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# Digital Information Literacy among Health Sciences Professionals: A Case Study of GGS Medical College, Faridkot, Punjab, India

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## Abstract

This paper is basically a case study and an attempt has been made to highlight the information literacy skills among the health science professionals i.e. teachers and postgraduate students of Guru Gobind Singh Medical College (constitute college of Baba Farid University of Health Sciences), Faridkot. The information literacy has various parts such as Computer Literacy, Library Literacy, Media Literacy, Network Literacy and Digital Literacy. The present study is only focused on the assessment of digital information literacy among the health sciences professionals within the scope of the study. The data for the study was collected by using a questionnaire and interviews were also conducted to fill up the gap of the area in health domain special reference to Baba Farid University of Health Sciences, Faridkot.

**Keywords:** Information Literacy, Digital Information Literacy, Health Science Professionals

## Introduction

Information is a vital aspect of modern society. It is an instant power and tool to decision making, lifelong learning and self actualization to transform information into knowledge and vice-versa. The quality of decisions depends upon the availability of quality information.

In this information age, the volume of information and complexity of the available information are increasing significantly. It is emphasis on acquiring of basic knowledge and skills to deal effectively with information whether in print or digital form. The knowledge and skill of information sources in one's subject area, the ability to construct effective search strategies, the ability to critically appraise information sources and the ability to use these sources appropriately is called information literacy. It is the new face of user education programmes.

In broader context, information literates have been described as those who know when they need information, and are then able to identify, locate, evaluate, organize and effectively use the information to address and help to resolve personal, job-related, or broader social issues and problems.



**Editor: Eli Cohen**

## *Digital Information Literacy: Concepts and Current Trends*

Qwusu-Ansah (2005) points out that the term information literacy was first used by Paul Zurkowski, President of the Information Industry Association in 1974. Zurkowski described the information literate individuals as people trained in the application of information resources to their work. During the 1980s, the term gradually started to replace the concepts of user education and library skills.

In his comprehensive paper "Information and digital literacies: a review of concepts", Bawden identifies various terms related to information literacy which have been in the literature. These include:

- Information Literacy;
- Computer Literacy;
- Information Technology;
- Library Literacy;
- Media Literacy;
- Network Literacy;
- Digital Literacy.

This study is focused on the last point of Bawden i.e. Digital Literacy. The investigator tried to investigates the digital information literacy among the health sciences professionals i.e. teachers and students within the scope of the study. Glister (1997) defines digital literacy as, "set of skills to access the Internet; find, manage and edit digital information; join in communications; and otherwise engage with an online information and communication network. In simple terms, digital literacy is the ability to properly use and evaluate digital resources, tools and services and apply it to their lifelong learning process." The most essential aspect of digital literacy is the ability to make informed judgments about what is found online, for unlike conventional media, much digital information is unfiltered by editors and open to the contribution of all.

In other words, digital literate people are able to:

- Determine the extent of digital information needed;
- Access the needed digital information effectively and efficiently;
- Evaluate digital information sources and services critically;
- Incorporate selected digital information into one's knowledge base;
- Use of digital information effectively to accomplish a specific purpose; and
- Understand the economic, legal, and social issues surrounding the use of digital information access and use of this information ethically and legally.

Digital Information Literacy is a major component of information literacy. It helps users cope with information from a variety of electronic formats and provides techniques and methods of collecting digital resources. It creates awareness of issues like copyright and intellectual property rights in an electronic environment.

Information is available from many sources and in many formats, such as printed text, television, videos, library databases, web sites, and more. To be "information literate" one needs to know why, when, and how to use all of these tools and think critically about the information they provide. One can't become information literate overnight. His abilities will improve over time as he gains expertise in the topics he chooses to investigate and as he practice searching for, selecting,

and evaluating the information and ideas he encounter. In nutshell information literate students are supposed to:

- Be competent, independent learners;
- Actively engage in the world of ideas;
- Confidently solve problems;
- Know what the relevant information is;
- Use technological tools to access information and communicate;
- Operate comfortably in situations where there are multiple answers or no answers;
- Have high standards for their work and use information ethically;
- Create quality products.

## *Problem Statement*

In today's modern society technological advancement opens gateways of very vast availability of information through digital resources but question arise are we aware of all the digital resources available to collect, organize and analyze the information? The answer to the above mention question is Digital Information Literacy. So, this paper investigates the digital information literacy level of health sciences professionals.

## *Scope of the Study*

The present study covers the Digital Information Literacy (DIL) level of health sciences professionals of GGS Medical College (constitute college of Baba Farid University of Health Sciences), Faridkot.

## *Objectives of the Study*

1. To recognize the e- resources needed by health sciences professionals and purpose for the use.
2. To know the I.T. Skills that are needed for collecting, organizing and analyzing the digital information among health sciences professionals.
3. To investigate the searching tools and evaluation criteria used for e-resources by the health sciences professionals.

# Review of Literature

Powell and Case-Smith (2003) conducted a study to assess the information seeking skills of Ohio State University's Occupational Therapy graduates. The results of the study revealed that a majority of the respondents prefer to use information resources that are readily available to them, such as advice from their colleagues or supervisors (79%) and the Internet (69%), rather than the evidence available in the journal literature.

Durando and Oakley (2005) described in his paper on developing information literacy skills in nursing and rehabilitation therapy students for Queen's University in Kingston, Ontario. The short term goal of these programs is to teach undergraduate students advanced search strategy skills and critical appraisal techniques that will enable them to explore the implications of their literature findings.

Maharana and Mishra (2007) conducted a survey of digital information literacy of faculty at Sambalpur University. The response rate was 66.7%. The study revealed that demand for e-resources mainly e-journals is on the top with 82.86% responses. A majority of the respondents i.e. 92.8% used the e-resources to keep their knowledge up-to-date. The study also revealed that authenticity and reliability are the most important parameters for evaluation of online information; and all the respondents expressed the wish that the library should take initiative in promoting information literacy at the university level.

Karisiddappa and Rajgoli (2008) conducted a survey in search of information literacy programmes conducted in selected institutions at Bangalore. The study revealed that more than 43% of the libraries are conducting information literacy programmes for the new users. The majority of the libraries are conducting IL programmes on searching techniques and use of electronic information with response rate of 78.26%. The study also revealed that 95.65% of the respondents were agreed that information literacy programmes are helpful today as much of the information is available in electronic formats.

Choudhury and Sethi (2009) conducted an analytical study on computer literacy of library professionals in the university libraries in Orissa. The study focused on the self efficacy in the context of information literacy. The study was conducted to identify the level of skill and efficacy presented by the library professionals of university libraries of Orissa, India. The study concluded that the library professionals are in the early stages of full-grown information literacy programme.

The review of literature reveals that there is a large amount of literature available in the shape of survey and case studies to judge the various professionals, but no in depth study has been done on the health science professionals. The present study is an attempt to clearly exhibit the status of information literacy among the health sciences teachers and postgraduate students of GGS Medical College (constitute college of Baba Farid University of Health Sciences), Faridkot.

# Research Methodology

The investigator decided to use the survey method for the purpose of this study as a means to collect data. A survey instrument was developed in the form of a questionnaire (see the Appendix) and interviews were also conducted to fill up the gap if any. The random method was used to collect the data. The number of postgraduate students admitted at GGS Medical College was 50 and teachers were 100. A sample of 50% was considered for students (25) and teachers (50) to provide satisfactory results. The investigator received 50 questionnaires back with a response rate of 66.66%. The respondent's answers were entered into an SPSS database and results were computed.

# Data Analysis and Results

## *IT Skills of the Respondents*

The respondents were asked to indicate their Information Technology (IT) skills, which is the basic requirement to be a digital information literate person. The results of Table 1 shows that a majority of the respondents have knowledge of Internet applications i.e. 42(84%), and knowledge of MS-Office and Desktop Publishing Tools come on the second position with 29(58%) responses. 25(50%) respondents have knowledge of multimedia applications and only 3(6%) have knowledge computer programming language.

**Table 1: IT Skills of the Respondents**

| Kind of IT Skills | Yes | No |
|---|---|---|
| Internet | 42 (84%) | 8 (16%) |
| MS-Office and Desktop Publishing Tools (DTP) | 29 (58%) | 21 (42%) |
| Multimedia Applications (Audio, Video and Audio-Visual) | 25 (50%) | 25 (50%) |
| Programming Languages | 3 (6%) | 47 (94%) |

## *Types of Electronic Information Resources*

The respondents were asked to indicate the electronic information sources needed by them for their academic pursuits. Table 2 exhibits that a majority of the respondents i.e. 41(82%) indicated that they required e-journals to up-to-date for their knowledge. E-articles and e-theses & dissertations, however, are needed by 32(64%) and 17(34%) respondents respectively. The need for other sources of e-information such as e-databases, and e-books is not significant.

**Table 2: Types of E-Information Resources**

| Type of E-resources | Yes | No |
|---|---|---|
| E-journals | 41 (82%) | 9 (18%) |
| E-articles | 32 (64%) | 18 (36%) |
| E-books | 5 (10%) | 45 (90%) |
| E-databases | 6 (12%) | 44 (88%) |
| E-theses and dissertations | 17 (34%) | 33 (66%) |

## *Purpose of Using E-resources*

Table 3 indicates the purpose of using electronic information resources. A majority of the respondents i.e. 47(94%) stated that they need electronic resources for the purpose of enhancement in their present status of knowledge. 39(78%) respondents required e-resources to support their research work, followed by 30(60%) for preparing their assignments and for writing papers for publication. 26(52%) indicated that they needed e-resources to prepare their course material for teaching and learning, followed by 18(36%) to attend or organize seminars/ workshops.

**Table 3: Purpose for Using E-resources**

| Purpose of Using Electronic-information Resources | Yes | No |
|---|---|---|
| To update their knowledge | 47 (94%) | 03 (6%) |
| To support research | 39 (78%) | 11 (22%) |
| To prepare course material for teaching and learning | 26 (52%) | 24 (48%) |
| To attend or organize seminars/ workshops | 18 (36%) | 32 (64%) |
| To write papers or assignments | 30 (60%) | 20 (40%) |

## *Use of Internet Searching Tools*

The electronic information sources are generally access by using of various searching tools available on the Internet. Table 4 depicts that 49(98%) respondents use the Internet search engines for searching any resource from the Internet. 23(46%) use the bibliographical databases like web OPAC etc. to find the resources, followed by 19(38%) respondents who use the digital libraries for searching the information from the Internet. 13(26%) respondents preferred to search through subject gateways and only meager number of the respondents i.e. 4(8%) are using the websites to find any information from the Internet.

**Table 4: Use of Internet Searching Tools**

| Types of Internet Searching Tools | Yes | No |
|---|---|---|
| Search Engines | 49 (98%) | 1 (2%) |
| Subject Gateways (In their respected subject area) | 13 (26%) | 37 (74%) |
| Online Bibliographic Databases | 23 (46%) | 27 (54%) |
| Digital Libraries | 19 (38%) | 31 (62%) |
| Websites | 4 (8%) | 46 (92%) |

## *Evaluation of Internet Resources*

Table 5 exhibits the evaluation parameters used by the respondents for evaluating the electronic information resources. 40(80%) respondents consider “Authenticity” as the most important crite-

ria for evaluation, followed by "Reliability" with 36(72%) respondents. Other parameters for evaluation of Internet resources are used by the respondents in range of 14% to 30% respectively.

**Table 5: Evaluation of Resources**

| Evaluation Parameters of Internet Resources | Yes | No |
|---|---|---|
| Authenticity | 40 (80%) | 10 (20%) |
| Reliability | 36 (72%) | 14 (28%) |
| Usability | 15 (30%) | 35 (70%) |
| Coverage | 12 (24%) | 38 (76%) |
| Comprehensive | 10 (20%) | 40 (80%) |
| Accessibility | 7 (14%) | 43 (86%) |

# Major Findings

- A majority of the respondents i.e. 84% have indicated that they have knowledge of Internet applications, followed by knowledge of MS-Office and Desktop Publishing Tools with 58% responses.
- Maximum number of health science professionals who responded to the survey expressed their need for electronic information resources and preferred e-journals as most favorable e-resource with 41(82%) respondents.
- A majority of the health science professionals under survey i.e. 94% indicated that they need electronic resources for the purpose to update their knowledge in their respective subject area and 39(78%) required e-resources to support their research work.
- Search engines are the most frequently used searching tool on the web for finding the information from the Internet with 49(98%) respondents.
- Authenticity and reliability are the most important parameters used by the respondents for evaluation of electronic information sources with 80% and 72% responses respectively.
- All the respondents expressed their need that the university library & informatics division should take initiative to start a course on "Information and Research Skills" and it should be included in the postgraduate courses.

# Suggestions

On the basis of the findings of the study, the investigator set the following suggestions:

- The health science teachers of the university and its constituent colleges should be trained how to search/ browse for e-resources, its evaluation etc.

- The university libraries and information centres should start information literacy programmes (workshop, seminar etc.) to educate the health sciences professionals specially the teachers and postgraduate students.
- The information and research skill course should be included in the curriculum of health sciences post-graduate courses of the university.

# Conclusion

As off high rate of technological advancement and that too with high pace, the teaching community and resources found themselves in an imbalance state when it comes to availability of information. So, in this situation it is very important that educational institutes should play a vital role in spreading the knowledge of these digital information resources among health sciences professionals.

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# Appendix
## Questionnaire

(Please tick at the appropriate place)

Name : _____

Designation : _____

Age : 21-25 ☐ 26-30 ☐ 31-35 ☐ 41-45 ☐

More than 46 ☐

Department : _____

1. Do you have knowledge of computer? Yes ☐ No ☐

**A. IT Skills**

(Please indicate your IT skills)

| **Kind of IT Skills** | **Yes** | **No** |
|---|---|---|
| Internet | | |
| MS-Office and Desktop Publishing Tools (DTP) | | |
| Multimedia Applications | | |
| Programming Languages | | |

**B. Types of Electronic Information Resources**

(Please indicate the e-resources needed by you)

| **Type of E-resources** | **Yes** | **No** |
|---|---|---|
| E-journals | | |
| E-articles | | |
| E-books | | |

| | | |
|---|---|---|
| E-databases | | |
| E-theses and dissertations | | |

**C. Purpose of Using E-resources**

(Please indicate the purpose of using e-resources)

| **Purpose of Using Electronic-information Resources** | **Yes** | **No** |
|---|---|---|
| To update their knowledge | | |
| To support research | | |
| To prepare course material for teaching and learning | | |
| To attend or organize seminars/ workshops | | |
| To write papers or assignments | | |

**D. Use of Internet Searching Tools**

(Please indicate the searching tools used for finding e-resources)

| **Types of Internet Searching Tools** | **Yes** | **No** |
|---|---|---|
| Search Engines | | |
| Subject Gateways | | |
| Online Bibliographic Databases | | |
| Digital Libraries | | |
| Websites | | |

**E. Evaluation of Internet Resources**

(Please indicate the evaluation criteria used for evaluation of e-resources)

| **Evaluation Parameters of Internet Resources** | **Yes** | **No** |
|---|---|---|
| Authenticity | | |
| Reliability | | |
| Usability | | |
| Coverage | | |
| Comprehensive | | |
| Accessibility | | |
| | | |

**F. Any other information and suggestions**

_____

_____

_____

**Signature**

Thanking you for your time and kind cooperation.

## Biography

**Dr. Iqbal Singh Brar** (Ph.D. in Library and Information Science) is Librarian (Selection Grade) of Malout Institute of Management & Information Technology, Malout, Punjab, India. He has more than 22 years work experience in librarianship. He has attended more than 50 conferences. He has published 6 books and more than 30 research papers in national and international journals and proceedings and 3 chapters in books.