

## Role of Information Literacy in Higher Education During Recent Global Pandemic: An Overview

S.M.ABBAS\*

This paper discusses the concept information literacy, its role in higher education and the importance associated with information literacy in times of recent global health pandemic. Information is taking a new form each day and is continuously evolving with the changing world. People should become aware and make informed choices as a user of information. The use of information literacy helps an individual to recognize when information is required, how it can be located, evaluated and used productively. The entire education system around the globe faced the wrath of the lockdown period triggered due to the spread of Novel Corona virus (nCov-19). The intended purpose of this paper is to address the issues pertaining to information literacy in Higher Education Institutions (HEIs) during pandemic, to understand the role and usefulness of information literacy in times when there is a difficulty in moving ahead with the traditional student-teacher learning system.

**Keywords:** *Information literacy, Information literate, online learning, HEIs, teaching-learning system, information communication technology (ICT), pandemic, Covid-19.*

### 1 INTRODUCTION

Information literacy is an exercise involving lifelong learning that begins at a younger stage and continues till the end of different phases of life. Initially, a person acquires information through secondary and higher education while later through participating in and conducting research. The teachers are responsible for disseminating knowledge and information through academic programmes. The capacity to make choices, solve problems and

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\* Documentation Officer (Sr. Scale), MMAJ-Academy of International Studies, Jamia Millia Islamia, New Delhi

learn new things is established through information literacy. Information literacy is a process through which an individual knows why and when information is desired, where information can be found, how it can be evaluated and used in an ethical manner. Information literacy is an individual's skills to collect, organize, process and analyze information based on the findings to form informed decisions. Information literacy itself is a collection of a number of other literacy's viz. Media Literacy, Computer Literacy, Information Technology Literacy, Internet Literacy, Digital Literacy, etc. The concept of information literacy emphasizes on resource-based learning rather than text-based learning.

## **2 INFORMATION LITERACY CONCEPT**

An intricate relationship between technology and literacy exists. The printing press revolution led to mass production of books leading to the emergence of book culture, library collections and accelerated literacy around the world. Later, mass media and information oriented society inspired the development of information literacy as a pedagogical response to these changes and expansion of internet and web generated approaches to information and communication technology<sup>1</sup>. Owing to the increased usage of electronic databases/resources and the changes in user behavior when it comes to searching and using data for learning and study, the idea of information literacy has gained traction<sup>2</sup>.

### **2.1 INFORMATION LITERACY DEFINITIONS**

A number of definitions of information literacy have been stated by different scholars and scholarly organizations. Some of them are being presented here. ACRL<sup>3</sup> defines Information Literacy "a collection of expertise that allow people to recognize at what time information is required and have the capability to efficiently identify, evaluate and use the information needed". The American Library Association (ALA) Presidential Committee on Information Literacy, Final Report<sup>4</sup> states, "To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information". Prague Declaration<sup>5</sup> argued that Information Literacy is a requirement for successful participation in an information society and forms part of the fundamental human right to lifelong learning. According to Chartered Institute of Library and Information Professionals<sup>6</sup> it requires knowledge of one's information

interests and needs, the ability to define, locate, analyze, coordinate, use and communicate information effectively to tackle problems or issues at hand. Information literacy realizes when and why you need data, where to find it, how to ethically analyze, use and interact. West Chester University of Pennsylvania<sup>7</sup> considers Information literacy is the collection of knowledge and skills essential to define the information vital for a task and then to efficiently and effectively find, understand, assess and use information within the specified ethical and lawful framework. In the view of Gandhe<sup>8</sup> ALA definition of Information literacy is generally used.

## **2.2 NEED FOR INFORMATION LITERACY**

The advent of information communication technology has led to a rapid and abundant creation of information which is continuously created, stored, processed, analyzed and communicated through various electronic mediums. Internet has played the most important role in providing information to anyone sitting anywhere around the world. Users obtain this information in the form of raw and un-grouped data in unprocessed formats, raising concerns about its authority, precision and reliability. In order to get reliable and accurate information out of this raw and unfiltered data, a number of skills are needed to handle extensively produced, rapidly increasing information.

## **2.3 IMPORTANCE OF INFORMATION LITERACY**

Information Literacy theory is deemed to be a problem solving approach that contributes to a nation's development by making an individual 'Information Literate' and helps to bridge the difference among the information poor and information rich. Information literacy is a lifelong learning process that acts as a prerequisite for creation of new knowledge, social inclusiveness, and learning for life. It is quite evident that an individual cannot learn everything just by attending few years in college. But, information literacy helps an individual to develop critical thinking skills required to become self-sustaining and all-time learner.

The American Library Association, Presidential Committee on Information Literacy<sup>9</sup> viewed as "Information literate people are those who have learned how to learn. They have acquired learning skills because they know how to organize information, how to find data and how to use these data in such a way that everyone can learn from them. Lifelong learners can find the appropriate details for any assignment or decision at hand".

### 3 OBJECTIVES

The study was conducted with a view to:

- understand information literacy concept and its significance in modern day scenario;
- highlight the impact of Covid-19 on the education system with a particular emphasis on the HEIs; and
- know the e-governance initiatives taken by the government to establish a strong teaching-learning system in times of pandemic.

### 4 REVIEW OF LITERATURE

Mackey and Jacobson<sup>10</sup> presented a broad structure for information literacy. In a digital age, meta-literacy facilitates critical thinking and teamwork, combines various literacies and expands the conventional concept of information literacy (i.e., decide, access, locate, comprehend, generate and use information). The authors stated that their approach requires an adapting behavior to emerging technologies. For the new social media age, the concept of information literacy involves a different approach to developing an integrated collection of skills and the confidence that students need to self-assess their abilities. Babu<sup>11</sup> addressed the significance of information literacy as a field of concern to librarians and information experts who play an important role in the process of lifelong learning. It presented the foreign and Indian information literacy scenario and lists the UNESCO's declaration in Prague on the information literate society. Umesh and Sujatha<sup>12</sup> described the significance of information literacy and recommended the academic experts and policy makers to make all the efforts to align information literacy programme with academic curricula programmes. The researchers explored about the IL initiatives in India, role of Government and Higher Education Institutions. Singh and Klingenberg<sup>13</sup> viewed that university libraries in Germany are implementing information literacy courses in graduate and post graduate curriculum in two different phases. Naik and Padmini<sup>14</sup> underlined the value of information literacy initiatives in academic libraries and how the introduction of information literacy programmes would support the institutions. Singh and Singh<sup>15</sup> described that information literacy is the useful tool for students, researchers and teachers to find out information at the right time on area of interest. Syamalamba<sup>16</sup> highlighted the concept of information literacy and the role of libraries in the development of information

literacy expertise. Whereas, Jena<sup>17</sup> viewed on the significant effect of Covid-19 on higher education institutions in India and the steps taken by by them and authorities to provide continuous education services during the crisis. It outlined some of the patterns that could make it possible to imagine new ways of teaching-learning in higher education institutions post Covid-19.

In this modern changing world, information literacy has become a very important process particularly, at higher education level in the universities. The modern world is information centric and students must be familiar with the information and develop new skills in order to gain knowledge and participate in this highly competitive environment. An information literate person interprets and makes informed judgments as a user of information source and can himself act as the disseminator of information for further use. Information literate person can make critical decisions about his/her environment, health, education, work by accessing the information sources thereby, becoming more responsible for his/her decisions.

## **5 INFORMATION LITERACY AND ITS ROLE IN HIGHER EDUCATION**

The task of information literacy is to form the basis for lifelong learning which is not limited to just one discipline or one level of education rather, it can be applied to all subjects, environment and at all stages of higher education. Students are enabled to find the right information from sources that are authentic, which can be investigated, making learner self-directed giving more control over their own studying. The role of higher education institutions (HEIs) is not limited to imparting education and awarding degrees and certificates, it is also responsible for producing motivated, self-directed and lifelong learners. The information environment is dynamic and changes rapidly therefore, making students to employ advanced and sophisticated techniques to gather information in order to ethically identify, organize, evaluate and use this information. Information literacy in India exists in the formation of user based education, library instructions, library orientation, bibliographic instructions. Many have advocated for the mixing of information literacy with the system of education in India from the elementary level to higher education level and extending till the research level. The universities, teachers, researchers and students have access to digital consortium and the publishers and producers of these electronic databases train the information professionals who in turn train the user of these resources, to access and use effectively.

## **6 ROLE OF INFORMATION LITERACY DURING PANDEMIC**

The outspread of Covid-19 pandemic significantly brought havoc on every aspect of human life and one of the major hit was the educational setup around the globe. Education institutions around the globe were shut and the traditional teaching-learning system had to move online. The modern education system at all levels from elementary to higher education is already in an advanced system with well-developed libraries and classes making full use of information communication technology providing information to everyone who is willing to learn and access it. But, the education system was never ready for such as disruption caused by Covid-19 thereby, creating an unparalleled test on education. Approximately thirty two crore students in India were prevented going to schools and colleges and the entire system of education was brought to a standstill. The teachers and the learners had to work on alternate methods to connect with each other for the purpose of disseminating and gaining knowledge such that the flow of information never stopped. In India, the higher education institutions (HEIs) have responded considerably well to this unprecedented problem by adopting some of the best digital and virtual platforms to ensure an uninterrupted teaching-learning interface, research and societal services. The Covid-19 pandemic taught the HEIs on how to adopt new technologies and work on introducing e-learning and develop virtual learning culture. The pandemic has been driving the education system forward with the introduction of new age technological advancements and innovations. It was also seen that Indian students enrolled in foreign universities were asked to leave the countries which were severely affected to reduce the burden on the affected country on the one hand and, to provide safety and secure passage to their home country on the other. These students who were enrolled in foreign universities switched to online learning and virtual classes system as a replacement for the physical system of education. In times of a pandemic Covid-19, the response of the HEIs has been very positive and the HEIs have adopted various technologies and strategies to tackle the threats posed by Covid-19. The Ministry of Education (formerly, MHRD) along with UGC (University Grants Commission) have launched a number of digital learning platforms with e-depositories, e-books, educational channels through DTH, radio channels. The use of social media chatting and meetings platform increased during the entire lockdown period. The use of digital platforms like Whats App., Skype, Google Meet, Cisco Meetings, Zoom Call, GoTo Meetings, Telegram, Youtube Live, etc., increased

as both the instructor and the learner shifted to this already existing but less familiar system. In the beginning, it was difficult for both the teacher and the student to interact on this common platform with issues like internet service, network connectivity and availability of compatible systems playing an important role. A portion of teachers being less familiar with modern day e-learning tools had a hard time in adapting to these latest teaching-learning tools. But, eventually things became easy with the passage of time and the users are now familiar with the ICT and using these resources to the best of their ability. The HEIs have started conducting online semester examinations, orientation programs, induction training, scheduled classes and presentations using e-conferencing tools like Skype, Zoom Call, Google Meet, WebEx, etc., to provide learning platform to students.

Academic and research work is another department that has taken a hit because of the stringent lockdown rules imposed as a precautionary measure to prevent people from contacting Covid-19. It has become difficult for the academicians and researchers to travel and collect data from primary sources and respondents, and even more difficult to carry out scientific laboratory tests and research work. The researchers and academicians have got familiar with the ICT platforms which are helpful in conducting the research work. The researchers and academicians have got acquainted with platforms like webinars and e-conferences to share their ideas and expertise over the digital platforms which has allowed in improving their knowledge and concentrate on professional development. This has certainly led to the development of technical skills as the researchers have become self-directed and internally motivated helping them in writing their research papers, thesis, articles and journals.

Here we have listed few digital initiatives taken by Ministry of Education (earlier, Ministry of Human Resource Development) and UGC for higher education during Covid-19 along with the existing one's whose usage increased within the learning community are mentioned below:

- i. **NDLI (National Digital Library of India)** - NDLI is a virtual learning resource repository that is designed to offer a variety of learning community resources<sup>18</sup>. It is funded by the Ministry of Education (MoE) by way of National Mission on Education through Information and Communication Technology (NMEICT). In order to promote focused searching, filtered searching is used to help learners to discover the right source with minimal effort and in



minimum time. NDLI has been developed to allow individuals to study and make some of the best systems, and to encourage researchers to undertake interlinked exploration from various sources. NDLI also provides separate section named 'Corona Outbreak: Study from home' which can be accessed from its website and the mobile application. NDLI is a repository on multiple disciplines facilitating all kinds of learners such as students of all levels, teachers, researchers, librarians, and differently abled users and all other lifelong learners.

- ii. **e-GyanKosh** - It is a national digital repository used to collect, keep and impart digital learning resources which developed by the Open and Distance Learning Institutions of India. All the resources stored in e-GyanKosh are protected by copyright and all the rights are reserved by the Indira Gandhi National Open University (IGNOU)
- iii. **Gyandarshan**- Gyandarshan is a web based TV channel dedicated to the educational and developmental needs of open and distance learners providing a platform where the learner can fulfill their needs. It is a part of IGNOU Online services controlled by Indira Gandhi National Open University (IGNOU).
- iv. **Gyandhara** - Gyandhara is an internet based audio counseling service offered by IGNOU. It is a web based audio telecast where students can attend and listen to the live discussions by the teachers, professors and experts on the topic of the day and can interact with the experts through telephone, e-mail ([gyandhara@ignou.ac.in](mailto:gyandhara@ignou.ac.in)) and can even use the chat mode by sending typed messages and questions.
- v. **SWAYAM** – SWAYAM is a programme initiated by the Government of India and designed to achieve the three cardinal principles of an education policy i.e., access, equity and quality<sup>19</sup>. The objective of SWAYAM is to take the best teaching-learning sources to the most disadvantaged section of the society. SWAYAM seeks to bridge the digital divide for those students who remained untouched by the digital revolution and who find it difficult to become a part of the mainstream knowledge economy. SWAYAM is actively providing MOOCs (Massive Open Online Courses) with credit transfer feature approved by the UGC and all the universities. The National Coordinators responsible to look into the best quality learning in post graduate education are, NPTEL, AICTE, IIMB, UGC. SwayamPrabha is a group of 34 DTH channels transmitting high quality educational content for the learners.



- vi. **e-PGPathshala** – It is a programme designed for both graduate and post graduate students who can use this platform to access e-books, online courses and study materials.
- vii. **e-Adhyayan** – It is an interface developed to provide post-graduate courses with more than 700 e-books. All the e-books are extracted from the courses in e-PG pathshala. It also allows a playlist of video content to be viewed.
- viii. **e-Pathya** – It is also an extension of e-PG Pathshala which offers a software-driven course kit that supports and encourages students pursuing post-graduate higher education, both distance learning and campus learning
- ix. **FOSSEE (Free/Libre and Open Source Software for Education)** – FOSSEE is developed for the purpose to promote and provide open source software for educational and professional use. FOSSEE is developed under the National Mission on Education through Information and Communication Technology (NMEICT) under the Ministry of Education (formerly, MHRD), Government of India.
- x. **Virtual Labs** – Virtual Labs has been developed as a web based curriculum to facilitate remote-access to labs in various fields of Science and Engineering. The virtual labs are designed to cater the needs of students at Undergraduate level, Post graduate level and at research level. Virtual labs are designed to teach students to conduct experiments by triggering their curiosity, helping students to become lifelong learners through remote experimentation. Virtual labs provide a Learning Management System (LMS) where students can avail a number of tools for learning which includes additional web sources, video-lectures, and self evaluation. This entire platform is designed taking into consideration the physical distancing measure being followed in light of the pandemic and few other factors like time and geographical constraints. This platform works under the National Mission on Education through Information and Communication Technology (NMEICT).
- xi. **Shodhganga**- It is known as the reservoir of Indian thesis stored and maintained by the INFLIBNET centre<sup>20</sup>. Shodhganga provides a platform for research scholars to deposit their Ph.D. thesis which is made available to the entire scholarly community in open access. The repository possesses the ability to capture, index, store,

disseminate and preserve Electronic Thesis and Dissertations (ETDs) which are submitted by the research scholars.

- xii. **e-Shodhsindhu** – This project is launched by the Ministry of Education (formerly, MHRD) and being fulfilled by the INFLIBNET Centre. It is a consortium for higher education electronic resources that provides access to e-resources to Universities, Colleges and centrally funded technical institutes of India. It lends access to electronic sources as well as full-text, bibliographic, factual databases to academic institutions. Furthermore, it focuses on developing a formidable collection of e-books, e-journals on subscription access basis and monitors the use of its e-resources by the Universities, Colleges and Institutions in India through a number of training and awareness programmes. It also lays emphasis on bridging the digital gap and moving in the direction of an information productive society.

Thus it can be noted that access to several online resources has been made available by governmental agencies which can be accessed remotely. There is an increased need on the part of libraries to conduct information literacy programmes about these resources so that their optimum usage can be ensured. Libraries need to conduct these programmes at larger scales so as to reach out to the maximum number of students to ensure continuity of teaching learning and research.

## 7 CONCLUSION

With the modern technology taking a new shape each day in this pandemic situation, individuals should adapt in order to become skillful users to access and make full use of information. It has become necessary to develop competent skills in order to survive in this knowledge society. The required competency skill in times of information age is information literacy skills, and it is not an easy task to acquire information literacy skills and become an information literate. A person must be self-motivated and self-directed, willing to acquire information in whichever the form it arrives and willing to find it, evaluate it, analyze it, synthesize it and present it in a logical and ethical manner. Information literacy offers the requisite skills for learners and promotes lifelong and self-reliant learning skills that are important in problem solving. Nowadays, with changing patterns in information and communication technology, the government, colleges and higher education institutions (HEIs) have the obligation to organize seminars, workshops and

conferences in order to make an information literate society. The study has also outlined the role played by information literacy in the times of pandemic. The recent pandemic (Covid-19) gave an opportunity to shift from traditional pedagogical approaches of teaching-learning system to the introduction of virtual system at all levels of education. The Ministry of Education (formerly, MHRD) along with the UGC and other government agencies have taken considerable measures in order to shift towards online/virtual education system and have launched platforms with virtual repositories, e-books, e-journals and other online teaching-learning resources. ICT is a modern day learning tool which has become very important in times of pandemic (Covid-19) as it ensured that the process of dissemination of knowledge and information never stopped especially in HEIs and created a society that is more information literate as it was before the pandemic hit across the globe. Looking at current trends, it can be assumed that the post-Covid 19 education system will have, not only a physical setup but a parallel virtual/online system too, to compliment the traditional system. The academic experts and policymakers are advised to make all the possible efforts to provide a blended structure of education where programmes for information literacy must be aligned with the academic curricula of education at all levels from elementary level to HEIs and even at research study level in order to make a society which is information ready and is prepared and possesses enough resources at its disposal to counter any uncertain events or even in current global pandemics.

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