Information Literacy: Government Policies and Initiatives in India

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Abstract

This paper discusses the concept of Information Literacy, its need and importance and IL standards. It also discusses the ICT policies of the government in India and initiatives taken by the government to promote various components of the information literacy such as computer literacy, IT literacy. The paper also discusses various e-Governance projects of the government which are playing a leading role to make the citizen an information literate.

Keywords: Information Literacy, Information Communication Technology, e-literacy

1. Introduction

Information Literacy is a vital skill to survive in the information age. Today's age is full of ICT enabled services in every field of human life. Information is growing rapidly day by day and being codified in the digital form. Government is also keen to make the citizens information literate about its policies and programmes for various sections of the society.

In The Third Wave book, Alvin Toffler divided history of the evolution of human society into three major eras, or waves. The first wave, from 8000 BC to 1750 AD was termed the agricultural revolution, and was based on farming as the world's primary occupation. In the second wave, from 1750 to 1955, the rise of industrial civilization and the industrial revolution marked the main occupation. The developed world was engaged in or moving toward mass production of industrial goods. The third wave, which began in the mid-1950s, is sometimes referred to as the information age and is based on the delivery of services. In the transition to the information/knowledge based society, two aspects are important- development of ICT infrastructure for information accessibility and information literate citizen. If the large number of citizens become information literate, they will be able to utilize a considerable amount of information resources for the generation of wealth towards welfare of the society. They can be a driving force in demanding adequate information infrastructure. The information literacy can also play a major role in e-readiness of a country (Ghosh, 2006)

2. Information

Information consists of data that have been retrieved, processed of otherwise used for informative or inference purposes, argument or as a basis for forecasting and for decision making (Ckumar, 2004).

In simpler term the processed data is information.

2.1 Role of Information

Every society has its own critical resource. In agricultural society, labour was essential input in industrial society, capital played a vital role, and in information society, information has become a

strategic resource. Therefore preservation and access of information is an essential factor in human progress. It is also an essential input for decision-making (Dhiman, 2005).

Thus, information is certainly

- a vital element for creativity and innovation;
- a basic resource for learning and human thought;
- a key resource in creating more knowledgeable citizens ;
- a factor that enables citizens to achieve better results in their academic lives, with regard to health; and at work; and
- an important resource for national socio-economic development;

2.2 Information Society and its impact

Human society is always changing and moving towards better socio-economic and cultural situation than ever before. The present society is becoming increasingly more centred on information handling, processing, storage and dissemination using microelectronic based technologies, especially those made available through convergence of computer with telecommunication namely IT. Therefore the present society is called Information Society. In this society information is key resource and plays an important role.

The term information society and similar concepts such as information age and knowledge economy describe a society in which there is a great dependence on use of information technologies to produce all manners of goods and services (Lal, 2008)

2.3 The need for Effective use of Information

Information has become a vital source for world economies and is certainly the basic component of education. Information is a vital element to technological and scientific change. It poses several challenges to individuals of all walks of life: students, workers, and citizens. The current information overload requires people to validate and assess information to verify its reliability. Information by itself does not make people information literate.

3. Information Literacy

Final report of American Library Association (ALA) Presidential Committee (1989) on information Literacy states, "to be an 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"(IFLA)

3.1 Need for Information Literacy

Information Literacy is increasingly important in the contemporary environment of rapid technological change and proliferating information resources. Because of the complexity of this environment,

individuals are faced with diverse information choices in their academic studies, the work place, and in their personal lives. Information comes to them in unfiltered/formats, raising questions about its authenticity, validity and reliability. In addition, information is available through multiple media, including graphical, aural and textual, posing large challenges for society.

Information Literacy forms the basis of lifelong learning. It is common to all disciplines, to all learning environments and all levels of education. It enables the learner to master the contents and extend their investigations.

Association of College and Research Libraries (ACRL) sets following standards of Information Literacy. An information literate individual is able to

- i) determine the extent of information needed.
- ii) access the needed information effectively and efficiently.
- iii) evaluate information and its sources critically.
- iv) incorporate selected information in to one's knowledge base.
- v) use information effectively to accomplish a specific purpose; and
- vi) understand the economic, legal, and social issues surrounding the use of information, access information ethically and legally (ACRL, 2002).

3.2 Other "Literacy" Concepts related to Information Literacy

Information literacy is linked with other types of related literacies, but it should be differentiated from them, especially from information technology, media literacy, network literacy, digital literacy, network or Internet literacy, "computer literacy" and "media literacy". Computer and media literacies are clearly defined by Horton (F. Horton, Jr., personal communication, December, 2004) in the following terms (IFLA, Information Literacy Guidelines)

3.2.1 Computer Literacy

The knowledge and skills necessary to understand information and communication technologies (ICTs), including the hardware, the software, systems, networks (both local area networks and the Internet), and all of the other components of computer and telecommunications systems.

3.2.2 Media Literacy

The knowledge and skills necessary to understand all of the mediums and formats in which data, information and knowledge are created, stored, communicated, and presented, i.e., print newspapers and journals, magazines, radio, television broadcasts, cable, CD-ROM, DVD, mobile telephones, PDF text formats, and JPEG format for photos and graphics.

4. E-Information Literacy

It is conceivably the foundation for learning in our contemporary environment of continuous technological change. As information and communication technologies develop rapidly, and the information environment becomes increasingly complex, educators are recognizing the need for learners to engage with the information environment as part of their formal learning processes. Information literacy is generally seen as pivotal to the pursuit of lifelong learning, and central to achieving both personal empowerment and economic development.

E-information literacy is a natural extension of the concept of literacy in our information society (8).

4.1 Requirements for E-Information Literacy

To acquire E-information literacy as defined above, basic (8). knowledge on other literacies is neccessary for users, as:

- a. Traditional notion of literacy to read and write;
- b. Computer literacy to understand and operate computers which are interfaces between networked information and end users.3
- c. Media literacy to understand different media storing networked information and use them.
- d. Traditional Information literacy to locate, select, evaluate and use effectively.

5. Information Literacy- Government Policies

5.1 The National e-Governance Plan (NeGP)

It is a holistic view of e-Governance initiatives across the country, integrating them into a collective vision, a shared cause. Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is evolving, and large-scale digitization of records is taking place to enable easy, reliable access over the internet. The ultimate objective is to bring public services closer home to citizens, as articulated in the Vision Statement of NeGP (9).

Make all Government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realise the basic needs of the common man"

5.2 Policy objectives of the Department of Information Technology Government of India:

- i) e-Government: Providing e-infrastructure for delivery of e-services.
- ii) e-Industry: Promotion of electronics hardware manufacturing and IT-ITeS industry.
- iii) e-Innovation / R & D: Providing Support for creation of Innovation Infrastructure in emerging areas of technology.

- iv) e-Education: Providing support for development of e-Skills and Knowledge network.
- v) e-Security: Securing India's cyber space (10).

Many states in India come out with IT policies, highlighting IT in education policy initiatives and thus making the future generation a "Techno-savvy" and to be "information literate", viz, Goa State IT Policy 2005, Haryana IT Policy 2000, Jammu and Kashmir IT Policy 2004, Kerala IT Policy 2007, Madhya Pradesh IT Policy 2006, Manipur IT Policy 2003, Mizoram IT Policy 2001, Nagaland IT Policy 2004, Orissa ICT Policy 2004, Uttaranchal ICT Policy 2006, Uttar Pradesh IT Policy 2004, West Bengal IT Policy 2004 etc (11).

Sr. No.	State	Features of the state IT policies.
1.	Andhra Pradsh	 ICT Policy 2005-2010 * Development of skills in ICT for employment opportunities. * 'Future Skills Unit' to track technology trends and identify the future requirements in terms of skills and training. * Training incentives. * Harnessing new technologies, IT education in School curriculum, Secondary and Vocational Education.
02	Assam	Information Policy of Assam 2000 (ITPA, 2000)Objective To encourage and accelerate the use of IT in schools, colleges in the state to enable the youth to acquire skills and knowledge to make them highly employableFeatures * Encouragement for the use of IT in all educational Institutions. *Special grants to put up the necessary infrastructure. * Teaching for school children the use of computers * Three months course in IT for the college students.
03	Chhattisgarh	 IT and ITES Policy Objective: 100% IT literacy in all high schools and colleges in a phased manner. Features: IT will be used in school education in two distinct Segmenti) i) Computer literacy and skills in IT. ii) Use of IT to enhance the effectiveness of teaching in other subjects.

IT policies of some prominent states are stated below

04	Gujarat	IT Policy
		Features: i) Compulsory computer education would be introduced in all schools from class-V onwards.
		iii) Provide internet connectivity to all schools in the stateiv)iv) Creation of State Library Networks
		v) Setting up Gujarat Institute of Information Technology.vi) Promotion of Gujarati on Computer.

(Source : www.csdms.in/gesci/stats.asp)

6. Information Literacy: Government Initiatives

In a knowledge society, knowledge itself becomes the factor of productions, and plays a central role in driving economic and social development. A knowledge driven industries compare to have much higher economic growth, both in terms of volumes and revenue, manufacturing industries and agriculture. This segment also requires intellectually motivated, creative, competitive decision makers. This workforce would use information resources, information services and information systems judiciously, rationally and adequately to pursue their professional goals, organizational goals, and social goals. The utilization of information resources can be habituated and sensitized through the information literacy competency development programmes. The information literacy is required at every stage and sphere of a person's life, starting from the school education to higher education, from social life to professional life (Ghosh, 2006).

Information and Communication Technologies (ICT) is being used worldwide as a tool for social welfare, better governance, illiteracy eradication and poverty removal. ICT is also being used as a tool for empowering certain social groups, like farmers, women, artisans and common citizens. In India, ICT is also at the grass root level through various initiatives and pilot projects on experimental basis. The private public partnerships have been established across India. Government of India and state governments are also taking appropriate steps in sustaining economic growth, employment generation and strengthening information infrastructure.

Following are the various initiatives, taken by the Central and State governments in India (1).

6.1 National Knowledge Commission of India

To establish a knowledge-oriented paradigm of development and to address the digital divide in India the Government of India has established National Knowledge Commission in June 2005 with the following aims.

- Build excellence in the educational system to meet the knowledge challenges of the 21st century and increase India's competitive advantage in fields of knowledge.
- Promote creation of knowledge in S&T laboratories.

- Improve the management of institutions engaged in intellectual property rights.
- Promote knowledge applications in agriculture and industry.
- Promote the use of knowledge capabilities in making government an effective, transparent and accountable service provider to the citizen and promote widespread sharing of knowledge to maximize public benefit.

The National Knowledge Commission (NKC) has five distinct focus areas:

- (i) Access to Knowledge: Providing access to knowledge resources through strengthening library and information infrastructure and networks, promoting and adopting open access literature, open courseware and open source software.
- (ii) Knowledge Concepts: Nurturing intellectual capabilities and enhancing professional skills, including information handling skills of youths
- (iii) Knowledge Creation: Making self-sufficiency in knowledge creation; strengthening indigenous research capabilities in science, technology and medicine areas; generating knowledge for social development.
- (iv) Knowledge application: Deriving maximum benefits from intellectual assets, applying knowledge in fields like agriculture, industry, health, education, etc.
- (v) Knowledge Services: Making governance and government functionaries more accountable, transparent and sensitive to the causes of common men.

6.2 Right to Information Act 2005

Right to Information Act 2005 mandates timely response to citizen requests for government information. It is an initiative taken by Department of Personnel and Training, Ministry of Personnel, Public Grievances and Pensions to provide a RTI Portal Gateway to the citizens for quick search of information on the details of first Appellate Authorities, PIOs etc. among others, besides access to RTI related information / disclosures published on the web by various Public Authorities under the government of India as well as the state Governments (12).

6.3 Rashtriya Computer Literacy Drive

Presently the Information Technology touches its peak. The total world is globalised through Computerization. Each and every phase of life is categorized through the development of this technology. Today, with the advent of E-mail & Internet, information retrieval has come down within the snap of fingertips. Computers have changed information processing in a dramatic way. To give acceleration to make India 100% Computer Literate, it is highly essential to take 'IT' education to the grass root level. Until & unless the end-users are educated in the right way to handle the technological aids, our goals cannot be achieved (13).

6.3.1 Rashtriya Computer Literacy Drive..... The Birth of an Idea

Rashtriya Computer Literacy Drive is an initiative by Sunita Infotech to make "India 100% computer literate..." and spread the Quality Education on IT with a difference.

The objective of the mission is to enable individuals & enterprises nationwide to achieve greater success by providing knowledge, skills, solutions & services through pioneering efforts and usage of appropriate technology at a very affordable cost. The fees collected is being low, will help the economically backward as well as Organised sector of the urban and rural areas respectively.

6.4 National Knowledge Network (NKN)

In the initial phase of NKN, following projects have been taken up and their status are as follows:

• Up-gradation of the NICNET at 15 locations to handle gigabits of speed has been completed in December 2008. The locations are: Delhi (Delhi), Chandigarh (UT), Jaipur (Rajasthan), Gandhinagar (Gujrat), Hyderabad (Andhra Pradesh), Bhopal (Madhya Pradesh), Kolkotta (West Bengal), Bhuwaneshwar (Orissa), Mumbai (Maharashtra), Chennai (Tamil Nadu), Guwahati (Assam), Thiruvananthapuram (Kerala), Bangalore (Karnataka), Lucknow (Uttar Pradesh).

◆ Creation of minimum infrastructure at 40 Institutions (out of 57 Institutions) to connect to NKN have been completed. The Institutions includes: IIT- Gandhinagar (Gujarat), IIT-Mumbai (Maharashtra), TIFR Mumbai (Maharashtra), BARC Mumbai (Maharashtra), IIT-Hyderabad (Andhra Pradesh), IIT-Patna (Bihar), VECC Kolkotta (West Bengal), IIT Kharagpur (West Bengal), IIT - Chennai (Tamil Nadu), IGCAR, Delhi (Delhi), IIT-Guwhati (Assam), IMTEC (Chandigarh), IITM-Pune (Maharashtra), CDAC Pune (Maharashtra), IGIB- JNU (Delhi), IGIB-Okhla (Delhi).

6.5 National Digital Library

With the advent of digital technology and internet connectivity, the library scenario is changing fast. Data available in physical form can be preserved digitally in Digital Library. Digital Libraries have the ability to enhance access to information and knowledge. They also bridge barriers of time and space.

National Digital Library is an initiative taken by Government of India to establish the Digital Library of India. The project is ongoing and the prominent activities under this project are as follows (15).

Setting up of Mega Centres and Scanning Centres in collaboration with IISc, Bangalore and Carnegie Melon University, USA.

Under the collaborative programme, scanners for these centres were provided by CMU, USA, under Million Book Universal Digital Library Programme. Indian Institute of Science, Bangalore is coordinating this programme. The digital data generated by these scanning centres under this activity is web enabled on "Digital Library Initiatives" web site http://www.new.dli.ernet.in. This site in addition to

above scanning centres, has data from other scanning centers too that were supported by IISc., Bangalore/CMU, USA.

6.6 Public Information Kiosks (PIKs)

Public Information Kiosk is an action research project of National Institute of Rural Development (NIRD) which works as an information cum communication centre(16).

6.6.1 Objectives

- Awareness building about rural development programmes.
- Database development on the resources of the local area.
- Information and Communication services.
- Empowering citizens with information.

6.7 Village Knowledge Centres (VKC)

Village Knowledge Centres serve as information dissemination centre providing instant access to farmers to latest information/ knowledge available in the field of agriculture, starting from crop production to marketing. The Village Knowledge Centre (VKC) is a place to render distant services from a single window point to rural masses especially in remote areas of the country through modern Information and Communication Technology. The knowledge centre will be connected to a central studio using technologies viz WiMax /VSAT/leased line(17).

6.8 Government of India Portal

This is the National Portal of India, developed with an objective to enable a single window access to information and services being provided by the various Indian Government entities. The content in this Portal is the result of a collaborative effort of various Indian Government Ministries and Departments, at the Central/State/District level. This Portal is mission mode project under the National E-Governance Plan (18).

6.9 Swift Jyoti

One of the most popular offerings under the NIIT SWIFT umbrella of programs, SWIFT Jyoti has been effectively used to proliferate computer literacy among the masses and help India bridge the digital divide.

Targeted at the broadest section of society-from six to sixty year olds-SWIFT Jyoti has enabled a large number of individuals citizens to experience their first brush with computers. The duration of the SWIFT Jyoti program is 18 hours.

The course content covers the areas: Word Processing ,Spreadsheets Presentations, Graphics and pictures, Internet browsing ,Online chatting (19).

6.10 e-Choupal

It is an unique web based initiative of ITC's agri-business divisions, offers the farmers of India all the information, products and services they need to enhance farm, productivity, improve farm-gate price realisation and cut transaction costs. Farmers can access latest local and global information on weather, scientific, farming practices as well as market prices at the village itself through this web portal in regional languages, Choupal also facilitates supply of high quality farm inputs as well as purchase of commodities at their door step (20).

6.11 Friends Model

One of the very first and the most successful initiatives Kerala government put in place was the Fast Reliable Instant Effective Network for Distribution of services (FRIENDS). The aim of the project is to create a single window, enabling the citizens to pay taxes and other utility payments. The project was first launched in Thiruvananthapuram Corporation in 2000. The FRIENDS counter today handles bill payments of seven departments: revenue, motor vehicles, civil supplies, local bodies, universities, electricity, water, and telephones. Close to around a million people have used the FRIENDS service so far and it is growing at about 150% every year. The FRIENDS centers were initiatly conceived as a multi purpose service center, helping not only bill payment services but also acting as a information kioskas on government activities (21).

6.12 The Akshaya Project

Akshaya was started as a e-literacy project in 2002 in Malappuram district of Kerala. It is an effort on the part of the IT department to 'bridge the digital divide'. By the end of the 3-year project, organizers hope to have set up a network of 6000 information centres that have the potential to impart basic IT literacy to at least one member in each of the 6.5 million families in Kerala. The project has helped in taking IT to the remotest part of Kerala.

Training provided by Akshaya e Centres not only familiarizes people with the basics and scope of IT but also ensures hands on skill in operating a computer. The project aims at providing e-literacy to one person in every family (21).

6.13 MKCL

Maharashtra Knowledge Corporation Ltd is a major initiative of Maharashtra Government to make the citizens an IT literate. MKCL conducts MS-CIT course for the citizen of Maharashtra state.

MS-CIT is an Information Technology (IT) literacy course started by MKCL in the year 2002. It has made 5.4 million learners IT literate till date. It is the most popular IT Literacy course in Maharashtra (22).

6.13.1 This course comprises of

- Reading and understanding a highly illustrated book
- eLearning based self-learning sessions
- Through MKCL's e -Learning Revolution for All (ERA)
- Providing hands-on practice sessions.
- Learning facilitation by certified professionals
- With academic interactions, assessments, and collaboration.

6.14 Bhoomi Project

Bhoomi Project is and initiative of Karnataka State Government for computerisation of land records. This project is sponsored jointly by Ministry of Rural Development, Government of India and State Government of Karnataka.

Under this project all 20 million land records of 6.7 million land owners in 176 talukas of Karnataka have been computerised. This system works with the software called BHOOMI, designed by National Informatic Center, Bangalore (23).

7. Conclusion

The present information society is witnessing vast quantities and rapidly generating of information available in a variety of formats. Information and Communication Technology provides a medium to connect people with the government and provides easy access to information, efficiently. Hence in such a scenario information literacy plays a dominant role for the people to recognize the information, access it and use it to fruitful purpose.

In India the central and state governments framed policies and took various initiatives to promote various components of information literacy. Several e-Governance projects are launched to make the citizen access the government information. All the ministries, departments are having web portals providing information to access.

IT policies initiated by various governments are promoting computer literacy and internet literacy among the citizens resulting in efficient access to information, however more focus need to be given on the rural area and efforts should be made to make people understand how to use information to bring value to everything they undertake. Teaching information literacy skill to the citizen may play an important role in this regard.

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