Digital Literacy- The Importance, Initiatives and Challenges

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Abstract

Today is an era of technological revolution. Especially a global pandemic like covid19 has made the world more aware of technology and digitalization. As technology becomes more integrated in daily life, learning digital literacy skills has becoming increasingly important. So, in the presented research article, an attempt has been made to know the importance of digital literacy and to analyse the initiatives which are taken by Government to improve digital literacy in India, the challenges in front of them and the suggestion to overcome them.

Keywords: *Digital literacy, Digital learning, Initiatives*

Introduction :-

Digitalization is transforming all aspects of society that's why 21st century is considered as a Digital era. Digital literacy plays an important role in the social and economical development. The emergence and rapid development of digital technologies in the 21st Century have prompted significant changes in how human beings operate, communicate and interact with one another on a daily basis **(Mishra & Koehler, 2006).** Digital literacy empoweres individuals to participate fully in the digital world, communicate, access information, solve problems and engage in online learning.

Rational of the study:

Digital literacy is considered, "an essential requirement for life in a digital age" **(Bawden, 2008)**. **UNESCO** advises the nations to improve digital literacy as a monitoring indicator of it's **Sustainable Development Goal 4(SDG4)** because digitalization has affected all the areas of our lives including our education system too. So now when digitalization has become a part of our daily work and life there is a need to know the relevence of digital literacy as well as in education too and also the efforts which have been made by the government to improve digital literacy and the challenges and solutions. Therefore there was a need to conduct this study.

Research Questions:

The present paper is an attempt to find answers of following-

1) What is the importance of Digital literacy?
2) What is the importance of Digital literacy in Education?
3) What are the major government initiatives to improve Digital literacy?
4) What are the major Digital initiatives in Education?
5) What are the challenges in improving Digital literacy in India?
6) What are the solutions to overcome the challenges of Digital Literacy in India?

Methodology:

The present study is based on secondary sources like articles, websites, journals, news, expert opinions etc. The method used is Descriptive analytic method.

Digital literacy:

Digital literacy term was initially introduced by **Paul Gilster** in his book 'Digital Literacy' in **1997**. He defined digital literacy as the capacity to understand information and make use of it via computers and internet in multiple formats.

According to **Tabusum et al.(2014)** , "Digital literacy is the ability to use digital technology to find, arrange, understand, evaluate and analyse information". He states that using digital technologies to share knowledge on digital platforms goes beyond simply knowing how to use computers.

American Library Association (ALA)'s Digital Literacy Task Force defines digital literacy as "the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills."

UNESCO institute for Statistics (2018) defines digital literacy as " the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competences that are referred to as computer literacy, ICT literacy, information literacy and media literacy".

Covello (2010) defines Digital literacy as an umbrella for a variety of integrated sub-disciplines or literacies such as 'Information literacy' ,'Media literacy', 'Computer literacy', 'Visual literacy', 'Communication literacy' and 'Technological literacy'.

Digital literacy is the capacity to recognise and use technology in a confident and creative way that satisfies the need and challenges of daily life learning and working in a digital world. A person who is digitally literate can use technology to efficiently find and evaluate information and apply it to their real-world activities

Importance of Digital literacy:

The invention of digital technology has changed how we interact with our enviornment and perform daily life tasks. Digital literacy, which means knowing how to use digital technology and devices to meet our basic needs, can help spread awareness of the digital world. Digitally literate people are better able to take care of their own needs and adjust to the ever changing demands of this digital world. Being digitally literate used to be a choice but now it is a requirement of time. That's why digital literacy has been recognised by **UNESCO (2011)** as an important "life skill".

Currently, having digital literacy skills is necessary for effectively contributing to the developing digital economy and society. Digital literate youth are more prepared to actively participate in the social, economical, intellectual and cultural life of the present and the future.

Witt & Gloerfeld (2017) reinforced the need of digital literacy because it educates people how to survive in the digital world by using technology as a tool.

Importance of Digital Literacy in Education:

The growing usage of technology in education is one of the main reasons why digital literacy is important. High level of digital literacy and pedogogical abilities are highly essential for

teachers. Teachers won't be able to organize the teaching enviornment while taking into consideration digital technology unless they have high levels of digital literacy and pedogogical competence **(Aslan, 2011)**.

Digital literacy has become a pillar of education now which is important to improve the teaching learning process. It is important for both teachers and students to be digitally literate so they can follow up the emerging educational trend. Here are several reasons why digital literacy is crucial in education:

1) Access to information
2) Communication and collaboration
3) Critical thinking and problem solving
4) Digital citizenship and online safety
5) Life long learning and skills
6) Improve digital equity

Government Initiatives to improve Digital Literacy:

The government has taken numerous initiatives to strenghthen digital literacy in india. Some of the endeavors are:

1) **Bharat Net Project:** Bharat Net, one of the largest rural telecom projects in the world, was phased in to all Gram Panchayats (approximately 2.5 lakh) in the country in order to provide non-discriminatory access to broadband connectivity to all telecom service providers. Union Cabinet approved this project on 25.10.2011 and on 30.04.2016, the Telecom Comission approved to implement this project in three steps.
2) **National Digital Literacy Mission (2014):** The Department of Electronics and Information Technology, under the Ministry of Communication & Information Technology, launched a programme for IT mass literacy in 2014 with the vision to empower at least one member of every family with crucial digital literacy skills. The project's aim is to assist adults with low digital literacy to develop the skills they need to live in a world that is becoming more and more digital.
3) **Digital Saksharata Abhiyan:** The second phase of the NDLM programme, named as **Digital Saksharata Abhiyan (DISHA)** was started in December 2014 with the aim of providing basic digital literacy skills to 42.50 lakh people including government functionaries like ASHA, Anganwadi workers and Ration dealers. Over 87.68 lakh were trained and 53.46 lakh citizens were certified under the scheme for digital literacy training by October 2016.
4) **Digital India:** Prime Minister Narendra Modi launched the Digital India campaign on 1st july 2015, under the Ministry of Electronics and Information Technology and Ministry of Finance. The vision of this campaign is making the country digitally empowered in technological field and to ensure that Government's services are accessible to citizens electronically by improved online infrastructure and by expanding internet connectivity.
5) **Internet Saathi Program:** This program was launched in 2015 by Google India and Tata Trusts, under Ministry of Electronics & Information Technology. The main aim of this program is to improve digital literacy among women of rural areas. Women from villages

are trained on internet usage and they are made equipped and given access to digital devices. These women are referred to as "Internet Saaathis". The Internet saathis then work as instructors and help other women in their village in beginning their internet journey and get benefit from it.

6) **The Pradhan Mantri Gramin Digital Saksharta Abhiyan:** The Ministry of Electronics and Information Technology initiated **PMGDISHA** in 2017, under Digital India Programme to make 6 cr persons in rural areas digitally literate.Only one person from household where none of the family members is digitally literate, would be considered for training from the age group of 14-60 years.

Digital initiatives in Education:

1) **E- Pathshala:** The Central Institute of Educational Technology and National Council of Educational Research and Training (NCERT) developed a portal/app named E-Pathshala. The portal offers educational resources, including NCERT textbooks, audio-visual resources by NCERT, teacher training modules, periodicals a variety of other printed and non printed materials.
2) **National Digital Library of India:** The Ministry of Education, Government of India launched this project in July 2017. It is a digital repository with browse facilities and contains textbooks, videos, articles, lectures, audio books and all other kind of learning media.
3) **Sugamya Pustkalaya:** It's an online librarywhich contains books accessible to the blind, people with low vision or to person with any other print disability. It was launched by the Department of Empowerment of Persons with Disabilities and Daisy Forum of India with assistance from Tata Consultancy Services Access.
4) **Swayam:** Ministry of Education, Government of India and All India Council for Technical Education & NPTEL launched this program. It is a Massive open online courses platform which provides educational opportunities for learners. SWAYAM seeks to bridge the digital divide for students who are untouched by the digital revolution. It facilitates hosting of all the courses from class 9 to post graduation to be accessed by anyone, anywhere at any time.
5) **Swayam Prabha:** It is an initiative of the Ministry of Human Resources Development which aim is to provide 34 DTH (direct to home) channels on 24X7 basis using the GSAT-15 satellite. These channels provide new content everyday for 4 hours and it would be repeated 5 times in a day.
6) **Digital Infrastructure for Knowledge Sharing Platform (DIKSHA):** This platform was launched in September, 2017. It will aid teachers to learn and train themselves. They will be equipped with advanced digital technology and it will help teachers to create training content, assessment aids, profile, in-class resources and connect with teacher community.
7) **PM E-Vidya:** This program was announced on 17 May 2020, with the vision to unify online and digital education with education programs for access to E-learning. Nearly 25 crore school students are targeted across the country.

8) **Virtual Labs:** This project is an initiative of Ministry of Human Resource Development (MHRD). Under this project over 100 virtual labs were designed for remote operation and viewing.

Challenges :-

Improving digital literacy in india faces several challenges. Here are some key challenges:

- **Infrastructural issues:** Lack of access to digital infrastructure, especially in rural areas, is one of the major challenges. A proper infrastructure such as computer, electricity, internt connectivity is required to improve digital literacy.
- **Lack of Awareness and Interest in Digital Technology:** Another issue is that some certain sections of the population, especially women and older adults are less aware and not intrested in digital technology. According to the data from 2023, in India, only 29% of women are digitally literate, compared to 59% of males. This highlights the requirement for focused initiatives to encourage digital literacy among these groups.
- **Language Diversity:** India is a linguistically diverse country with numerous regional languages. Ensurong digital literacy in multiple languages is essential for information dissemination. Language barrires can hinder the adoption of digital tools and platforms, making it necessary to provide content and resources in local languages.
- **Illiteracy and Basic Education:** A big part of the Indian population still struggles with basic literacy. Without a foundation in reading and writing, it becomes difficult for individuals to engage with digital technologies and content.
- **Socioeconomic Disparities:** India has significant socioeconomic disparities. Many people struggles to afford digital devices and internet connections, which restrict their ability to take part in digital literacy programmes.
- **Lack of Trained Person:** People who are not properly trained are working in the digital service sector which affect performance of digital literacy in india.

Solutions :-

To overcome the challenges of Digital literacy in india, here are some suggestions:

- **Enhance Digital Infrastructure:** Improve internet connectivity and expand it's access especially in rural areas. This can be achieved by making network infrastructure investments, implementing initiatives like the National Optical Fiber Network and supporting the expansion of telecom service providers.
- **Public Awareness Campaigns:** Organise public awareness campaigns to inform and educate people about the advanteges of digital literacy and possible dangers of the online world. The main objective of these initiatives should be to spread awareness of safe online behaviour , responsible internet use and data privacy.
- **Localized Content and Languages:** To serve the different linguistic population of India, create and promote digital content in regional languages. Digital materials will be easier to access and understand for users who may not be fluent in english.
- **Adressing basic Educational Gaps:** Adressing basic educational gaps and promoting functional literacy are fundamental prerequisites for digital literacy.

- **Digital Skills Training:** Implement digital skills training programs at the school and college level to give students basic understandig of computers, internet and online safety. Programmes for adult education can be designed to educate older people who may have had little exposure to digital technologies.
- **Collaboration with Private Sector:** Encourage collaboration with IT companies, NGOs and private companies to support digital literacy programmes. These collaborations can contribute resources, expertise and financial support to improve digital literacy programmes.

Conclusion :-

Since we are in a digital era, it is challenging to perform various tasks without digital tools and digital knowledge and skills. Everyone should be digitally literate to accomplish different activities with the use of digital technologies regardless of geographic, age, location, caste, socioeconomic status. This paper concludes that looking at the relevance of digital literacy our government has taken numerous initiatives but there are several challenges in improving digital literacy like infrastructural issues, lack of awareness, illiteracy etc. Addressing these challenges requires a multi-pronged approach involving awareness campaigns, enhancing digital infrastructure, private sector participation, digital skills training to ensure comprehensive digital literacy programs in India. By implementing these suggestions, India can make significant progress in overcoming the challenges of digital literacy and empower its citizens to fully participate in the digital era.

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