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DIGITAL LITERACY AMONG FEMALE POSTGRADUATE STUDENTS OF KARNATAK UNIVERSITY, DHARWAD, KARNATAKA, INDIA: A STUDY

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Abstract

Digital literacy is the ability of an individual to locate, organize, evaluate, analyze and use the required information using digital technologies. It includes a working knowledge of several technologies and understanding of how it can be used. The main objective of the study was to determine the literacy of using digital resources by Female Postgraduate students of Karnatak University, Dharwad. The present study also determines the student's level of ICT skills, frequency of internet use by the respondents, ascertain their awareness about different databases and their familiarity with various search strategies to retrieve E-resources. The study also highlights the problems faced by students in accessing information. The major findings of the study highlight that Google search engine is the most preferred search engine, the majority of the respondents i.e. 53 (68.83%) are aware of Google scholar followed by Research gate, Twitter, Slideshare, Academic.edu. and LinkedIn, SciSpace, Research ID are least used among the academic social networking sites. It is also found that there is a lack of awareness among students regarding the use of various search strategies for efficient information retrieval and only 43 (55.84%) respondents have awareness of copyrights issues. The study also highlights the problems faced by the respondents such as poor network connectivity, access restricted by the university, which curtail the prospects of effective use of digital information resources.

Keywords: Digital literacy, Digital literacy skills, ICT literacy, Digital resources.

INTRODUCTION

With the modernization of digital technologies enormous amount of information is being generated in innumerable formats which raises the questions about authenticity, validity and reliability of information. In current digital environment, individuals are required to make use a variety of E-resources and information literacy is becoming increasingly important in order to perform tasks and solve the problems encountered by information users. These create special challenges in evaluating, understanding and using information in an ethical and legal manner. To overcome these challenges, the

skills of digital literacy and technology literacy are apparently becoming the “survival skills” of the present information age which is changing drastically due to technological developments.

Digital literacy refers to the ability to locate, organize, understand, evaluate and create information using digital technologies (**Warlick, 2005**). In the present scenario, the concept of literacy has changed along with the technological revolution. This is due to increase in technologies like, computers/laptops, smartphones, Ipod, etc. have become strongly integrated into the social infrastructure that an individual without adequate digital literacy skills would feel like an alien in the society (**Majid & Abazova, 1998**). The most important components of digital literacy are *accessing, managing, evaluating, integrating, creating, and communicating information* individually or collaboratively in a networked, computer-supported, and web-based environment. In order to negotiate with digital environment, people of present generation need to be digitally literate.

DEFINITIONS OF DIGITAL LITERACY

Digital literacy has been defined in various ways since the term was first introduced by **Paul Gilster** in 1997 in a book entitled ‘Digital Literacy’, in which the author defined Digital literacy as “the ability to understand and use information in multiple formats from a wide range of sources when presented via computers”. Later, in 2005 **Martin** defined digital literacy as “the ability to succeed in the encounters with the electronic infrastructures and tools that make possible the world of the 21st century”. The author in the study observed the need for mastering electronic tools as crucial to success in learning communities. Furthermore, **Bell and Shank (2008)** defined digital literacy as the awareness, attitude, and ability of individual to use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze, and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations in order to enable constructive social action; and to reflect upon this process”. **Despo and Nikleia (2011)** defines digital literacy as “the ability to understand information and more importantly to evaluate and integrate information in multiple formats that computer can deliver”. **American Library Association (2013)** defined digital literacy as the ability to use information and communication technologies to find, understand, evaluate, create and communicate digital information. Digital Literacy is an essential prerequisite for all people in the ongoing information evolution in digital culture which furnishes people with the skills that will help in making use of the digital technology in all spheres of life. It is the person’s proficiency to make and share information in different modes and formats, to generate, to communicate and to understand how and when digital technologies can best be used to support these processes.

REVIEW OF LITERATURE

Parvathamma and Danappa Pattar (2013) conducted a study to know the digital literacy competency of student's community of management institutes in Davanagere district, Karnataka. The findings of the study reveals that 22.96% of the respondents are aware of online databases i.e. 22.96% are aware of 'Capitaline' and only 2.96% are aware of 'IndiaStat'. The study also reveals that web portals are most widely used as an information source by the respondents while open access journals and institutional repositories are used least. **Sampath Kumar, Basavaraja and Gagendra (2014)** investigates the computer literacy competencies among rural and urban students in India to find out how rural and urban students use computers and also discusses the problems encountered by the students while using computers. **Nilgun Ozdamar- Kesin, Fatma Zeynep Ozata and Kerim Banar (2015)** examine the digital literacy competences and learning habits of learners enrolled in the open and distance education system of Anadolu University in Turkey. The study reveals that learners need training on how to use digital tools more efficiently for learning purposes. **Scholastic Ukwoma et.al (2016)** carried out a study to know the digital literacy skills possessed by the students of University of Nigeria, Nsukka. Majority of the students indicated that digital literacy has affected their academic performance to a high extent and discusses the problems encountered by the students. **Essam Mansour (2016)** carried out a survey of digital information literacy among library and information professionals. The study showed that there is a significant relationship between some of the demographic factors i.e. age and education with digital information literacy skills. **Wawta Techataweewan and Ujsara Prasertsin (2018)** have developed the digital literacy indicators for Thai undergraduate students for developing learning ability. The results revealed that digital literacy criteria for Thai undergraduate students consisted of four factors i.e. operation skills, thinking skills, collaboration skills, and awareness skills along with 12 indicators.

NEED FOR THE STUDY

In the contemporary information society, the digital literacy skills are required for exploring the electronic information resources for various purposes. In present scenario, most careers demand some level of understanding of how to use digital devices, how to search in internet to find required information, how to communicate electronically and to manage data. Thus, the world has reached the point where digital literacy has become an essential skill for finding employment (Tahmeena Nigar Sultana, 2018). In addition, technological advancements and increase in information sources have created a threat for the individuals to adapt them to the changing environment which is digitized, and students need to possess effective skills to develop new ways to interact with the sources of information available through the use of technologies.

With the understanding of digital technology as a basis for a lifelong learning. Digital literacy has positive effects on student's skills that are essential for successful learning. The enormous information resources are available in digital format and are more easily accessed than traditional paper-based resources for learning. Students who lack digital literacy may achieve poor performance in academic progress and face fewer employment opportunities. Hence, the present study is to determine the Digital literacy skills of Female Postgraduate students of Karnatak University, Dharwad.

OBJECTIVES OF THE STUDY

The main objectives of study were:

1. To know the level of ICT skills of the respondents
2. To find out the frequency of use of internet by the respondents
3. To examine the information search strategies adopted by the respondents.
4. To assess the awareness of databases among the respondents
5. To ascertain the awareness about Plagiarism among the respondents
6. To know the problems of respondents while accessing the electronic information resources.

METHODOLOGY AND SCOPE OF THE STUDY

Determination of Sample size

The total strength of the Female postgraduate students of Karnatak University, Dharwad is 1577 (www.ugc.ac.in). A simple random sampling technique was used to derive the sample size. Around 80 questionnaires were distributed among the students i.e. 5% of the total target population. Among 80 respondents, 77 have responded with a response rate of 96.25%.

Tool for Data Collection

A structured questionnaire was designed to collect the required data among Female postgraduate students of Karnatak University, Dharwad. The questionnaire covers the questions pertaining to students' knowledge about the use of Search strategies, search databases, awareness of academic social networking sites, reference management software (RMS), plagiarism and problems faced by the respondents in using digital information resources.

Scope of the study

The study was limited to the Female Post graduate students of Science and Social Science departments of Karnatak University, Dharwad.

DATA ANALYSIS AND INTERPRETATION

The analyzed data is presented in the tabular form. The data collected for this study are analyzed using simple percentage. The results of the analysis are presented in the following sections.

Demographic information of the respondents

The study found that, 42 (54.54%) respondents belongs to urban area and 35 (45.45%) respondents belongs to rural area. Among the total respondents, the majority i.e. 41 (53.24%) belong to the age group of 20 and 22, followed by 34 (44.15%) respondents between the age group of 23 and 25 and only 2 (2.59 %) respondents belongs to the category of 26 and above age group.

Frequency of Visits to Library

It is found from the study that, the majority of the respondents i.e. 30 (38.96%) visit library rarely, followed by 21 (27.27%) respondents visit library once in a week, 14 (18.18%) respondents visit the library every day, 9 (11.68%) visit once in a month, and only 2 (2.59%) respondents visit once in fortnight.

Information and communication technology skills (ICT skills)

Table 1: Respondents opinion about the use of computer and its application

| Statements | SA | Ag | DK | DA | SD |
|---|---------------|---------------|---------------|-------------|------------|
| I know the basics of computer and functions of hardware components | 32 (41.55) | 44 (57.14) | 1 (1.29) | 00 (00) | 00 (00) |
| I can retrieve the document using 'search' command to locate a file | 24 (31.16) | 52 (67.53) | 00 (00) | 1 (1.29) | 00 (00) |
| I am aware of URL, domain names and IP addresses | 16 (20.77) | 46 (59.74) | 14 (18.18) | 1 (1.29) | 00 (00) |
| I know how to protect information from viruses and digital threats | 18 (23.37) | 40 (51.94) | 15 (19.48) | 3 (3.89) | 1 (00) |
| I can download and use apps on different digital devices | 20 (25.97) | 50 (64.93) | 4 (5.19) | 3 (3.89) | 00 (00) |

*SA-Strongly agree; Ag-Agree; DK-Don't know; DA- Disagree; SD- Strongly disagree

**Figures in parenthesis indicate percentage

Table (1) highlights the opinion of students with the abilities to use computer. It clearly indicates that out of 77 respondents, 44 (57.14%) respondents agreed and 32 (41.55%) respondents strongly agreed for the statement 'I know the basics of computer and functions of hardware components'. Followed by 52 (67.53%) respondents agreed that they can retrieve the document using search command to locate file, 46(59.74%) agree that they are aware of URL, domain names and IP addresses, 40(51.94%) agree that

they know how to protect information from viruses and digital threats, 50 (64.93%) agreed that they can download and use various apps on different digital devices. It is observed from the table that majority of the respondents agreed for the statements which indicates that respondents have the ability to use computer and its applications.

Table 2: Proficiency level of the respondents in using Computer applications

| Computer application | Excellent | Good | Uncertain | Fair | Poor |
|--|------------------|---------------|------------------|--------------|--------------|
| Word processing applications (MS Word). | 34 (44.15) | 37 (48.05) | 00 (00) | 6 (7.79) | 00 (00) |
| Presentation applications (MS PowerPoint) | 27 (35.06) | 39 (50.64) | 1 (1.29) | 9 (11.68) | 1 (1.29) |
| Spreadsheet applications(MS Excel) | 28 (36.36) | 34 (44.15) | 2 (2.59) | 4 (5.19) | 9 (11.68) |
| Apart from MS Windows | 13 (16.88) | 6 (7.79) | 44 (57.14) | 7 (9.09) | 6 (7.79) |

*Figures in parenthesis indicate percentage

**1-Excellent, 2- Good, 3- Uncertain, 4- Fair, 5- Poor

A question was raised to indicate the proficiency level of students in using computer applications. Table (2) indicates that the majority of the respondents 37 (48.05%) are good and 34 (44.15%) are excellent in using a word processing application. Further, the majority of the respondents i.e. 39 (50.64%) are good and with least no. of respondents i.e. 9 (11.68%) are fair in using a presentation application. Followed by 34 (44.15%) respondents opines that they are excellent in using spreadsheet applications while 13 (16.88%) respondents stated that they are excellent in using operating system with majority of the respondents 44 (57.14%) felt uncertain.

Use of Search engines by the respondents

Table 3: Use of Search engines by the respondents

| Search engines | No. of respondents | Percentage (%) |
|-----------------------|---------------------------|-----------------------|
| Google | 77 | 100 |
| Yahoo | 35 | 45.45 |
| Alta vista | 3 | 3.89 |
| Bing | 13 | 16.88 |
| HotBot | 1 | 1.29 |
| Others | 3 | 3.89 |

To find out the information from the internet, students have to use one or the other search engines. The literacy towards the search engines was tested and presented in the above table. It is clear from the table (3) that all the respondents i.e. 77 (100%) use the Google search engine and it is highly preferred by all the respondents, followed by 35 (45.45%) respondents preferred Yahoo, 13 (16.88%) respondents use

the Bing search engine. Further, the very least number of respondents use other search engines like Altavista (3.89%) and only one respondent stated about Hotbot 1 (1.29%) while 3 (3.89%) stated that they use other search engines other than the above mentioned list. The table clearly indicates that Google search engine is the most preferred search engine by the respondents.

Purpose of using Internet and its frequency

Table 4: Purpose of using Internet and its frequency of use by the respondents

| Purpose of using Internet | Always | Often | Usually | Sometimes | Never |
|----------------------------------|---------------|---------------|----------------|------------------|--------------|
| For general/current information | 41 (53.24) | 32 (41.55) | 1 (1.29) | 3 (3.89) | 00 (00) |
| For research work | 29 (37.66) | 23 (29.87) | 8 (10.38) | 15 (19.48) | 2 (2.59) |
| Use of E-mail | 29 (37.66) | 24 (31.16) | 12 (15.58) | 11 (14.28) | 1 (1.29) |
| To access e-resources | 15 (19.48) | 33 (42.85) | 15 (19.48) | 10 (12.98) | 4 (5.19) |
| For communication | 35 (45.45) | 29 (37.66) | 10 (12.98) | 3 (3.89) | 00 (00) |
| For entertainment | 40 (51.94) | 25 (32.46) | 3 (3.89) | 9 (11.68) | 00 (00) |
| For social networking sites | 28 (36.36) | 28 (36.36) | 11 (14.28) | 6 (7.79) | 4 (5.19) |
| Online banking | 15 (19.48) | 23 (29.87) | 9 (11.68) | 23 (29.87) | 7 (9.09) |

*Figures in parenthesis indicate percentage

Table (4) shows the purpose and frequency of internet use among the respondents. The results of the table indicate that, majority of the respondents i.e. 41 (53.24%) have used the internet always to get general/ current information followed by 32 (41.55%) respondents often use the internet. Further, 29 (37.66%) respondents stated they use internet always for research work and to use e-mail purpose, 33 (42.85%) use often to access e-resources and 35 (45.45%) use internet always for communication, 40 (51.94%) always for entertainment in leisure time, 28 (36.36%) respondents use internet always for using social networking sites and equal number of respondents use often for the same purpose. While 15 (19.48%) respondents stated always in online banking service whereas least no of respondents stated never for the above mentioned purposes. The table clearly indicates that he majority of the respondents use the internet for one or the other purpose.

Use of E-resources

Table 5: Use of E-resources by the respondents

| E-resources | No. of Respondents | Percentage (%) |
|--------------------------------------|--------------------|----------------|
| e –books | 74 | 96.10 |
| e –journals | 20 | 25.97 |
| e –reference sources | 34 | 44.15 |
| Bibliographic and citation databases | 14 | 18.18 |
| e –theses and dissertations | 27 | 35.06 |
| Institutional repositories | 8 | 10.38 |
| CD-ROMs databases | 10 | 12.98 |

The table (5) shows the use of different e-resources by the respondents. It is clearly observed from the table that, majority of the respondents 74 (96.10%) preferred to use e-books and 34 (44.15%) respondents preferred to use e-reference sources followed by 27 (35.06%) e-thesis and dissertations. About 20 (25.97%) of the respondents prefer to use e-journals. Around 14 (18.18%) respondents opined that they use bibliographic and citation databases and followed by 10 (12.98%) respondents prefer to use CD-ROM databases with least number of respondents i.e. 8 (10.38%) respondents expressed to use Institutional repositories.

Awareness of Databases and Consortiums

Table 6: Respondents awareness about Databases and Consortiums

| Databases | No. of respondents | Percentage (%) |
|------------------------|--------------------|----------------|
| Web of Science | 51 | 66.23 |
| EBSCO | 7 | 9.09 |
| Biological Abstracts | 32 | 41.55 |
| Chemical Abstracts | 30 | 38.96 |
| ProQuest | 25 | 32.46 |
| Science Citation Index | 11 | 14.28 |
| Scopus | 9 | 11.68 |
| Project Muse | 20 | 25.97 |
| e-Shodhasindu | 25 | 32.46 |
| Springer Link | 11 | 14.28 |
| ERIC | 16 | 20.77 |

Table (6) reveals about respondents awareness in databases and consortiums. The study reveals that the majority of the respondents i.e. 51(66.23%) are aware of Web of Science, followed by 32 (41.55%) of the respondents are aware of Biological Abstracts. Around 25 (32.46%) respondents are aware of ProQuest and e-Shodhasindhu followed by 20 (25.97%) respondents are aware of Project Muse, 16 (20.77%) ERIC. The less number of respondents are aware of other databases like 11(14.28%) Springer Link and Science Citation Index, 9 (11.68%) Scopus, 7 (9.09%) EBSCO.

Awareness of Academic social networking sites

Table 7: Respondents awareness about Academic social networking sites

| Academic Social Networking sites | No. of respondents | Percentage (%) |
|----------------------------------|--------------------|----------------|
| Research gate | 35 | 45.45 |
| Google scholar | 53 | 68.83 |
| Slideshare | 20 | 25.97 |
| Academic.edu | 19 | 24.57 |
| LinkedIn | 15 | 19.48 |
| Twitter | 28 | 36.36 |
| SciSpace | 3 | 3.89 |
| ResearchID | 8 | 10.38 |

Use of academic social networking sites help students to stay in touch with the academic community in their respective field of specialization. A question was raised for the students to know the awareness of academic social networking sites. From table (7) it is found that, the majority of the respondents i.e. 53(68.83%) are aware of Google scholar to find required information followed by 35 (45.45%) respondents were aware of Research gate, 28 (36.36%) Twitter, 20(25.97%) Slideshare, 19 (24.57%) Academic.edu.. The responses on the aware and use of LinkedIn, SciSpace, ResearchID was least used in the academic social networking sites in academic work by the respondents. Hence, the data in the table clearly indicates that Google scholar and Research gate has more stakeholders in terms of usage by the post graduate students.

Awareness of Search strategies

The information on internet can be searched using various search strategies to retrieve information sources. It is observed from the study that, 64(83.11%) respondents use simple key words, 37(48.05%) respondents are aware and use Boolean operators. Followed by 33(42.85%) respondents are aware of field search strategies such as, through title, URL etc. whereas, 32(41.55%) respondents are aware of natural language searching with very less number of respondents i.e. 19(24.67%) are aware of using controlled vocabulary followed by equal number of respondents are aware of Phrase search 10(12.98%) and Truncation and wildcards 10(12.98%) search techniques.

Awareness of copyright issues

Table 8: Respondents awareness about copyright issues

| Awareness about Plagiarism | No. of Respondents | Percentage (%) |
|---------------------------------|--------------------|----------------|
| Yes | 43 | 55.84 |
| No | 34 | 44.15 |
| Total no. of respondents | 77 | 100 |

Table 8.1: Respondents opinion about Plagiarism

| Statements | SA | Ag | DK | DA | SD |
|--|---------------|---------------|--------------|-------------|-------------|
| Copying others works without crediting the source constitutes plagiarism | 12 (27.90) | 24 (55.81) | 4 (9.30) | 2 (4.65) | 1 (2.32) |
| Publishing own work for second time that will be treated as 'Self plagiarism'. | 5 (11.62) | 35 (81.39) | 3 (6.97) | 00 (00) | 00 (00) |
| Self-plagiarism is not punishable | 3 (6.97) | 32 (74.41) | 5 (11.62) | 1 (2.32) | 2 (4.65) |
| Translating from other language is not considered as Plagiarism | 8 (18.60) | 28 (65.11) | 7 (16.27) | 00 (00) | 00 (00) |
| Violation of Plagiarism rules have to face serious consequences | 8 (18.60) | 30 (69.76) | 5 (11.62) | 00 (00) | 00 (00) |
| I always give credit to the works of others by citing in a proper way | 6 (13.95) | 34 (79.06) | 3 (6.97) | 00 (00) | 00 (00) |

*SA-Strongly agree; Ag-Agree; DK-Don't know; DA- Disagree; SD- Strongly disagree

**Figures in parenthesis indicate percentage

The question was raised to know the respondents awareness about copyright issues. From table (8) out of 77 respondents, 43(55.84%) respondents stated that they have awareness while only 34 (44.15%) respondents are not aware about copyright issues.

It is clearly observed from the table (8.1) that, among 43 (55.84%) respondents who were aware of copyright issues, 24 (55.81%) respondents agree with the statement '*Copying others works without crediting the source constitutes plagiarism*' and one respondent strongly disagree with the statement. Around 35 (81.39%) respondents stated agree with the statement '*Publishing own work for second time that will be treated as 'Self plagiarism'*', and followed by 32 (74.41%) respondents agree with the statement '*Self-plagiarism is not punishable*'. In addition to this, 28 (65.11%) respondents stated agree for the statement '*Translating from other language is not considered as Plagiarism*', 30 (69.79%) respondents agreed that '*Violation of Plagiarism rules have to face serious consequences*', and lastly only 6 (13.95%) respondents strongly agree and 34 (79.06%) respondents agree with the statement '*I always give credit to the works of others by citing in a proper way*'.

Problems in using Digital resources

Table 9: Problems faced by the respondents in using Digital Resources

| Problems | No. of respondents |
|--|--------------------|
| Lack of proper guidance | 64(83.11) |
| Lack of knowledge of advance search techniques | 29(37.66) |
| Poor network connectivity | 46(59.74) |
| Time constraints | 6(7.79) |
| Access denied by university | 26(33.76) |

A question was raised to know the problems encountered by the respondents in using digital resources. It was found from the table (9) that, majority of the respondents i.e. 64 (83.11%) respondents stated they lack proper guidance, 72(93.50) respondents indicate that they face poor network connectivity and followed by 29 (37.66) respondents felt they lack knowledge about advance search techniques, 26 (33.76) respondents faced problem of access denied by university, 6(7.79) respondents stated problem of time constraints. The table clearly indicates that the major problem lies with the respondents are lack of proper guidance, poor network connectivity and Lack of knowledge about advance search techniques.

Mode of Instruction to acquire digital literacy skills

Table 10: Preferred Mode of Instruction by the respondents to acquire digital literacy skills

| Mode of Instruction | No. of respondents | Percentages (%) |
|-------------------------------|---------------------------|------------------------|
| Seminar/ workshops | 58 | 75.32 |
| Training programmes | 47 | 61.03 |
| Computer assisted instruction | 18 | 23.37 |
| Specific course | 13 | 16.88 |

The respondents were asked to give their opinion regarding the preferred mode of instruction for acquiring information literacy skills. The data presented in table (10) reveals that, majority of the respondents i.e. 58(75.32%) prefer seminar/workshops and followed by 47 (61.03%) respondents prefer training programmes. Further, less number of respondents i.e. 18(23.37%) respondents opine other mode of instruction i.e. computer assisted instruction and 13(16.88) respondents stated Specific course to acquire digital literacy skills.

MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION

Major findings of the study

1. The majority of the respondents i.e. 77 (100%) use the Google search engine and it is highly preferred by all the respondents, followed by 35 (45.45%) respondents preferred Yahoo, 13 (16.88%) respondents use the Bing search engine. The Google search engine is the most preferred search engine by the respondents.
2. The majority of the respondents i.e. 74 (96.10%) prefer to use e-books and 34 (44.15%) respondents preferred to use e-reference sources and followed by other sources such as e-thesis and dissertations, e-journals, bibliographic and citation databases, CD-ROMs databases with the least number of respondents i.e. 8 (10.38%) respondents expressed to use Institutional Repositories.

3. The majority of the respondents i.e. 51 (66.23%) are aware of Web of Science and followed by other databases like Biological Abstracts, ProQuest, e-Shodhasindhu, Project Muse and ERIC with the less number of respondents are aware of other databases like Springer Link, Science Citation Index, Scopus, EBSCO.
4. The majority of the respondents i.e. 53 (68.83%) are aware of Google scholar to find required information followed by Research gate, Twitter, Slideshare, Academic.edu. and the use of LinkedIn, SciSpace, Research ID was least used in the academic social networking sites which clearly indicates that Google scholar has more stakeholders in terms of usage by the postgraduate students.
5. The majority of the respondents i.e. 64 (83.11%) use simple keywords and 37 (48.05%) of the respondents are familiar with Boolean operators with the least number of respondents use other search strategies like field search, natural language search, controlled vocabulary, Phrase search, Truncation and wildcards to access electronic resources.
6. It was found from the study that, majority of the respondents i.e. 43 (55.84%) were having awareness about plagiarism and remaining 34 (44.15%) of the respondents were not aware of plagiarism.
7. Majority of the respondents i.e. 64 (83.11) stated that they lack the proper guidance followed by other problems such as poor network connectivity, lack knowledge about advanced search techniques, access denied by the university and time constraints faced by the respondents.
8. The majority of the respondents i.e. out of 77 respondents, 58 (75.32%) respondents prefer a seminar/workshops and followed by 18 (23.37%) respondents opine computer assisted instruction and 13 (16.88) respondents stated Specific course to acquire digital literacy skills.

Suggestions

Based on the findings and opinion given by the respondents the following suggestions are made.

1. Though there are number of databases in the different subjects, the respondents are aware of aware of Web of Science and followed by other databases like Biological Abstracts, ProQuest, e-Shodhasindhu, Project Muse and ERIC with the less number of respondents are aware of other databases like Springer Link, Science Citation Index, Scopus, EBSCO. Therefore, it is suggested to the library authorities must create awareness about these databases and promote their use.
2. It is evident from the study that, the majority of the respondents use simple keywords than the other search strategies like use of Boolean operators, Truncation and wildcards, natural language searching, phrase search, controlled vocabulary search was found to be not satisfactory. Since these search strategies are important to make use of e-resources. Hence, the study suggests to the library authorities

to make it possible by conducting training programs and information literacy programs to the students to focus more on improving search skills to retrieve e-resources effectively.

3. The study reveals that awareness about copyrights issues among the respondents is less. Hence, it is suggested to the library authorities to overcome this challenge by organizing regular workshops, training programs, information and digital literacy programs.

Conclusion

Digital literacy has become an essential skill in delivering quality and relevant services to every individual in the society, because of strong penetration of electronic information resources. This raising invasion of information resources pushes the need of digital literacy of every individual in the society. Although students are capable of using various technologies, but they are not able to use it effectively when it comes to the learning process. Thus, Digital literacy plays a vital role in defining their abilities to succeed in academics and it opens up opportunities to learn and it empowers innovation in ways that were unimaginable in the past few years ago. Therefore, the empowerment of women has become one of the most important concerns of the 21st century where women still come across various problems such as lack of education, awareness, accessibility, affordability and often restrictions to move out of home. It is necessary to build up women's capacities to enable them to deal with technologies and help them to use effectively in productive activities.

Being digitally literate is the need and necessity for upliftment and empowerment of women, which helps to build women empowered society. Digital literacy is becoming as important as other traditional literacy skills. Special attention must be needed to encourage women to acquire technological skills and help them stay updated with emerging technologies. To encourage the digital literacy skills, Government of India has started National Digital Literacy Mission (NDLM) with an aim to empower one member in a family with digital literacy skills. Therefore, the Female students should be encouraged to become digitally literate through providing education and training in using digital resources.

Hence, the present study is an attempt to know the Digital literacy competencies among Female Postgraduate students of Karnatak University, Dharwad. The findings of the study reveal that students lack the searching skills required to find the information. Therefore, it is suggested to the authorities of the university and library professionals must take initiatives in providing proper guidance towards using different search strategies and in developing develop digital literacy skills among female students.

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