue followed by online journals, web site information, and online newspapers. The main purpose of accessing electronic resources was in order to gather information on a specific topic. A total 86.2 per cent of the respondents selected the “ease-of-access” as the chief reason for using electronic resources. The major reason for not using electronic resources was that the respondents were not sure how to use the electronic resources. Other reasons were that they were not aware of e-resources; unable to access the resources was one of the other reasons. Author concluded that the overall attitude of respondents towards the use of electronic resources was found to be very positive. This was evident from the high frequency of use; the high percentage of users rated electronic resources useful and believed them to be invaluable and vital for work and study.
Swain and Panda (2009) argued that the attitude of library users is gradually shifting from the printed document to electronic resources. Web based resources are used more in comparison to with CD-ROM databases. Google and Yahoo were revealed to be the most frequently used search engines by the study.

Gowda and Sivalingaiah (2009) carried out a survey regarding the attitude of research scholars towards use of electronic information sources with the purpose of identifying preferences of research scholars towards print and electronic resources, the effectiveness of usage of e-resources among researchers of various disciplines, the impact of e-resources on the quality of research the result of the study revealed that there exist a significant difference in the preference of print and electronic resources among various discipline results also revealed that e-resources have created a positive hope among the research community in searching the information.

Oshan and Khudair (2008) identified and analysed factors associated with and influencing Saudi students’ attitude toward the Internet Saudi, with particular emphasis on investigating cultural and gender factors associated with and influencing female university students’ attitude towards using the Internet. Results reveal that Saudi women show positive attitudes and have lower anxiety toward using the Internet but they are less confident about their ability to control their Internet usage. Their lower ability to control their Internet usage may be related to confidence.

Peng, Tsai and Wu (2006) in a questionnaire survey investigated university students’ attitudes and self-efficacy towards the Internet, and explored the role that university students’ perceptions of the Internet may play in their Internet attitudes and self-efficacy. The results indicated that university students demonstrated positive attitudes and adequate Internet self-efficacy and that these students are more inclined to view the Internet as a functional tool. Gender differences existed in university students’ attitudes towards and perceptions of the Internet that is; male students demonstrate Internet attitude that were more positive than those of their female peers. Students who perceived the Internet as a leisure tool (e.g. as a tour or a toy) exhibited more positive attitudes and communicative self-efficacy than students who used the Internet as a functional technology.

Lombardo and Miree (2003) designed this study to measure business students’ initial perceptions and use of three information formats: print reference resources, the Web
resources, and library databases. They also explored the impact of library instruction on students’ attitudes about and use of these research tools. Results indicated that after library instruction, students held more favourable attitudes toward print resources and used them in their research more than they had initially expected. Although instruction did not have any impact on the perceived convenience of the Web, students found that the Web was even easier to use after instruction. Library instructions had statistically insignificant impact on students’ attitudes toward library databases. Though there was some decrease in frustration using library databases and an increased perception that these resources were convenient and reliable.

Hong, Ridzuan and Kuek (2003) investigated the success of a technology and Internet-enriched teaching and learning environment in moulding positive attitudes among students toward using the Internet for learning at a university in Malaysia. Students were provided with computers facilities, required to complete two compulsory generic courses in information technology, and the lecturers actively encouraged the use of information technology, in particular, the Internet in the teaching and learning processes. Results from the study indicated that students have positive attitudes toward using the Internet as a learning tool, adequate basic knowledge of the Internet, and view the learning environment as supportive of using the Internet for learning. Students with better basic Internet skills view the learning environment as promoting the use of the Internet favoured using the Internet for learning. Students’ attitude towards the Internet effected their perception and use of the technology.

Heterick (2002) reported attitude of faculty towards electronic resources and proclaimed that more than sixty percent of the faculty studied were comfortable using electronic resources. They believed that a variety of electronic resources are important for their research, and they considered electronic databases to be invaluable. In addition, sixty-two percent of the faculty members expected that they will become increasingly dependent on electronic resources in the future. The most often used resources were found to be online catalogues, full-text electronic journal databases, abstracting and indexing databases. More than seventy percent of all respondents considered their library's online catalogue to be "very important" to their research. However, the importance of this resource varies significantly by field. Just over 60% of the economists considered their library's online catalogue to be "very important", while nearly 90% of humanists regarded it as such. In fact, the home
library catalogue was found to be the most important electronic resource for humanists.

Herring (2001) explored attitudes of faculty toward the web as a research tool for their students’ research. Results show that although faculty members generally felt positive about the web as a research tool However, the faculty members questioned the accuracy and reliability of web content and were concerned about their students’ ability to evaluate the information found.

2.5 EVALUATION OF THE WEB RESOURCES

Walraven, Brandgruwel and Boshuizen (2009) investigated the criteria secondary educational students use while searching the Web for information, and it was reported that students do not evaluate source and information very often. When evaluating information on the web criterion used most often by the school students was, whether the information is connected to their task and helped in answering the information problem they aimed to solve. Criterion that was ranked second by the students was that the information “agrees with more sites” that is whether the same information was found on more web pages or was the information available only on that particular website.

Robins and Holmes (2008) investigated the relationship between aesthetics and credibility of information on web sites i.e. whether the more aesthetically designed website is considered more credible by the users. The results revealed that the higher the aesthetic quality of a site, the higher was it ranked in credibility by the respondents. That is even when the same content was presented to respondents after using different levels of aesthetic treatment; the content with a higher aesthetic treatment was judged as having higher credibility. The study concluded that higher aesthetic treatment increases the perceived credibility in other words a better designed site was considered more credible by the users.

Kim and Sin (2007) surveyed undergraduate students examining three different aspects related to their source selection behaviour viz. frequency of source use, criteria used for source selection, and perceived characteristics of sources. The study reported Web search engines to be the most frequently used source followed by Web sites/Portal. ‘Accuracy/trustworthiness’ received the highest score as the criteria for source evaluation. ‘Accessibility’ and ‘ease of use’ were the second and third criteria
respectively. The study also obtained an in-depth understanding of how an information source is perceived on different dimensions of characteristics. Participants tended to perceive that resources available on the web were highly accessible and easy to use. However, their perception of library electronic resources was less positive. While online catalogues (Online Public Access Catalogues: OPACs) received a high rating on ‘accessibility’ however, they were rated low on ‘ease of use’.

Park and Stapleton (2006) examined how faculty rate students’ web citations and how they look upon web sources in comparison with paper-based ones. In order to explore how teaching faculty assess the web references they encounter in students’ papers, criteria that were considered relevant for assessing web-referenced information were compiled from several sources and faculty members were asked to respond to the questionnaire that was centred on these criteria for web site evaluation. Faculty members were asked to indicate how they would weigh these criteria in their overall evaluation of a student’s web site by circling a number on a five-point Likert scale where one was “not at all important” and five was “very important”. The results made it clear that the faculty members gave priority to the same three criteria that are generally considered essential to assessing conventional print-based research sources namely academic rigor, objectivity, and reputation of the individual(s) or organization(s) responsible for the text and graphics.

Liu and Huang (2005) investigated how Chinese students made credibility assessments of web-based information for their research, and the evaluation criteria used by them for evaluation propose. The authors noted that both undergraduate and graduate students viewed the reputation of authors, institutional affiliation as positive indicators of credibility, with emphasis on information quality and accuracy. They further assessed the perception of American and Chinese students in analyzing the credibility of scholarly information on web and identifying the features that the students from both the countries considered important for making the web information credible and what all factors decrease the credibility of web information. Factors that were deemed highly credible by the students from both the countries were found to be inclusion of references in a document, document that were posted on a well-reputed website; document that was also published in a printed journal along with the web version. However, exaggerated, repetitive and biased content according
to the Chinese students seemed to decrease the credibility of web information, while in case of American students, multiple colours, strange fonts, broken images, information hosted on unknown or freely available web host, lack of .edu domain etcetera were the features that decreased the credibility of web information.

Liu (2004) investigated factors influencing students’ perception of the credibility of scholarly information on the web. Students perceived that the documents that have been previously published in printed journals are more credible as a result of the review and referee process it has to go through and gave greatest rating to such documents followed by the document that were hosted on a well-reputed website, author affiliation with a prestigious institution was considered as a more positive indicator of perceived credibility. Factors which negatively affected the credibility perception of the students regarding the web information included presence of grammatical errors and broken hyperlinks.

Ganeshan and Pandean (2004) discussed about the web resources and the techniques to be followed for identifying the relevant information. They mentioned that by application of some of the evaluation techniques it is possible to get the relevant information to some extent emphasizing on the importance of assessing the authority, currency, content, purpose, cost, connectivity, searching etc., as the criteria for evaluation of web resources.

Dong (2003) examined the use of Internet resources and the evaluation of their usefulness from the perspective of Chinese students and academics. The study found that users with higher educational degrees tend to spend more time on the Internet and find Internet resources more useful than less educated users. It was also revealed that World Wide Web was considered as the most valuable internet resource followed by library resources, databases, e-journals, and software. Accuracy and authority were considered as the most important factors for judging the quality of information on the Internet. Interface and design of web pages were of less concern for most users. It was evident from the results that the information content and quality was considered much more important than its format.

Metzger, Flanagin and Zwarun (2003) to research on college students' use of Web-based information, their perceptions of information credibility, and their online verification behaviours. Two studies were conducted to address these issues. Results
of the first study show that college students rely very heavily on the Web for both
general and academic information, and that they expect this usage to increase over
time. Results of the second study indicate that students find information to be more
credible than do those from a more general adult population, across several media and
considering many different types of information. Nonetheless, students verify the
information they find online significantly less.

Tillotson (2002) studied the student’s understanding of the need for the evaluation of
information on the web at two Canadian universities. Respondents seemed to be
aware about the fact that information on the web is not always accurate as a
considerable percentage of them admitted that they have come across incorrect
information on the web though, occasionally while only 4 percent of the respondent
stated that they have never found any incorrect information on the web. Moreover, the
respondents were aware that information on the web is not always up to date and
current as majority of them disagreed to the statement ‘everything on the web is up to
date’. Study further revealed that participants were able to evaluate web resources on
the basis of URL and domain name. The study concluded that the respondents were
aware about the standard evaluation criteria and they were using it for the evaluation
of information on the web.

Rieh (2002) conducted a study on scholars from various disciplines. The purpose of
the study was to understand the factors that influenced their judgment of quality and
authority relating to information on the web. It was revealed that, while searching
information on the web researchers were concerned with the information quality,
authority and the content of the information. Author noted that researchers made
judgment about information quality and cognitive authority (trustworthiness,
credibility of information) to a great extent when searching for information. One of
the significant findings of the study was that users preferred academic websites for
research purposes rather than the commercial sites. Scholars’ judgment of quality and
authority seemed to be influenced more by institutional sources e.g. source reputation,
type of source and URL domain type than by the individual level such as the author or
creators credentials.

Grimes and Boening (2001) carried out this research project with the purpose of
determining whether students are using unauthenticated resources, whether they are
evaluating their resources, and whether there is a gap between the quality of resources
expected by instructors and the quality of resources used by students. The findings show that students were using unauthenticated web resources. Moreover students were careless about the evaluation of the web resources i.e. they were only superficially evaluating the web resources. Study reported a gap between what instructors expect students to use and what students actually use. Study also emphasized on the role of librarians in making students learn about the various criteria for the evaluation of web resources so that they are able to find the pertinent information on the web.

Burton and Chadwick (2000) identified students’ preferred criteria when they evaluate research sources on the Internet and compared these responses to criteria students prefer when evaluating library sources. They also attempted to establish the percentage of students who have received training in evaluating library or Internet sources. Results of the survey revealed that the top ranked criterion by students while evaluating library sources was the “availability of the source” followed by the criteria such as “source is easy to understand”, “up-to-datedness of the facts” etc. However, in case of internet sources “source is easy to understand”, “source is easy to find” and “source is available” were the top three criteria, and three of the top five for library sources indicating that accessibility both physical and cognitive is primary for students. Majority of students received training in evaluating library sources from high school teacher (39%) rather than high school librarian (37%) while, in case of Internet sources student peers (17%) were the chief provider of the training followed by the College professors (16%) .

2.6 BARRIERS/ HINDRANCES

Bhat and Mudhol (2014) analyzed the various barriers that the medical professionals face in accessing e-resources and it was found that presence of viruses caused major problems to the respondents other problems included difficulty in finding relevant information limited access to computers, lack of time and too much information retrieved.

Amjad, Ahmed & Naeem (2013) examined the problems faced by the users on a five point likert scale from 5 (always) to 1 (Not at all). The results revealed that the Lack of Internet connection frequently interrupted the use of e-resources by the respondents as depicted by its Weighted Mean (4.57) followed by Credibility and quality issues.
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(Weighted Mean= 3.77), Information overload (Weighted Mean= 3.71), Power outages (Weighted Mean= 3.63), and Difficult Interface design (Weighted Mean=3.53) However, the Computer illiteracy obtained the lowest Weighted Mean score (2.79) indicating that computer illiteracy did not cause much of a hindrance in respondents use of e-resources.

Ahmed (2013) analyzed the problems that the respondents face in using e-resources subscribed by the library and it was found that the major problems that the users faced were as a result of poor ICT infrastructure and limited access to online resources in the universities under the study. Slow download speed, limited access to computers in the university and limited number of titles subscribed by the university were identified as some of the common problems among the respondents.

Madhusudan (2010) studied the various problems that the users face in accessing the e-resources and it was revealed that the most common problem in accessing e-resources was that of slow access speed (62 %), followed by download delays as 44 percent respondents stated that it takes too long to view/download pages, whereas 42 percent of them found it difficult to retrieve relevant information from the e-resources, 28 percent of the respondents regarded information overload as a problem while, lack of proper IT knowledge caused problem to 26 percent of the respondents.

Tahir Mahmood and Shafique (2010) identified the problems faced by humanities scholars at the University of the Punjab, Lahore, Pakistan in assessing electronic information resources. The respondents were asked to mention the problems faced by them while seeking information using the electronic resources and it was revealed that information being scattered in too many sources (90 %), due to the information explosion (87%) made it difficult to search the required information without assistance. Other common problems that the respondents stated were “electronic resources are too expensive” (87 %), “lack of time for searching” (79%), “non availability of electronic resources” (74%), “lack of training to use the electronic resources/products” (71 %), “lack of computer hardware or software” (71%), “lack of technical support” (68%) and “language barrier (most of the electronic material is in foreign languages)”.

Angello (2010) investigated the accessibility and use of electronic information resources by the livestock researchers in Tanzania. The study found the lack of
information literacy skills among most of the researchers as a reason to be limiting their access and use of e resources.

Ozoemelem (2009) observed a general opinion among Library and Information Science postgraduate respondents, that issues like large mass of irrelevant information, the need to filter the results from search were some of the basic problems encountered while using electronic resources, other problems included download delay, failure to find information, inadequate/lack of search skills, high cost of access, power outages, unavailability/disappearance of some websites, inaccessibility of some websites, difficulties in navigating through electronic resources.

Kamau and Ouma (2008) summarized the major challenges in accessing e-resources in Kenya as the lack of IT personnel to address the problematic areas. Restriction in accessing some of the sites due to limited bandwidth. Power fluctuations, problem in Internet connectivity, Low speed for accessibility. Viruses and pop-ups.

McMartin, Iverson, Wolf, Morrill, Morgan & Manduca (2008) revealed the most commonly reported obstacle in faculty members use of web resources was lack of time. Moreover lack of availability of useful digital resources was also perceived to be a barrier by majority of respondents.

Kumar and Kumar (2008) identified lack of information about how to use electronic information resources, lack of time to acquire skills needed to use electronic information resources, lack of support from the library staff as the major problem faced by the students and faculty for accessing electronic information sources.

Harley (2007) makes an in-depth study of humanities and social science faculty and their attitudes about use and non use of digital resources and for this purpose conducts a survey of 4,443 full-time and part-time faculty from specific discipline among diverse higher education communities: California research universities (UCs), liberal arts colleges, and community colleges in California. Survey primarily focused on answering reasons for non-use and barriers to use of digital resources. Lack of time was a major constraint, for the non use of digital resources by faculty, regardless of the institutions, while the other most-cited obstacles were the availability, reliability and plagiarism with online resources, and expense of the necessary equipment, both in the classroom and for personal use. Whereas the major barrier included difficulty in locating high-quality, pedagogically relevant materials from credible sources, and the
sheer volume of available materials, copyright issues, non-availability of full text, resources etc.

Ibrahim (2004) studied the use and perception of the United Arab Emirates University (UAEU) faculty members of electronic resources. Results indicated that frequency of using electronic resources was low. Reasons cited for low frequency of use were lack of time because of the time needed to focus on teaching; lack of awareness about the electronic resources provided by the library; ineffective communication channels, and language barrier.
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