

# **INFORMATION & COMMUNICATION TECHNOLOGY AND LOCAL SELF GOVERNANCE**

## A NEW AGE SOLUTION FOR DIGITAL INDIA

EDITED BY  
DR SHASHI PUNAM & SANJEEV KUMAR



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**INFORMATION & COMMUNICATION TECHNOLOGY  
AND LOCAL SELF GOVERNANCE –  
A NEW AGE SOLUTION FOR DIGITAL INDIA**

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# About The Book



The digital world in which we live today is the result of several developments in automation and science, as well as modernizations and the most recent technologies. At the moment, every country desires to be completely digitised in order for the country to be legitimated in a more effective manner. The phrase “Digital India” refers to the concern about the use of different Information and Communication Technologies (ICTs) such as mobile phones, personal computers, tablets, TVs, and other similar devices to promote the country's development. The Digital India Campaign is a visionary initiative by the Indian government to transform our country into a smart, economically cautious, and digitally legitimised nation through the use of technology. To reconstruct India, the Indian government aspires to provide residents with quality and acceptable administrative services, as well as to promote coordination and synchronisation of obligations among citizens. The Digital India Campaign intends to link the people of India digitally and to convey the different government services and programmes to them via the use of information and communications technology (ICT). The notion of local self-governance is not a new one, since it has its origins in antiquity, dating

back to the period of the Mauryan emperors and even before them. The path of local self-governance from the time of the dinosaurs to the present day is depicted in this study. Furthermore, in the current environment, information and communication technology (ICT) has emerged as a successful tool for the dissemination of various e-governance services, and the Government of India has formulated the National e-Governance Plan (NeGP) with an adequate service delivery mechanism in this regard. After ICT was introduced, numerous apps were developed by both the federal and state governments that contributed to strengthening of public-private partnerships (PRIs) for rural transformation. The advancement of information and communication technologies (ICTs) has created a plethora of possibilities in rural India. It is feasible for information and communication technologies to make cognition sharing more convenient, and information may be easily transmitted via the use of information and communication technologies. This information might be easily accessed and used by administrators responsible for developing rural development strategies in India. Interactions between the Ministry of Panchayat Raj and Rural Development, the Government of India, and the Panchayat Raj Institutions are coordinated. In order to ensure rural development and strengthen rural local government, the primary goal of the e-panchayat is to provide a diverse range of services to its stakeholders. A series of research phases were initiated after the notion of the e-Panchayat. The stages of information gathering and planning, information and service requirements assessment, process re-engineering, and DPR (detailed project report) preparation are all included. Finally, in 2009, with the assistance of the National Information Council, the Indian government launched e-Panchayat (NIC). Along with numerous research papers, this book sheds some insight on the importance of information and communications technology (ICT) in self-governance toward the digital India.

On the occasion of Azadi Ka Amrit Mahotsav a workshop was funded by the Indian Council of Social Science Research from July 7<sup>th</sup> to 16<sup>th</sup> July, 2022. The Chief Guest of The valedictory session was Hon,ble Vice Chancellor Prof. Sat Parkash Bansal and Guest of Honour Prof. Kaushal Kumar Sharama from JNU.

Vice Chancellor Prof Sat Parkash Bansal motivate to all participants from whole the county to write a research paper on workshop whatever he or she learned from this workshop and send all research paper to Director of Workshop. We received nine research articles from participants and 14 research articles from another related themes like Digital India, Unnat Bharat Abhiyan, Swachh Bharat Abhiyan, e-Governance State and central schemes and we published an edited book within 21 research article.

I would like to thanks the Honorable Vice Chancellor, Central University of Himachal Pradesh, Professor Sat Prakash Bansal who inspired us to publish the book. I would also like to thanks ICSSR, New Delhi who gave us the opportunity to publish the edited book in this way.

**“Thanks to everyone on my publishing team.”**

# Contents

Chapter #	Chapter	Page #
1	<b>Introduction to Communication Technology</b> Shahina Parveen	12
2	<b>Local Self Government: Historical Perspective</b> Rajat Sharma	25
3	<b>Local Self- Governance: Historical Perspectives</b> S. Lisepe Sangtam	40
4	<b>Literature and Rural Development: An Analysis of The Book, 'Everybody Loves a Good Drought' by P. Sainath as a Communication Intervention</b> Abatis Thokalath Sunny & Dr. V. Vasanthi	48
5	<b>Panchayati Raj Institutions and Grassroot Democracy: A Study of Shahpur Panchayat in Kangra District of Himachal Pradesh</b> Abnish Kumar	61

Chapter #	Chapter	Page #
6	<b>Digital Responsiveness Through E-Governance In India</b> Dr. Mnau Sharma	74
7	<b>ICT Based E-Learning In European Union Member Countries During Covid-19 Pandemic: An Analysis</b> Balasubramanya P. S.	87
8	<b>HOPS: Real Time Hook Order Pattern Based Resource Approximation Technique for Efficient Scheduling in Grid Environment</b> Dr. V. Indhumathi	100
9	<b>ICT and Teacher Education: Are we preparing for future classroom?</b> Dr. Shivali	118
10	<b>A Review: Potential Uses of Information and Communication Technologies in Indian Agriculture</b> Dr. Shikha Rangra Chandel & Ashish Jaiswal	132
11	<b>Digital India Vis-A-Vis Atmanirbhar Bharat</b> Sanjay Kumar	148
12	<b>Information Communication Technology and cryptocurrency: Legal Issues and Challenges</b> Prashanth S	166



Chapter #	Chapter	Page #
13	<b>Information and Communication Technology: Rural Economy and Society</b> Anshu Sharma & Akeel Naveed Raja	173
14	<b>Demystifying the delivery of services and local governance in Kerala</b> Dr. Remani K K	183
15	<b>E-governance and Laws in India: A Critical Analysis</b> Dr. Seema Modi	191
16	<b>Role of Information Communication Technology In Women Empowerment In India</b> Nancy Kanwar	204
17	<b>The Role of ICT in Early Childhood Education: A Review</b> Manjula	221
18	<b>The Importance of Information and Communication Technologies in the Empowerment of Women</b> Monika	233

Chapter #	Chapter	Page #
19	<b>Covid-19 Pandemic Impact on Higher Education Teaching and Learning through Digital Mode A Literature Review</b> Vikas Kumar	251
20	<b>Digital Education–An Initiative of Indian Government</b> Rohit Kumar Gupta & Dr. Shabab Ahmad	267
21	<b>E-Governance: A Review</b> Babita Sharma	282
22	<b>Local Self-Government in India: Tradition and Challenges</b> Kumar Vivek Kant	293



# CHAPTER ONE

# 1

## Introduction to Communication Technology

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## SYNOPSIS

Before knowing about the Communication Technology, we must know what is communication? Communication is directly the act of move information from one place, person or one group to another. Communication Technology also known as Information Technology which mention to all apparatuses well as programs that are used to process and communicate Information. Main objective of this paper is to describe, Communication Technology have changed the way in which we communicate with each other, how we are able to find needed information, work, conduct business, interact with government agencies, examination and evaluation, administrative procedures and how we lead our social lives. Communication technology is the way of education that use Information as well as Communication Technology to support, enhance and evaluate one transportation of information. One and all Communication Technology device has hit the way of information is circulated and they carry on with to enhance the communication experience.

**Keywords:** Communication Technology, Internet, Education, Effectiveness.

## INTRODUCTION

Communication is the act of giving, receiving and the sharing information. It is the necessity or a way to live a life because without communicating we won't be able to understand a person or any other things. In other words, talking or writing and listening or reading. Each and every communication involved at least one sender, a message and a recipient. These include our emotions, the cultural situation, and the medium we used to communicate

and even our location. Good communicators listen carefully, speak or write clearly as well as respect different opinions. Strong communication skills help us to interact in both face-to-face and in the online world with confidence.

Communication technology, is also called as Information Technology, mention to every single of the instrument used to send, receive, as well as process information. In this day fast weather, coherence as well as comfort are the lead to victorious communication technology. One and all communication technology device has impacted the way information is circulated, as well as they continue to upgrade the communication experience.

## **OBJECTIVE OF THE STUDY**

- To be aware the concept, meaning and definition of Communication Technology.
- To study about elements or process of Communication Technology.
- To understand the types of Communication Technology.
- To be aware the uses of Communication Technology.
- To examine the skills of using Communication Technology.

## **METHODOLOGY**

The study is based on the source of the secondary data collected from different Journals, Magazines, books, previous research article, websites, Newspaper and Internet.

## **CONCEPT/ MEANING/ DEFINITION OF COMMUNICATION TECHNOLOGY**

Communication is a fundamental concept in retail, but it's too one of the most misinterpret concepts. Many people be of the opinion that communi-

cation is just about give voice to any individual. However, the truth is that communication proceed much deeper than just words and speeches.

The term “Communication” plays in different circumstances with each and every individual. Further view it in a sense that assist them to form interpersonal relationships, while further see it as a way of reach success. Communication is not only about speaking. There are many types of ways individual use to communicate with one another.

Communication is an extraordinarily wider concept that circumscribe many different forms and types of interconnection i.e. verbal (talking), written language (reading and writing) non-verbal communication (facial expressions and body movements) etc. communication is essential as well as required in all managerial functions. However, it is a constitutive part of the govern procedure and take it greater significance at the directing stage.

Communication is a continuous process, throughout the organizational life. It is the basic of organizational functioning. “No communication, no functioning of the organization”, thus goes on old managerial age.

Communication is a complete and rational process only when the recipient of the message has understanding of the subject matter of communication. Communication is, in fact, a transmission of understanding from the sender to the recipient of the message something, which is an imperative requirement from the human relation perspective of communication.

“Communication is a way that one organization member starts meaning and understanding with another”. (**Koontz and O’ Donnell**)

“Communication is the process of passing information and understand from one person to another”. (**Keith Davis**)

Careers in communication technology require the knowledge to utilize, keep going as well as improve communication equipment. Persons inside the computer technology field must have a understanding of wireless technologies, mechanical operations, computer applications, as well as problem solving. Investigate the definition of communication technologies, the accessible jobs, as well as industry interpretation.

All technologies used for the influence and communication of information. Transfer of messages (information) among individual as well as machines by the uses of technology. Communication technology encompasses media like- written note, mobile phone/ telephone, computer, TV/Video, Radio, Fax, Camera, Painting and many more.

## **PROCESS OR ELEMENTS OF COMMUNICATION**

The process of linking between senders and a receiver of the message is known as Communication. The process of communication is made up of four essential components, elements or process. Those elements or process are encoding, medium of transformation, decoding and feedback. In the process of communication there are two more factors, which are involved in the form of the sender and the receiver. The process of communication begins with the sender and ends with the receiver.

The basic process of communication are discuss in below:

**Sender:** An individual or a person who indicates the communication process by sending messages or cues to which someone can respond, it referred to as the encoder or the sender.

**Receiver:** The person or the individual to whom the message is sent to known as the receiver. A receiver can be an individual or a group of individuals or a listener or a reader or a viewer of the message, or a television set,



a computer etc. depending on the channel used for the process.

**Message:** In a communication process message is a set of verbal and non-verbal symbols, gestures, movement, figure or words sends by sender. It is also known as the subject-matter of the communication process.

**Symbol:** Something that denotes a fact/an idea/ thing etc. is known as symbol. It can be verbal and non-verbal.

**Channel:** Channel it is a medium through which the message is sent or conveyed by a sender to the receiver.

**Encoding:** Encoding is the process of inverting the message into words, symbol, pictures etc.

**Decoding:** Decoding is the process through which the receiver of the message, interprets the messages and translate it into a meaningful information.

**Feedback:** The response or the reaction to the message by the receiver to the sender of the message is called a feedback.

## **TYPES OF COMMUNICATION TECHNOLOGY**

Communication technology is the convey of messages (information) among individual as well as machines by the use of technology. This processing of details can assist individual make decisions, solve problems and control machines.

There are **four main types of communication technology** that have put up to the ease of sending messages: Telephone, Radio, Television, and Internet.

- **Telephone:** As the latest technology, the device customizes from 'Telephone' to 'Mobile Phone'. The telephone revolutionized verbal

communication.

- **Radio:** Radio technology modify the way of information is bring to large audiences and continues to strengthen mass communication. The radio's ability is to extend a large audience at a low cost continues to inspire a lot of communicators to take full advantage of the tool.
- **Television:** Television is another way to reach substantial audiences, but it brought a advanced park to the table visual communication. It provides viewers with all the varieties of information like-history, sports, news, science, fiction, and so on.
- **Internet:** It is a global computer network providing a variety of Information as well as communication facilities, consisting of inter-connected networks using standardized communication problems. Through the internet, people can share information and communicate from anywhere in the world with an internet connection.

## USES OF COMMUNICATION TECHNOLOGY

There are various uses or benefits of communication technology. These are as follows:

**Reaching:** Reaching is one of the main use or benefit of communication technology. With the help of communication technology an individual can hold out more and more individual at a particular given time period. Through modern communication technologies an individual have the provision of reaching a huge number of individuals for shorter duration. Now a days with the use of mobile phone are smart phone individual all over the world can reach each and every one instantaneously. There are various social media like – WhatsApp, Telegram, Instagram, Facebook, Snapchat and many more through which people can have contacts and get connected to each other from distant places all over the world, as well as can chat or send

and receive messages from distant places without any delay in the progress.

**Teaching:** The process of education, according to narrow concept was considered to be teacher oriented or teacher centered education. Where the teacher is the only active participant and student being the passive one and it is also considered that learning crops up in the classroom situation only just. But this concept does not exist or stand reasonable any more. Now a days, according to new concept or the modern concept of education. It is possible for every individual to learn or to acquire knowledge through distance education anytime, anywhere, according to their needs, interest, capacity etc. with the extension as well as development of communication technology the obstacles of time and extent in between the teaching learning procedure have been smashed down. With the help of these technologies the process of teaching and learning becomes more flexible and enjoyable. The feature and the proportions of teaching have also modified with the advance growth of communication technologies.

**Specific uses:** There are various significance or the importance/uses of communication technology in the field of education. Here, we will talk about some distinct educational uses of communication technology---

**Students Support Services:** Earlier, the offline mode or the occasional face to face interactions between the student as well as teacher and with the help of printed materials distance education were made possible to access. But nowadays, individual can acquire distance education more easily with the help of the availability of electronic media. Students can attend their classes regularly through online mode of distance education without any barrier of time and space.

**Radio Broadcasting:** For educational and developmental purposes radio has been extensively used. To democratic education in any country and to

bring it to the doorstep of every citizen of the country, radio can be of immense importance in achieving this objective. Distance education can be more accessible to the students with the help of radio broadcasting.

**Computer:** For distance learning the Computer Assisted Instruction or the CAI is very helpful for an individual who can't acquire education through normal mode of learning. He or she can acquire, process and store a large amount of information by using computer. The educational implication can become more powerful with computers multimedia capabilities like to handle sound, video, picture, text etc. but in our country like- India the computer is not yet being used extensively for teaching learning purposes by distance education.

**Telephone:** The inter-personal communication is mainly done through telephone. It can be useful for the student, if audio conferencing is conducted through telephone. Students can clarify their doubts or problems or any other issues from their teacher/counsellor/university administrator etc. if student service hours could be opened with the help of telephone lines.

**Video-text and Tele-text:** These devices are of advanced communication technologies. For using a video-text or a tele-text, in both the cases a master computer is required which can be connected to home television and the desired information can be acquired.

## **SKILLS OF USING COMMUNICATION TECHNOLOGY**

According to the require as well as character of a particular society, the technology grows and develop. The convey of communication Technologies has encouraged different countries to instruct up their individual to obtain new types or kinds of skills need to use communication technologies for education, development, entertainment as well as other motives.

**For Education:** In most of the advance countries. The motive of using communication technology is not very well defined as well as the framework are also not distinctly spelt out both through the institution/teachers or the users. To achieve the goal/purpose the teacher must be accurate in his/her plan of action. To relay knowledge, skills as well as desired attitudes to the pupils. He or she can use several means of communication as a unified strength. Sometimes, the purpose can be served by using a single technology.

These skills can be classified into three types:

- i. Hardware related
- ii. Software related
- iii. User related

### **Radio and Television:**

Hardware connected skills needed through the technicians, engineers are-

- To maintain, utilize as well as install the antennas transmitters etc.
- Replacement or modification of the damage part of the hardware.

Software related skills needed through educationist/teachers are -

- To have an intelligible idea of the knowledge for operating a hardware.
- To have an idea the knowledge about weakness of the individual medium and the specific potential which are being used.

User related skills needed through pupils are-

- To have knowledge or the idea of the functioning of the control

systems.

- For operating the technology.

### **Computer:**

Hardware related skills needed for educators are:

- For operating of computer by using Mouse/ keyboard.
- To take care of computer and to repair simple.

Software related skills are:

- Use of numerous software scheme.
- Built scheme according to the requirements of the individual pupils.

User related skills:

- Evolve the ability of using computers.

### **For development:**

The skills needed to administer communication technology for evolution motives were similar as far as the (a) Hardware (b) Software (c) The user is concerned.

### **For entertainment:**

Communication Technology can also be used for the purpose of entertainment. The educational programmes should be design in such a manner that it becomes alterative, entertaining and interesting too. So for that reason the programme process design their substance in such a manner that they attract as well as clutch students attention. To present a powerful educational input, such as reasoning as well as extent for problem solving, computers are very much in use by different educational institutions.

## CONCLUSION

From the above discussion we can conclude that, communication technology is the process of transferring information or the messages among individual or machines in shorter duration fast and quickly through the use of technology. The process of communication is made up of four essential components or elements i.e. Encoding, Medium of transmission, Decoding, and Feedback. Beside these essential components, there are various uses or benefits of communication technology i.e. Reaching, Teaching for a student support services, Radio broadcasting etc. there are also different kinds of skills essential to utilise communication technologies for different purposes like education, development, and entertainment.

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# CHAPTER TWO

# 2

## **Local Self Government: Historical Perspective**

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*“When the panchayat raj is established, public opinion will do what violence can never do”*

*By Mahatma Gandhi.*

## INTRODUCTION

In a democracy, it is not sufficient to have an elected government at the centre and at the State level. It is also necessary that even at the local level, there should be an elected government to look after local affairs<sup>1</sup>. Local Self Government is a concept that refers to governance by local people of their area. Now, considering the number of villages in India that lack total connection to the urban parts and often get neglected by the government, it is essential to have a concept of local self-government to ensure that even rural areas are duly represented. It is believed that self-governing village communities existed in India from the earliest times in the form of ‘sabhas’ (village assemblies). In the course of time, these village bodies took the shape of Panchayats (an assembly of five persons) and these Panchayats resolved issues at the village level. Their role and functions kept on changing at different points of time.<sup>2</sup>

In modern times, elected local government bodies were created after 1882. Lord Rippon, who was the Viceroy of India at that time, took the initiative in creating these bodies. They were called the local boards. However, due to slow progress in this regard, the Indian National Congress urged the government to take necessary steps to make all local bodies more effective. Following the Government of India Act 1919, village panchayats were

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1 Chapter 8 of NCERT, class 6

2 Ibid

established in a number of provinces. This trend continued after the Government of India Act of 1935.<sup>3</sup>

Integrating institutional reforms in local governance with economic reforms was Gandhiji's far-sighted vision of 'Poorna Swaraj'.<sup>4</sup>

During India's freedom movement, Mahatma Gandhi strongly pleaded for the decentralization of economic and political power. He believed that strengthening village panchayats was a means of effective decentralization.<sup>5</sup>

## **HISTORY OF LOCAL SELF GOVERNMENT**

Local government is government at the village and district level. Local government is about the government closest to the common people. Local government is about a government that involves the day-to-day life and problems of ordinary citizens. The local government believes that local knowledge and local interest are essential ingredients for democratic decision-making. They are also necessary for efficient and people-friendly administration. Democracy is about meaningful participation. It is also about accountability. Strong and vibrant local governments ensure both active participation and purposeful accountability.<sup>6</sup>

The people of India live in villages and village panchayats in some form or other have been functioning in India for a long. The village panchayats in India flourished as autonomous bodies in ancient India survived into the modern period, as evidenced by their prevalence at the time of the British conquest. 3 India is a country where about 70 percent of the total population lives in villages. The Founding father of the Indian Constitution in

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3 Ibid

4 6<sup>th</sup> report of 2<sup>nd</sup> Administrative reform commission, October, 2007

5 Supra note 1

6 Ibid

article 40 has rightly enshrined “The state shall take steps to organize village panchayats and endow them with powers and authority as may be necessary to enable them to function as units of local government.

### **Vedic Period:**

The Panchayat system in India is very old and the origin of the system can be traced to the Vedic period. In the words of A.S. Altekar: “From most ancient times, villages in India have been the axle of administration”.<sup>5</sup> In the history of India, the village remained an important unit for social and economic life. The village was the basic unit of administration. In the field of governance, the villages had central authority and exercised their power over the village council. The term Grama (village) is frequently used in the Vedas. During Vedic times the village headman (Grameya) carried out the village administration, women also attended the meetings in panchayats which clearly shows that women were also the representative of the administrative body.

### **Medieval Period:**

During Muslim rulers, there were three important officials- Mukkadam for administration, Patwari for collection of revenues, and Choudhrie for a decision on disputes with the help of Panch. Management of the village was looked after by Lambardar, Patwari, and Chowkidar.<sup>9</sup> The original village community system had a very great and vital share in the actual work of the village administration in Mughal times. During the medieval period, the Muslim Rulers, did not attempt to interfere or modify the village government of the village community in any radical manner. In the words of Hugh Tinker: “The Mughals had interfered very little with the ancient customs of village government, they incorporated the village into the administration as a unit for revenue and police process only...local affairs remained unreg-

ulated and the village affairs and servants were answerable primarily to the panchayats.

### **British Period:**

During British Period, every village panchayat had its own picture, because in some areas they were weaker, in other areas, they were becoming stronger while in some areas, the situation of panchayats was the same. The following passage from the report of the Congress Village Panchayat Committee (1954) made it more explicit. “The inordinate greed of the East India Company caused slow but steady disintegration of these village panchayats. The deliberate introduction of landlordism and the Ryotwari system as against the Mahalwari or village tenure system dealt a death blow to the corporate life of the village communities. The British Rulers did the greatest disservice to this country by destroying the ancient tradition of village panchayats and trying to replace them with their officers whose sole interest was to please the alien rulers by exploiting the people of India to the maximum”.

The Britishers used local self-government to extend their own rule and the attitude of the people towards local self-government changed because they lose faith in the old system of local government. As Mathew rightly points out Village Panchayats were not the first priority of the British rulers. Concentrated as they were mainly around the trading centers, their interest, in the beginning, was limited to the creation of local bodies of nominated members in the major towns”<sup>13</sup> The resolution introduced by Lord Rippon (the Viceroy of India) on 18th May 1882, was a landmark step for local government, after this resolution, the local bodies took proper shape. This resolution was designated as the ‘Magna Carta’ of local democracy in India. The aim of local self-government was not only to achieve administrative efficiency but also to train the people politically and educationally to partic-

ipate in the system.

Gandhiji had categorically defined his vision of village panchayats in the following words:

My idea of village Swaraj is that it is a complete republic independent of its neighbours for its own vital wants and yet independent of many others in which dependence is a necessity.... The Government of the village will be conducted by the Panchayat of five persons annually elected by the adult villagers, males and females, possessing minimum prescribed qualifications. These will have all the authority and jurisdiction required. Since there will be no system of punishment in the accepted sense, the Panchayat will be the legislature, judiciary, and executive combined to operate for its year of office. Any village can become such a republic today without much interference even from the present government whose sole effective connection with the villages is the execution of the village revenue.... Here there is perfect democracy based upon individual freedom. The individual is the architect of his own Government.

The present structure of Local Self Government institutions took shape in 1688 when the British established a Municipal Corporation at Madras which was followed by the creation of similar bodies at Bombay and Calcutta (1726). Comprising a mayor and a majority of British-born Councillors, these Corporations were basically units of administration enjoying considerable judicial powers. During the next 150 years, municipal bodies were created in several mufasil towns although their functions remained confined to the conservancy, road repairs, lighting, and a few other sundry items.<sup>7</sup>

In 1872, Lord Mayo introduced elected representatives for these munic-

ipalities and this was further developed by his successor, Lord Ripon, in 1882. By the 1880s, these urban municipal bodies had a predominance of elected representatives in a number of cities and towns, including Calcutta and Bombay. A corresponding effective structure for rural areas came up with the enactment of the Bengal Local Self Government Act, 1885 which led to the establishment of district local boards across the entire territory of the then Bengal province. These boards comprised nominated as well as elected members with the District Magistrate as Chairman who was responsible for maintenance of rural roads, rest houses..etc. Within a span of five years, a large number of district boards came into existence in other parts of the country, notably Bihar, Orissa, Assam, and North West Province. The Minto-Morley Reforms, 1909 and the Montague Chelmsford Reforms, 1919, when Local Self Government became a transferred subject, widened the participation of people in the governing process and, by 1924-25, district boards had a LocalGovernancepreponderance of elected representatives and a non-official Chairman. This arrangement continued till the country's Independence in 1947 and thereafter till the late 1950s.<sup>8</sup>

### **Panchayati Raj Institutions in Post-Independence Period:**

The leaders of India were of the opinion that without the development of villages of India it would not be difficult but impossible to restructure India at the grass-root level. The national leaders who fought for independence were also in favor of development at the grass-root level. 16 Gandhiji concluded, "Indian Independence must begin at the bottom and every village ought to be a republic with panchayat having powers". Gram Swaraj coined by Gandhiji was accepted by the Constituent Assembly drafting Constitution for independent India. 18 Post-Independence Period, strengthen the path of village panchayats in our country, and this idea was added in Part IV

of the Constitution's Directive Principles of State Policy. affirmed: "State shall take steps to organize village panchayats to endow them to function as units of self-government."<sup>9</sup>

The debates in the Constituent Assembly indicate that the leaders at that time were hesitant to introduce a wholesale change in the then prevailing administrative system and as a compromise, it was agreed that Panchayati Raj Institutions would find a place in the Directive Principles of State Policy (Part IV, Article 40) which, inter alia, provides that the State shall take steps to organize village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government. But there was a general view that local government institutions would be creatures of the State Legislature and hence there was no whittling down of the powers of the State Government.<sup>10</sup>

In compliance with the provisions of the Directive Principles of State Policy pertaining to the establishment of village panchayats as units of self-government, an ambitious rural sector initiative, the Community Development Programme, was launched in 1952. Its main thrust was on securing socio-economic transformation of village life through people's own democratic and cooperative organizations with the government providing technical services, supply, and credit. Under this program, 100 to 150 villages formed a Community Development Block, and participation of the whole community was the key element of this experiment which strengthened the foundation of grassroots democracy. In 1953, the National Extension Service was introduced which was an amplified version of the Community

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9 SheenamKousar, 2020 IJCRT | Volume 8, Issue 2 February 2020 | ISSN: 2320-2882,, available at <https://ijcrt.org/papers/IJCRT2002238.pdf> (accessed on 27-04-2022)

10 Supra note 4



Development Programme and aimed at transferring scientific and technical knowledge to agricultural, animal husbandry, and rural craft sectors.<sup>11</sup>

In 1956, when the Second Five Year Plan was launched, it recommended that the Village Panchayats should be organically linked with popular organizations at higher levels, and in stages, the democratic body should take over the entire general administration and development of the district or the subdivision excluding functions such as law and order, administration of justice and selected functions pertaining to revenue administration.<sup>12</sup>

### **Various Committees:**

Various committees were appointed to look after the work and development of PRIs in India.

### **Balwant Rai Mehta Committee:**

A committee was appointed at the end of the First Five Year Plan, known as Balwant Rai Mehta to evaluate the planned projects under the Community Development Programme. The report was finally signed on 24th November 1957. The Committee suggested the formation of the three-tier system (village, block, and district level)) of the local government, there should be direct elections of Panchayats at the village level, Panchayat Samiti at the block level, and Zila Parishad at the district level.

### **Ashok Mehta Committee:**

The Janata Party came to power in 1977 after 30 years of the Congress rule at the center. A Committee was constituted under the chairmanship of Ashok Mehta to review the existing PRIs to identify their shortcomings

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11      Supra note 4

12      Ibid

and suggest ways and means to revitalize them and Committee submitted its report in August 1978. The Committee recommended the establishment of the two-tier system instead of a three-tier system evolved by the Balwant Rai Mehta Committee and desired that all the powers should be concentrated at the district level.<sup>13</sup>

### **GVR Rao Committee:**

The Planning Commission- GVR Rao Committee established the third committee in the year 1985. The committee stated if the power of Panchayat Raj is given to the Council of Minister that it will be like “*grass without roots*”. The committee also suggested

1. All the commands for the development of the state must be given to Zila Parishad.
2. There must be a chief executive officer at Zila Parishad.
3. From time-to-time the election for Panchayat Raj should take place.

### **L M Singhvi Committee (1986):**

Constituted by the Rajiv Gandhi government on ‘Revitalisation of Panchayati Raj institutions for Democracy and Development, its important recommendations are:

- Constitutional recognition for PRI institutions.
- Nyaya Panchayats to be established for clusters of villages.

### **Sarkaria Commission:**

Constitutional status for PRIs was opposed by the Sarkaria Commission. But the idea gained momentum in the late 1980s, especially because of the endorsement by the late Prime Minister Rajiv Gandhi who introduced the 64th Constitutional Amendment Bill in 1989. Rajiv Gandhi's commitment to the PRI route to rural development seems to have emerged through a series of workshops he had as Prime Minister with District Collectors, where he got a sense of the insensitivity of District Administration and of wastage of funds for rural development.<sup>14</sup>

Though the 64th Constitutional Amendment bill was introduced in the Lok Sabha in 1989 itself, Rajya Sabha opposed it. It was only during the Narasimha Rao government's term that the idea finally became a reality in the form of the 73rd and 74th Constitutional Amendment acts, 1992.

## **73RD AND 74TH AMENDMENTS**

In 1989, the central government introduced two constitutional amendments. These amendments aimed at strengthening local governments and ensuring an element of uniformity in their structure and functioning across the country. Following these circumstances, Rajiv Gandhi the then Prime Minister of India, introduced the 64th Amendment bill on local government on the 15th May 1989 in the Parliament, but it failed to get the required support. A second attempt was made in September 1990 to pass the bill in Parliament. The bill however was not even taken up for consideration. In September 1991, a fresh bill on Panchayati Raj was introduced by the Congress government under P. V Narasimha Rao, the then Prime Minister. It was passed in 1992 as the 73rd Amendment Act 1992 with minor modi-

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14 Silvasahu, available at [www.legalserviceindia.com/legal/article-7960-evolution-of-local-self-government-in-india.html](http://www.legalserviceindia.com/legal/article-7960-evolution-of-local-self-government-in-india.html) (accessed on 28-04-2022)

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fications and came into force on 24th April 1993.<sup>15</sup>

### **73rd Amendment Act (Pre-Amendment Scenario):**

Before the 73rd Amendment Act, the condition of the Panchayati Raj was not so effective because their powers were limited and elections were not conducted regularly. The Commissions and committees gave various recommendations that led to the realization that there was a need to create a strong government by which the local self-government gives constitutional recognition. Prime Minister, late Rajiv Gandhi was strongly in favour of strengthening the local bodies by providing constitutional status to panchayats. Prime Minister's commitment to strengthen the village administration had a series of workshops with District Collectors and 'Responsive Administration' between December 1987 and June 1988, to understand the problems of rural development in the country. These workshops were held in Bhopal, Hyderabad, Imphal, Jaipur, and Coimbatore. 23 The workshops were meant to see the problems of rural people and funds being provided by the government for rural development but not any fruitful results came from these workshops and then finally, the proposal of the 64th amendment became very important to introduced in the constitution.<sup>16</sup>

73rd Amendment Act (Post-Amendment Scenario) 1992: The 64th Amendment Bill (1989), was introduced in Parliament for composing panchayats in every state at the village level, intermediate level, and district level by providing such powers and functions which are necessary for the local self-government. But this Bill could not pass in the Rajya Sabha. Then the 74th Amendment was introduced on September 7, 1990, by V.P. Singh the then Prime Minister of India who proposed that power should be given to the

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15 Ibid

16 Supra note 9

people and this objective can be achieved only by giving the constitutional status to Panchayats. Then again, the Prime Minister of India P.V. Narsimha Rao introduced 73rd Amendment in the form of the Constitution Bill in September 1991 and the Amendment passed in the Lok Sabha on December 22, 1992, and in the Rajya Sabha on December 23, 1992, and got the President's assent and finally, the 73rd Amendment Act came into force on April 24, 1993. All the states passed complied with and adopted new Panchayat legislation by April 23, 1994. <sup>25</sup> But its provision was not made in the Jammu and Kashmir Panchayat Raj Rules, 1996.<sup>17</sup>

73rd Amendment Act has been enacted to give the constitutional status to Panchayati Raj and enshrined in Article 40. The Amendment has been added in Part IX which is consisting of 16 Articles and the Eleventh schedule. Article 243 to 243-O shows that the framers of the constitution had envisaged Village Panchayat to be the foundation of the country's political democracy a decentralized form of Government where each village was to be responsible.<sup>18</sup> The mandatory provisions have helped solve the problems of lack of uniform structure, the dominance of upper castes and vested interests, irregular elections, and frequent super sessions. The catch lies in the area where each state has to frame its own laws to operationalize the mandate given in favour of strengthening the PRI's.<sup>19</sup> After the 1993 Constitutional Amendment Act, various states have delegated powers out of the 29 functions listed in Schedule XI of the Constitution of India. The Rajasthan government has appointed an Administrative Reforms Commission under the Chairmanship of the ex-Chief Minister, Shiv Charan Mathur. The Commission examined the position regarding the powers and functions in

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17      Ibid  
18      Ibid  
19      Ibid

the states of Andhra Pradesh, Maharashtra, West Bengal, Karnataka, and Gujarat and submitted its report in the year 2001.<sup>20</sup>

### **74<sup>th</sup> Amendment Act, 1992:**

the 74th amendment dealt with urban local bodies or Nagar Palika. The constitution 74th Amendment Act 1992, relating to Municipalities (Urban local Government) was passed by the parliament in 1992. It received the assent of the president of India on 20th April 1993.<sup>21</sup> The Act seeks to provide a common framework for the structure and mandate of urban local bodies to enable them to function as effective democratic units of local Self Government. The government of India notified 1st June 1993 as the date from which the 74th Amendment Act came into force. The Act provided for a period of one year from the date of its commencement, within which the then existing municipal laws (which were in force at that time in states/ union territories) were required to be changed/amended/modified in order to bring them in conformity with the provisions of the constitution (74th Amendment) Act—1992.<sup>22</sup>

### **The Salient Features of the Constitution (74th Amendment) Act, 1992:**

- Constitution of Municipalities.
- Composition of Municipalities.
- Constitution of wards committees.
- Reservation of seats.
- Fixed duration of Municipalities.

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20 Joshi, P. R and Narwani, S.G. (2002), Panchayati Raj in India: Emerging Trends Across the States, New Delhi, Rawat Publications.

21 Dr. Sultana, AleyaMousami Sultana, available at [https://cbpbu.ac.in/userfiles/file/2020/STUDY\\_MAT/POL\\_SC/73rd%20and%2074th-converted.pdf](https://cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/POL_SC/73rd%20and%2074th-converted.pdf) (accessed on 28-04-2022)

22 Ibid

- Power, Authority and responsibilities of Municipalities.
- Appointment of State Election Commission.
- Appointment of State Finance Commission.
- Constitution of Metropolitan and District Planning Committees.<sup>23</sup>

### **Extension of Provisions of the Constitution (74th Amendment) Act 1992 to Scheduled Areas:**

Part IX A of the constitution (i.e. the constitution (74th Amendment) Act 1992) is not applicable to Scheduled Areas referred to in clause (I) of Article 244 of the constitution. However, in terms of Article 243ZC (3), the parliament may, by law extend the provisions of I his part to those areas with such exceptions and modifications as may be specified in such law.<sup>24</sup>

## **CONCLUSION**

The local self-government passed through various stages from the Vedic Period to the Post-independence period, many up and down came in the local administration. Various committees and commissions were appointed to study the problems and suggest ways means for implementing the schemes of PRIs in India. But it was only after the 73rd CAA which was a landmark step in the history of local self-government to provide provisions at the grass-root level to work effectively and efficiently. It is mandatory for all the states to adopt all the provisions which are mentioned in the 743rd CAA for the implementation of PPRI sat the grass-root level.

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23 Ibid

24 Ibid

# CHAPTER THREE

# 3

## **Local Self Governance: Historical Perspective**

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## INTRODUCTION

Naga villages can be traced and termed as petty republics in themselves; they were a politically organized association like the ancient Greek city-states. This village government was run without written laws. The customary usages were the basis for running the affairs of village government. The structure of traditional village government in Nagaland was different for different tribes and was known by different names. After fourteen years of India's independence, the Government of India passed an Act called "Nagaland (Traditional Provisions) Regulation Act, 1961" according to which there shall be one village council for each village, range council for each range and a tribal council for each tribe. This is how the Village, Range and Area Council emerged in Nagaland. The validity of this Act was however discontinued from 1st Dec. 1963 when Nagaland attained statehood.

**Emergence of Village and Area Council** The birth of present form of the Village Council in Nagaland is the result of several years of experience on the part of the Nagaland Government Since 1963, which recognized the traditional village government as an important institution for the benefit of each village. The outcome of this recognition was reflected in the Act of "Nagaland Village and Area Council Act, 1973" which was further amended in 1978. Under the Act of 1978, the traditional village authority was given statutory recognition under the name of Village Council. The Village Council is provided with uniform powers and duties to all recognized villages of Nagaland. At present, being a statutory body empowered with a common set of powers and functions, in the area of judicial, administration and development, the Village has lot of responsibilities.

The Village Development Board (VDB) was first formed on December 6, 1976 in Kütsapo village with the initiative of the then Phek Deputy Commissioner AM Gokhale and was implemented throughout the state of Na-

galand under former Chief Ministership of shri. Vamuzo. The concept of VDBs was socially accepted in all recognized Villages in Nagaland in 1980 under Clause 12 of Section 12 the Nagaland Village and Areas Council Act 1978. The concept of Village Development Board relied heavily on the involvement of grass root people and it also required the line department to dedicate technical support and financial resources to ensure that the 'Village Plan' envisioned by the villages becomes reality. The essence of the Village Development Board (VDB) is that all permanent residents of the village form the General Body of the Village Development Board. A Management Committee is formed from the General Body Chosen by the Village Council concerned and a Secretary is selected to manage the affairs of the VDB for a period of three years. Besides women and youth are to constitute 25% each of the total of the management committee. The management committee helps formulate "One Village One Plan" and then continue to help to oversee the works that are being carried out. The autonomy in deciding Village Plan by the villager themselves and funded by the Government Machinery is the main source of revenue. An important function of village council is to constitute Village Development Board (VDB), a statutory body to assist the village council in executing development policy programs. The VDB is a village linkage enshrine under the Village Council in Nagaland. The institution of the VDBs, which are synonymous with the concept of decentralized grass root level planning in Nagaland. A mass campaign was launched since 1980 to expand the coverage of VDB model in all the recognised villages of the state. VDBs were thereafter gradually constituted in the remaining parts of the State and the concept institutionalized with the enactment of VDB Model Based on overwhelmingly positive response. The concept of VDB was socially accepted at a General Conference of the Chairmen of all Village Councils and VDB Secretaries at Kohima from 20 - 22 May 1980. The concept of VDBs was extended and installed to all

existing recognized villages in 1980-81.

## **DUTIES OF THE VDB**

The Village Development Board as per the directive of the Village Council formulate schemes, programmes of action for the development and progress of the Village, groups of individuals or for individuals in the Village, either using the village community or other funds.

The VDBs are involved in all phases of developmental activities as part of their responsibilities. These include receipt of allocation of funds, selection of beneficiaries or schemes, monitoring of progress of works & expenditure and completion of schemes.

They are accountable organization, where book keeping of accounts is mandatory, open and subject to any audit of its account. Along with their role in the identification of beneficiaries for development programmes, they are to formulate and supervise village developmental scheme; help government agencies in carrying out developmental works in the village, receive grant-in-aid, donations, subsidies from the government or any other agencies; to provide security for due payment of loan by any permanent resident of the village from the government, bank or financial institutions, to lend money from its fund to the deserving villagers; to enter into any loan agreement with the government, bank or any financial institutions.

## **COMPOSITION OF VDB**

All permanent residents of a Village constitute the General Body of the VDB's and from among them a Management Committee of the VDB's is formed with not less than 5(five) members and up to 25(twenty five) members who are selected/chosen by the village council. Village council member and non-members along with one fourth  $\frac{1}{4}$  of women of the total

members formed the Management Committee of the VDB's. The Management Committee of the VDB's are entrusted with the management of the Village Development Boards and the funds of the VDB's for 3 (Three) years unless decided otherwise by the Village Council by resolution.

The essence of VDBs is that Government servants can be chosen as members of the Management Committee, with the permission of the government. A member of the Management Committee may be replaced by a resolution of the VC, for reasons to be recorded in the Resolution. The affairs of the Village Development Board are managed by a secretary popularly known as VDB's Secretary who is selected from among themselves and gets a honorarium between Rs. 1000-3000/-. A quorum of not less than 51% of the Management Committee is required to pass resolutions; The Management Committee is expected to meet every month. The secretary presents financial statement at the annual general body meetings. No Village council Chairman or Head GB or Village Administration Head etc. shall be permitted to hold the post of the VDB Management Chairman. However, Deputy Commissioner or the Additional Deputy Commissioner of the District is to be the ex officio Chairman of each VDB in the District. All funds/accounts are operated jointly between the Chairman/DC and the Secretary of the VDBs; VDBs are to maintain their Fixed Deposit Accounts as these forms the main basis for the existence of the VDB; Funds received and programme/scheme selection are taken up during the monthly meeting; A panel of auditors approved by the Chairman audits VDBs accounts annually.

## **THE BASIC OBJECTIVES OF THE VDBS ARE**

- To make the villages vibrant, with powers to take decisions and im-

plementation of schemes within the guidelines both for state and Centrally Sponsored Scheme (CSS);

- To mobilize its internal resources for investment in various income generating and economically productive activities;
- To check migration of educated unemployed rural youth to towns by ensuring self-employed opportunities through their involvement in taking up income generating and economically productive activities in the rural areas;
- To build and transform the rural areas into the standards of semi-urban areas in terms of availability of the basic facilities and needs.
- To facilitate acting as financial intermediaries to manage their own rural credit and loan activities

## **MEETING AND ITS CONDUCTS**

Every decision or recommendation of the Village Development Board shall be in the form of resolution passed in a regular monthly meeting by all the members present in such a meeting. The meeting is open to the public.

The meeting of the VDB shall have three very important features:

Firstly, the VDB Secretary write down past month's financial statement on a Black Board and explains all queries.

Secondly, each loaner (who agrees to be present in every meeting) progress and repayment are evaluated by the Management committee Members and public.

Thirdly, other issues in connection with Village Development will be debated.

At the end of each monthly public meeting the Secretary of the Management Committee shall brief to the Chairman of the VDB showing: -

- Names of Village Development Board Members absent.
- Names of Loanees absent.

## CONCLUSION

In conclusion, the existence of Village Council and VDBs have proved to be significantly successful in a democratic country like India. At the end, all the decisions and plannings are directly handled by the local population themselves. There is also a system of proper check and balance with the active intervention of civil administrators in the functioning of all developmental activities.

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# CHAPTER

## FOUR

# 4

## **Literature And Rural Development: An Analysis of The Book, 'Everybody Loves A Good Drought' By P. Sainath As A Communication Intervention**

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## SYNOPSIS

Palagummi P.Sainath's book 'Everybody Loves a Good Drought' has made a valuable contribution to rural developmental studies. While various studies have been carried out in the field of communication for development, Sainath's work mirrors the struggle and tribulations that the rural community is subjected to, in a perfect manner. Literature mirrors life and the narrative style chosen by the author has made the book a masterpiece of literature. When analyzed for the literary value of the book, the discussion leads to the observation that literature could be one of the most effective tools used in communication interventions. The literary characteristics of the book and the factors that contribute to effective communication have been analyzed in the article at length. The article discusses development, rural development, communication for development, participatory communication and literature as a tool for development. The literary nuances and skills of the author facilitate the communication to flow in a streamlined fashion and emphasizes the importance of literary studies in the area of communication for development. It also gives directions for further research in a similar fashion.

**Keywords:** Literary devices and Communication, Literature and Rural Development, Literature as a tool for CfD, Language of Communication,

## INTRODUCTION

The research on rural development in India has always been exhaustive to scholars, immaterial of the extensive study that has been conducted all over the world and most importantly in India since her independence. When development is discussed, it should be contemplated in specific contexts

under which it can be understood. Katar Singh defines development as a “universally cherished goal of individuals, families, communities and nations all over the world” (Singh, 2009, p 22). In a developing country like India, rural development has been a big challenge for the last 50 years owing to a large population distributed in the rural areas. It has many facets and incorporates many sectors like financial, agricultural, educational, health, nutrition, awareness, infrastructure, women empowerment, child well-being, population control and so on. There have been many governmental and non-governmental interventions that are taken to the rural masses through communicative tools. This communication is expected to effect a behavioral change among the rural population and involve the community to which it is meant for. The contribution of P.Sainath in this connection becomes an important area of discussion and his book, ‘Everybody Loves a Good drought’ is considered a canon in the literature associated with rural development in India. This article shall explore the language of communication used by P.Sainath to present the rural scenario to the readers and establish effective communication.

## **RURAL DEVELOPMENT**

The word ‘rural development’ is seemingly becoming more important in the last few decades owing to modernization that swept the world after the second world war. In the colonized worlds emerging from the western influence, development could not be realized through indigenous means of the nation. In a country like India which believed in self-sufficiency of food; holding on to the traditional trade; keeping up with the culture and using indigenous knowledge in medicine and other occupations, development suffered a setback owing to the industrial challenges faced in the post-colo-

nial world. When the country started its race in the tracks of development along with other countries, success could not be measured in indigenous terms anymore and the rubrics were set in international standards.

## **DEVELOPMENT AND BEHAVIORAL CHANGE**

How can development be defined? It can be understood that development is a desired process that affects a certain change in human behavior, which is conducive for growth and attainment of certain goals. It may refer to the growth of intellectuality or gaining wealth and prosperity or anything as discussed above but in order to achieve that certain state, a change in behavior is needed.

The modern doctrine of development seems to have been inextricably bound with the rise in financial gain, infrastructure and productivity. The development programmes designed by governmental and non-governmental bodies have limitations owing to the power structure, corruption, poor awareness and other reasons unknown. Many books have been published by stalwarts and scholars present the facts and data on development in rural India since her independence. Everett Rogers speaks in his article titled, 'Communication Research and Rural Development' regarding this change and the ways and means to accomplish that change thus:

The process by which messages are transferred from a source to one or many receivers is a key concept in the analysis of development problems because all change inherently rests on the spread of new ideas. These new ideas may be technological innovations in agriculture, health, or family planning; they may be political news or they may be new manufacturing techniques. All involve changing human behavior by communicating new ideas.

( Rogers, 1969).

The ‘spread of new ideas’ and ‘innovations’ later developed into terms like ‘Communication for Development’ and ‘Participatory Communication’, which made sense to scholars who were studying the role of communication played in developing the rural areas.

### **Communication for Development:**

After several years of the debate, rural development has now focussed on developing the minds of the individuals and sensitizing them in a proper manner so that they could handle their lives stricken with poverty, lack of infrastructure, dearth of resources and other evils that loomed over the countryside, in a better way. Bella Mody reviews literature on development of nations with a tool called communication for development in her book titled ‘ International and developmental Communication: A Twenty first Century Perspective’ and explains ‘how communication can support national development, social change, and social resistance in this new millennium’ (Mody, 2003, p.140). Catching up from this angle, the next level of argument leads to the participatory approach in communication.

### **Participatory Approach:**

Alfonso Gumicio- Dagron insists on the importance of participatory approach in communication thus: It is true that often a participation process starts with a project that aims to encourage participation. Actually, this is more likely to happen when dealing with development communication. The very fact of implicating communication with a participatory purpose can make a development project different. If a communication initiative is seeking participation with the aim of involving the community of beneficiaries to the point of them becoming the owners of a project, then a communi-

cation process has to unwind over the time to make it possible. (Servaes. 2008, p.72).

Linje Manyozo refers to participatory communication as one of the three main approaches in his book titled, 'Media, Communication and Development: Three Approaches' and highlights the importance of knowledge dissemination and digital journalism by referring to P. Sainath's series of news stories written during his fellowship. Since the publication of the book, "Everybody Loves a Good Drought" by P.Sainath, scholars studying the communication pattern for development in the rural front seem to be interested in analyzing the nature of communication the author has adapted.

### **Everybody Loves a Good Drought:**

Palagummi Sainath undertook visits to some Indian states like Odisha, Madhya Pradesh, Bihar and Tamilnadu and carried out extensive research around 1993 and recorded his findings as part of the fellowship offered by the times group. He published all his stories in the form of a book and titled it as, 'Everybody Loves a Good Drought'. Some communication experts have identified the contribution of this book and his digital platform PARI, founded in the year 2014 as an innovative way of disseminating knowledge as Linje Manyozo observes. Nevertheless, employing the art of story- telling in presenting the rural affairs to common people with appropriate literary devices makes the reading of the book special. Readers can connect to the experiences and feel empathetic towards victims of corruption in the countryside and get a glance of atrocities committed by the development authorities. Readers could feel the pulse of the book, think in unison with the characters that speak and express their woes and sufferings; get carried away by the narrative technique. Even if storytelling and narration mark the uniqueness of the book, P.Sainath's aim of sensitizing the

common people about poverty in Indian states had been well accomplished. The book contains postscripts on the results that were obtained and the grievances or problems addressed, thereby establishing that the stories had indeed made a great impact. Therefore, it becomes important to evaluate how the author's literary skills have contributed to the success of the communication. This can be accomplished by analyzing the structure of the book and other literary parameters like narrative technique, tone, style and use of literary devices.

## **STRUCTURE OF THE BOOK**

The structure of the book appeals to readers as the author gives interesting titles and subheadings while presenting the findings in his book. Every unit speaks about a particular theme and stories are clubbed together, preceded by a common essay that provides the background for the unit. Stories compiled under a particular theme show appropriateness and relevance to the issue debated and present the life of the individuals in a very realistic way. The first unit is titled 'Introduction to the absurd' and gives three stories about a few blunders committed by the local governing body and developmental organizations. The next unit is on health and the background discussion is carried out under the title, 'A Trickle Up and Down Theory'. The unit on rural education is preceded by a short essay titled, 'This is the way we go to school' and summarizes the hardships faced by rural children in commuting to school. The problem of displacement and lost identity is discussed under the title 'The problems of Forced Displacement' preceded by a short essay titled, 'And the Meek shall Inherit the Earth'. 'Usury, Debt and the Rural Indian' is a section on the informal credit system and bankruptcy of the humble village people that follows a short writing under

the title, 'Lenders, Losers, Crook and Credit'. The atrocities committed by the governmental agents are discussed under the title 'Targeting the Poor' with an introductory essay titled, 'Crime and No Punishment'. 'Despots, Distillers, Poets and Artists' is the innovative sub-heading given to the section, 'Characters of the Countryside'. While Sainath discusses the drought situation under the title, 'Water Problems Real and Rigged', he uses the title, 'Everybody Loves a Good Drought' which happens to be the title of the book as well. P.Sainath chose the issue of corruption associated with drought and famine as the central theme to the entire book. The author says that huge funding is associated with drought relief and thus there is a lot of political play as every governing person tries to bring his district under DPAP (Drought Prone Areas programme) to reap benefits. He says, "Once it was clear that drought and DPAP were linked to fund flows in a big way, it followed that everyone wanted their block under the scheme" (Sainath, 1996, p.196). This explains why the book was called, 'Everybody Loves a Good Drought'.

The last section records success stories grouped under the heading, 'When the Poor Fight Back' with an appropriate prelude, 'With Their Own Weapons'. The grouping of essays under various themes enhances the communicative competency as the readers could process the information pertaining to various aspects of development like education, health, awareness and economic stability. The creative structure of the book contributes to a better understanding of themes and facilitates easy transition to thematic reflections. Thus, one could see that the appeal of this literary communication also lies in its structure and it was this organization of ideas that ensured an effective flow of information.

### **Literary Devices:**

The use of literary devices always brings about a strong emotional response from the readers and for the same reason, poetry inspires more than plain prose works. Thus it can be said that P.Sainath communicates to the readers in a strong way and drives the ideas into their heads in a strong manner.

The title of the book employs irony and symbolism. ‘Everybody’ refers to people who are reaping benefits and advantages over the abject conditions that prevailed in areas which were beset with problems like water shortage and famine. One of the major appeals of this diary of rural development is the use of literary devices such as irony, idiomatic expressions, symbolism, metaphor and alliteration. The title of the book, ‘Everybody Loves a Good Drought’ is ironic in nature and hence the sharp sense of satire cannot go unnoticed. ‘Still Crazy After All These Years’ is a subtle expression of madness and lack of thinking on part of the government officials that led to a disaster in Nuapada, Odisha. All the local bulls were sterilized in order to produce a fine breed of calves but the situation could not become worse. Another story that was titled, ‘What’s in a Name’ is a well-known idiomatic saying derived from Shakespeare’s play, Romeo and Juliet’. Even though the context is not the same as that of the Shakespearean play, it refers to a wrong spelling in a name that deprives a deserving person of all concessions. ‘A Trickle Up and Down Theory’ symbolically refers to administering IV fluids whenever someone falls sick by a fraudulent doctor. The author’s grim sense of humour and satire blend while he talks about how a fraudulent doctor gets beaten up by the people of Palamau and this incident finds expression in the title, ‘Biswas gets a taste of Palamau’s Medicine’. Alliteration is used in many titles and some of them are: ‘Lenders, Losers, Crooks and Credit’, ‘Foot-loose, Not Fancy free’ and ‘The Hills of Hardship’. Some titles sound like a cliché, but convey a strong meaning. For instance, ‘Crime and No Punishment’ is a new expression derived from the well-known title of a novel by Dostoevsky. Some titles act both as a metaphor and alliter-



ation as ‘Banning the Bees from the Honey’ under which the author talks about forest officials preventing the Khoja tribes of Malkangiri, Odisha, from using bamboo. The tribal community had been using bamboo traditionally to build their houses and utensils since time immemorial. Another title ‘Surguja’s Silent ban on Bullock Carts’ combines alliteration and irony to make a powerful impact. The title aptly seems relevant when the readers come to know that people in the village could not afford bullock carts for transport.

Not just the titles but the storytelling is laden with many devices that may seem unnoticeable but convey the author’s thoughts in a powerful manner. For instance, the line, “The Theater of action was mainly Nuapada, now a separate district in the Kalahandi region” (Sainath, 1996, p. 14) conveys that the governmental initiative which initially gave high hopes to people in Kalahandi, later seemed to be a disappointment. The use of metaphor, ‘theatre of action’ conveys the meaning and substance in a forceful way and the readers feel the meaninglessness of the project and this creates an emotion of anger and defiance against the system.

### **Tone and Style:**

The author communicates with a tone of sarcasm, anger, defiance, poignancy and appreciation according to the subject conveyed. He employs humour and also makes the readers realize that laughter would be an inappropriate emotion as the tone soon changes to a poignant one, leaving the rest of the thought process to the readers. The style of writing is simple and lucid and words flow in a streamlined fashion, paving way for a better understanding. A reader may feel compelled to read the entire communication without boredom and dwindling interest. Interpreting the writing needs no extra effort and the manner of writing transports the readers to the problem ar-

was that the author had visited during his fellowship. For instance, the story titled 'Ramdas Korwa's Road to Nowhere' talks about a road that was laid at a cost of 17.44 lakhs in the name of Ramdas Korwa, a tribal inhabitant of the Surguja District, Madhya Pradesh. The villagers tease him saying, "But one day I heard in the village about the road. And people jokingly told me—it's your road!". The story was not funny and continues while the tone changes serious when the author writes:

Ramdas's own demands are touchingly simple. 'All I want is a little water,' he says. 'How can we have agriculture without water?' When repeatedly pressed, he adds: 'Instead of spending Rs. 17.44 lakhs on that road, if they had spent a few thousand on improving that damaged well on my land, wouldn't that have been better? Some improvement in the land is also necessary, but let them start by giving us a little water.' (Sainath, 1996,p.19).

### **Narrative Technique:**

The author uses the technique of story -telling and chooses the characters carefully to highlight a rural issue. The individuals around whom the stories are built are often prototypes representing others who are in the same predicament. Sometimes these characters are unique and cannot be dismissed as one among a multitude. Every section contains human-interest stories that communicate strongly. The story, 'No Place Like School' on education uses a character called Pramod Kumar. Through this character, the author narrates the story of everyone else like Pramod. The narration can be seen as under:

Pramod Kumar Paharia is a bright, articulate student at the intermediate level in Godda College. As many as nineteen students from the Bhanji residential school he went to reached the same level last year. (Sainath, 1996,p.44)

On the other hand, the author brings the story of strong individuals who are unique and highly individualistic. For instance, the character Manatu Mowhar whom he discusses under the section, ‘Characters of the Countryside’ is unique and his portrayal is flawless. The entire merit of the book lies in the narrative genius of Mr. P.Sainath.

## CONCLUSION

Discussing rural development in the perspective of communication has thus led to the analysis of the work of P.Sainath titled ‘Everybody Loves a Good Drought’. It has been observed that the success factor of the book, ‘Everybody Loves a Good Drought’ and its contribution towards rural development lie in the fact that the book is a typical work of literature that uses appropriate structure, tone, style, literary devices and narrative. This discussion opens directions for further research on the language of communication for development.

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# CHAPTER

## FIVE

# 5

## **Panchayati Raj Institutions And Grass Root Democracy: A Study Of Shahpur Panchayat In Kangra District Of Himachal Pradesh**

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## SYNOPSIS

Democracy at local level becomes a significant issue with mounting process of decentralization at different tiers. 73<sup>rd</sup> Constitutional Amendment Act, 1992, the Panchayati Raj institutions becomes power at three level of governance. The structure of Panchayati Raj Institution is three level, first district level, second block level and third Gram Panchayat level. Panchayati Raj Institutions (PRIs) have their activity in twenty-nine subjects listed under the eleventh scheduled of constitution of India. The present study highlights some of them which related to panchayats issues, governance and their developments.

Local governance indicates certain relationship with politics of local level. Local governance distributed among the different tiers of administrative (Patel, 2009). Grass root democracy is creating new liberal leaders of the future politics. PRIs are a political and constitutional institution. It reaches out to SCs, STs, and woman with enabling provisions to assimilate them into the mainstream politics.

The panchayat elected representatives have the feel of ground realities, of local politics as well as Local Problems. Village assembly discuss the various developmental issues with the representatives of panchayat, which are of paramount importance and make a consent on various programs to be initiated for the welfare of people. Gram Sabha is a grass root democracy in India since time immemorial and it is equally important in present scenario. Keeping this in the backdrop, an attempt has been made to study the relation between panchayats representatives and village assembly about the different aspects which are in the core to sustain the spirit of local democracy as well as lacunas at various points.

**Keywords:** Grass root Democracy, Social Change and Local governance,

## INTRODUCTION

Panchayat is a part of grass root democracy in the rural India. Traditionally local governing system is closed and new local governing system is begun as the 73<sup>rd</sup> constitutional amendment act, 1992 in the PRIs. Traditional old village system was not more decentralized but Panchayati Raj three tire systems is more flexible in the part of our grass root democracy (Teltumbde, 2011). Panchayati Raj the word raj means “rule” and panchayats means “assembly”. Hierarchy of PRIs as three tires like, Panchayat (Gram Panchayats), Block, (Panchayat Samiti) and Zilla Panchayat (Zilla Parishad). Democracy is a part of our life because there is entire Indian population free to talk to each like public, spread to religion, religious ideas, thinking and education. Grass root democracy means everybody is independent there is no any restriction. Local government cannot survive without grass root democracy (Patel, 2009). Our rural Indian society depends on the grass root democracy. All masses are free and they are following others cultures, traditions, customs, and religions. Grass root democracy is creating new local system as freedom of local politics.

PRIs and local politics are most effective in the Indian democracy. Decentralization of democracy is extending. Indian society is complex but social change come slowly (Stephen, 2006). Social change is a long and continuous process because society is growing and developing. World is changing and Indian society is following new idea of globalization. Before independence Indian social system was not following democracy in the society. But now our democracy is highly developed in the world. Our Indian democracy model is better for the world. Constitution of India is saving our democracy. Constitution of India gives fundamental rights to masses. Indian democracy is following principles as liberty, equality, and fraternity.

Indian society is male dominated. **According to Government of India 2011**, census women population is composed of more than fifty percent of total population and they contribute to almost half of gross domestic product. Many women representative members were literate and educated. Woman got a political opportunity through 73<sup>rd</sup> constitutional amendment act, 1992.

Local governance is good idea of participation of masses in governance. “Empowering and involvement of the community are the necessary ingredients of good governance practice. In the age of globalization, the initiative is essential which bring the state closer to the people, give voice to the people especially the marginalized and the poor, broadens participation and develops power” (Patel, 2009:381). There is an opportunity for masses to participate local governance. Local level qualitative changes coming through reservation because SCs, STs and women got representation in the local governance.

Most of the Indian population living in the rural area and they did not aware about the grass root democracy. In Himachal Pradesh many people living in rural area they need to teach better local governance. According to government of India census 2011 Himachal Pradesh total urban population is 10.03 percent and district of Kangra total urban population is 5.71 percent. Panchayati Raj system in Himachal Pradesh was established in a statutory form under the provisions of the Himachal Pradesh Panchayati Raj Act, 1952 in the year 1954. Shahpur is a village of Kangra district. Shahpur village sat on the national highway as Pathankot to Dharmshala. Other villagers come to the Shahpur because Shahpur is a major market place. Here is government guest house in the main market. Shahpur total population is two thousand five hundred and twenty-three. Shahpur panchayats is divided into nine wards and there are nine ward members. We met several elected



members of panchayat. Newly elected representative members term is five years. There are five women members they sat on the village panchayat. Many elected women members come with her husband and her husband did not interfere her decision. Panchayat seats filled by through direct election some seats are reserved for SCs, STs, in proportion to their population; reservation of not less than 1/3 of the seats and offices for women (Sumathi & Sudarsen, 2005). In panchayat there is freedom to each member take to better decision. We see here is a real grass root democracy and local governance.

### **Shahpur Data:**

**Table No. 1**

<b>Particulars</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
Total No. of Houses	585	-	-
Population	2,523	1,259	1,264
Child (0-6)	261	130	131
Scheduled Caste	354	181	173
Scheduled Tribe	70	33	37
Literacy	94.30%	98.05%	90.56%
Total workers	819	604	215
Main worker	611	0	0
Marginal worker	208	146	62

Panchayat is a temple of grass root democracy. Masses enter the panchayat and ask about schemes, programmes and future plan. Panchayat activity is most effective to the development of communities. Local level politics is decentralized because all types of castes, religious sect, Varna are interred in the local governance. Panchayat is the decentralization of local governance. But another point, women issue is very serious because there is violence in the grass root democracy.

## The present data of Himachal Pradesh about Zilla Parishads, Panchayat Samitis and Gram panchayats:

Table No. 2

Sr. No	Name of the PRIs	Total Number	Total No. of Ers	Average Population
1.	Zilla Parishads	12	250	500000
2.	Panchayat Samitis	78	1673	80000
3.	Gram Panchayats	3226	26800	1900

### Gram Sabha:

The involvement of Gram Sabha as key units of governance at Grassroots level political process. Pradhan is a chief member of Panchayat. Pradhan is a president of Gram Sabha he called Gram Sabha meetings. The state government has been requested to ensure that the Gram Sabha meetings are convened once in each quarter preferably on 26<sup>th</sup> January Republic Day; 1<sup>st</sup> May-Labour Day; 15<sup>th</sup> August Independence Day and 2<sup>nd</sup> October Gandhi Jayanti (P.4). Panchayat organize regular meetings of Gram Sabhas because village developmental agenda is main work of elected members of panchayat and villagers. Gram Sabha is open to all eighteen years old persons. Gram Sabha is a village assembly because each eighteen-year-old person discuss in the Gram Sabha meetings about government schemes, programmes, policy, activities and the village development (Nambiar, 2001). All elected members and villagers attending Gram Sabha meetings. Most people expressed their problems as they are part of Gram Sabha. The secretary of the panchayats is appointed by the state government to watch over panchayat activities (Gupta, 2006). Many local leaders enter the Indian politics and they are changing the Scenario of Indian politics. But indirectly many regional and national political parties interfere of local politics.

Masses are aware of his problems and they say change is coming definitely. Communities want to develop his village as social, political, economic and cultural. Pradhan responsibility is increasing the participation of masses in the Gram Sabha meetings because Gram Sabha is deciding many developmental issues. Panchayat is more effective because there is strength of grass root democracy and local governance (Gupta, 2006). Panchayat promote ground level planning. Pradhan and Up-Pradhan is responsible for the village development. Pradhan maintain peace and social harmony in the panchayat and village. Panchayat is a centre of local governance autonomy (Dhavaleshwar). We visit the panchayat at that time many people came and asked questions to the elected members. Pradhan have a right he called two meetings in each month. There are male members they dominated in the panchayat meetings but after the meeting all members agree to any panchayat decision. Many representatives are literate and they are good leaders because they are following rules and regulation of panchayat.

PRIs have given the right of grass root democracy. Members of panchayat are known to all village masses. Relationship between panchayat members and masses is powerful because each representative is familiar with communities. Panchayat representatives take independently decision of the grass root democracy and local governance. Panchayat is a pillar of grass root democracy because all village members participate in the agenda of the Gram Sabha. Panchayat plays several key roles in the society like, remove of poverty, sanitation, village development, library, cultures, and health, social and economic changes. The potentials of grass root democracy are local masses. The representatives of the panchayat face many challenges and problems.

PRIs are constructing democratically ideas in the local governance. Grass root democracy is a local level good performing because there are many social safeguards of government. Many times, local leaders are not follow-

ing rules and regulations in the grass root democracy (Teltumbde, 2011). Grass root democracy is creating more powerful leadership in the PRIs. Local governance is more effective because there is freedom of representatives. So many representatives are not allowed to the local people in the Panchayat and they did not co-operate with masses. Local governance is slowly changing because there is many new things are add like, technology and globalization. Globalization is a one another great issue following local governance. In the globalization era masses are going to fast because they have no time. Traditional village system as well as our local governance also changes. Masses are creating awareness about grass root democracy, social change and politics. Many Indian leaders come to the rural area and they provide valuable leadership to the India. Local leaders got more opportunity to come in the main stream of Indian politics. Most people are educated and they create new leadership and ideology. (Chinsinga, 2006).

Senior citizens tell story about his time at that time village was not developed but now government takes care of villages. Panchayat's most powerful agenda is empowerment of people and create strength of grass root democracy and local governance. Social change comes through education. Masses are taking education and changing his life. Today people are more aware of his rights. Local masses are trying to change his social, economic and political status through grass root democracy and local governance. Every person wants to live without misery and they demanding change our social system. In the globalization era village is gradually change because there is inter ideology and technology.

## **SCHEMES AND PROGRAMMES**

Panchayat representatives are aware of ground level realities and they want to change local problems. Masses are trying to solve his problems at local

level. Local masses want government implement better schemes for our development. Himachal Pradesh government started many schemes for the development of communities and communities also taking benefit of the schemes and programmes. Elected representatives want to local level problems will be change through schemes and programmes. Panchayat function is good for local governance. Panchayat collect many types of tax for the development of village. This system is good for the local development. Government of India introduced many schemes for rural area as Rasthriya Gram Swaraj Yojana (RGSY) Panchayat Mahila Evam Yuva Shakti Abhiyan (PMEYSA), e-Panchayat and Resource Support to States (RSS) <http://www.panchayat.gov.in/rgpsa>. “The Rajiv Gandhi Panchayat Sashaktikaran Abhiyan (RGPSA) at national and state levels. RGPSA is a scheme of the Government of India that aims to enhance the capacities of panchayats and Gram Sabhas; and enable democratic decision making in panchayats” UNDP. Another scheme is Panchayat Empowerment and Accountability Incentive Scheme (PEAIS) is a central sector plan scheme. Aim of this scheme first is “Incentivization of states for developing funds, functions and functionaries (3Fs) to panchayats and second incentivization of panchayats to put in place accountability systems to make their functioning transparent and efficient” [pib.nic.in](http://pib.nic.in).

## **RESEARCH METHODOLOGY**

The present study is based on the case study method. We take only one panchayat for the deep study of local governance and grass root democracy. Primary data collect through interview schedule, group discussion and observation. We asked many questions to particularly members, elderly people, women and youth. Our study is based on the qualitative method and we followed personal interview technique, schedule and group discussion. Simple random sampling is used for the proposed study. Fifty respondents

selected from Shahpur panchayat both male and female respondents. The secondary data also used in the present study like books, journals, articles, newspapers, government records, published and unpublished reports, letters, manuscript, and so on. We met lots of local masses and asked about local governance and grass root democracy they say we are free and we are following democracy.

## **MAJOR FINDINGS OF THE STUDY**

- The Gram Sabha is a village assembly. Only 35 to 40 masses were present for the Gram Sabha meetings. Panchayat should try to encourage people participation in the Gram Sabha meetings, local governance and grass root democracy.
- There is no good relationship between elected representatives and masses.
- It is found that 100 percent of the respondents are literate.
- It is found 85% respondents are aware of the village problems.
- 75 percent respondents are rich and they living luxurious life.
- 100 percent of the respondents have own houses.
- 72 percent respondent's annual income is better.
- 25 % respondents not happy to Gram Sabha meetings.
- The panchayat promotes non-formal education for women and adults. In Shahpur there is elementary, secondary, college and university level education is available.
- It is found their primary health centre, medical store, water management system, drinking water, and facility of electricity.

## **SUGGESTIONS**

- Panchayat try to create mutual understanding with representatives and masses.
- Governments organize training programmes for the elected panchayat representatives.
- Increase participation of women and marginalized sections in the Gram Sabha meetings and local politics.
- Himachal Pradesh government needs to motivate youth and women for local governance.

## CONCLUSION

Local people do not have sufficient knowledge about PRIs. Grass root democracy is depending on the participation of local people. The success of local governance is depending on the development of administration. In the twenty first century our grass root democracy and local governance are stable because grass root level administration and development is providing good participation of Gram Sabha. Several social changes come through globalization. Panchayat is a temple of grass root democracy. Traditional leadership is closed and new leadership is emerged through democracy. 73<sup>rd</sup> constitutional amendment act, 1992 through women got a new leadership. Women will be empowering through grass root democracy. One woman will educate, she will teach democracy for the others like, son and daughter. The Gram Sabha is an instrument for village panchayat to bring local masses involvement in politics. Common masses are more ambitions in the local level. PRIs are a better system of grass root democracy and local governance is better working in the panchayat. Participation of local masses day-by-day increased in the grass root democracy. Ordinary people enjoy grass root democracy and created capacity of leadership for his future. Common people got a new path of democracy. Local governance is slowly growing and developing.

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# CHAPTER SIX

# 6

## Digital Responsiveness Through E- Governance In India

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## INTRODUCTION

The most recent global phenomenon is the development of information technology. It has always played a significant role in the social, political, and economic life of every country and is not limited to any one society or region. The way that government is run has undergone significant change as a result of information technology. With the development of technology, the government also made an effort to use digital platforms to connect with the public and provide services to them. Good governance is aided by e-government. In a nation as large, diversified, and in the midst of fast development as India, governance is a problem. At this point, new technologies step in to facilitate extensive change and aid in the execution of ambitious government objectives. Thus, e-governance is crucial to making governance efficient and simple while yet meeting people's requirements. In e-governance, the intermediaries in the form of clerks and officers have been eliminated. Government and residents have direct communication or an exchange of information and services. Actually, another name for this phenomenon is wise governance. E taxation, e transportation, e commerce is some of the fine examples of e governance. In the WEF Global Information Technology Report, India is ranked 24th out of 134 countries with a 5.38 score for accessing and overall priority of ICT. As a result, e-Government has a huge potential to maximise government investment returns while offering exponential advantages to its population. which demonstrates the growth of India's e-Government, which is very encouraging.[1]

## OBJECTIVES

- To evaluate the existing legal framework for e-governance
- The impact of e-governance on the existing system.

## **METHOD OF STUDY**

For this chapter the Doctrinal Method and for this purpose, various statutes, books, journals, commentaries, reports, magazines, newspapers, websites etc. have been consulted and referred, where needed. In preparing this paper, analytical, critical, historical, evaluative and socio-legal approaches are also applied to examine the existing laws, policies and their effects.

## **MEANING AND CONCEPT**

E-governance was developed in India in the 1970s with a focus on internal government applications in the fields of planning, economic monitoring, and defence as well as the use of ICT to manage data-intensive tasks such as managing elections, censuses, and tax administration, among other things. While automation and computerization have been emphasised prominently, state efforts to employ IT also involve ventures into connectivity, networking, building up systems for processing information and providing services, among other things. On a smaller scale, this has included things like IT automation in specific departments, electronic file handling, access to entitlements, public grievance systems, service delivery for high volume routine transactions like paying bills and tax dues, and achieving poverty alleviation goals by promoting entrepreneurial models and giving out market information. The aim of these programmes has varied, with some emphasising improving livelihoods while others facilitating the citizen-state interface for a variety of government services.

Electronic governance is known as e-government. It consists of the word's government and electronic. Government is not the same as governance. While governance refers to how an organisation operates, government refers to an executive body. Governance, then, refers to a government's man-

ner of operation. It is a use of information and communication technology for the exchange of information and the delivery of services. Thus, e-governance results from the use of ICT in government. It indicates that both the government and the general public use ICT for communication. In reality, e-governance involves both internal and external communication among a variety of actors, including the government, citizens, civil society, etc.

On the basis of meaning and concept, E- governance has following model [2]:

*Government to government-G2G* refers to interactions between federal, state, and municipal governments as well as between their departments, agencies, and organisations. It consists of state government data, welfare programmes, strategies, and initiatives, as well as the market for interdepartmental goods. Government e-Marketplace, are some of illustration of Government-to-government governance.

*Government to citizen- G2C* refers to interactions between the government and the populace. It gives people the freedom to decide when, how, where, and in what capacity they interact with the government. The major objective is to improve the accessibility of the government. Examples include computerising land records, e-courts, the India Portal, the Bhoomi Project for online distribution of land records in Karnataka, eSeva in Andhra Pradesh, and Project FRIENDS in Kerala, among others. Basic citizen services like birth and death registration, consolidation of the land register and ownership, and biometric data registration are all included. The National Portal of India, Passport Seva, e-Sarathi, etc. are a few examples.

*Government to employee-G2E* refers to business between the government and the workforce. Like any other company, the government, which is by far the

largest employer, needs to communicate with its staff frequently. The employer and employee are conversing with each other in this situation. Utilizing ICT technologies improves employee satisfaction while simultaneously speeding up and streamlining these interactions. It features a departmental complaints forum, online training, and staff conferences. For instance, Mission Karmyogi and employee e-training on [www.egovonline.net](http://www.egovonline.net).

*Government to business*-G2B refers to business-to-business exchanges. It covers the distribution of policies, memoranda, etc.; business information such applications, licence renewal forms, registration; Startup India Portal; etc. Licenses, permits, procurement, and revenue collection are examples of transactional G2B activities. They can also act in a facilitative and marketing capacity in sectors including trade, tourism, and investment. By fostering a hospitable environment for businesses, these actions help them run more effectively. A few of recent instances of this paradigm are E Tender and E Financial Support.

## **LEGAL SANCTIONS**

In India there is no specific legislation on e-governance. The Information Technology Act, 2000 has provided some legal sanction to e-governance and related issues. Section 4 to section 10 of the Act deals which deals with such provisions can be discussed as following:

### **Legal recognition of record (section 4):**

When a law specifies that a piece of information must be typewritten or printed, an electronic version is presumed to satisfy the requirement. As a result, section 4 grants electronic records validity.

### **Legal recognition of electronic signatures (section 5):**

Where any law provides that only information or other matters shall be authenticated by affixing the signature or any document shall be signed or bear the signature of any person, then such information or matter is authenticated by means of electronic signature affixed in such manner as may be prescribed by the central government. This section has made electronic signatures as a functional equivalent of hand written signatures. In simple words digitally signed contract would be valid and legal in the eyes of law.

### **Use of electronic records and electronic signature in government and it's agencies (section 6):**

The filling of any form, application or other documents, creation, retention or perseverance of record, issue or grant of any license or permit or payment in government offices and it's agencies may be done through the means of electronic form.[3]

### **Delivery of services by service provider (section 6A):**

This section has been added by IT Amendment Act of 2008. As per this Section the Appropriate Government may authorise service providers for providing efficient services through electronic means to the public against appropriate service charges. Further, the Appropriate Government may, by notification in the Official Gazette, specify the scale of service charges to be charged by the service providers, which may be different for different types of services.

### **Retention of electronic records (section 7):**

Where any law makes it mandatory to retain any document or record for specific time period then such mandate is deemed to have been fulfilled if such document or record is retained in electronic form. This provision does not apply to any information which is automatically generated solely for

the purpose of enabling an electronic record to be dispatched or received. However, in the cases of retention of electronic records following others conditions shall also be followed:

- a) The information contained therein must remain accessible so as to be usable for a subsequent reference
- b) The electronic record must be retained in the format in which it was originally generated, sent or received
- c) The details which will facilitate the identification of the origin, destination, date and time of dispatch or receipt of such electronic record must be available in the electronic record.

### **Audit of documents maintained in electronic form (section 7A):**

Where in any law for the time being in force, there is a provision for audit of documents, records or information, that provision shall also be applicable for audit of documents, records or information processed and maintained in electronic form.

### **Publication of rules, regulations etc in electronic gazette(section8):**

Any rule, regulation, order, bye-law, notification, or other thing that must be published in the Official Gazette pursuant to a particular legislation shall be regarded to have satisfied this requirement if it is published in the Official Gazette or Electronic Gazette. With the caveat that the date of publication will be taken to be the day the Official Gazette or Electronic Gazette was first published in any form for any rule, regulation, order, bye-law, notification, or other materials published there.[4]

### **No right to insist government office etc to interact in electronic form (section 9):**



Nothing in sections 6, 7, or 8 shall give anyone the right to demand that a ministry or department of the Central Government, the State Government, or any authority or body created by or under any law, controlled or funded by the Central or State Government, accept, issue, create, retain, or preserve any document in the form of an electronic record, or carry out any financial transaction electronically.

**Power to make rules by central government in respect of electronic signature (section 10):**

The central government may for the purpose of this act, by rules prescribe:

- a) The type of digital signature
- b) The manner and format in which the digital signature shall be affixed
- c) The manner or procedure which facilitate identification of the person affixing the digital signature
- d) Control processes and procedures to ensure adequate integrity, security and confidentiality of electronic records
- e) Any other matter which is necessary to give effect to digital signature

**Validity of Contracts formed through Electronic Means (Section 10 A):**

Additionally, this clause has been inserted by When proposals are communicated, accepted, or revoked as part of the formation of a contract using electronic means, such a contract will not be regarded to be unenforceable only on the basis that such electronic forms or methods were employed for that purpose. This provision gives e-commerce activities a legally binding status.

## GOVERNMENT INITIATIVES

The country like India has a lot of potential for e-governance. However there are hurdles in the form of low digital literacy, geographical barriers, lack of internet facility etc. keeping in view of the factors pushing back the e-governance plan in India, has taken initiatives to deal with such hurdles and promote e- governance. The government has always been dedicated to implement the e- governance model at various levels. The state and central government have started this by digitalizing their own departments. Some of the milestone government initiatives are as following:

### **Digital India:**

It is an umbrella program that covers multiple Government Ministries and Departments. It weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them can be implemented as part of a larger goal.

It aims to provide the much-needed thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. The important initiatives under Digital India include:

- DigiLockers
- E-Health Campaigns
- E-Education Campaigns
- E-Kranti (Electronic Delivery of Services)

- BHIM – UPI Portal
- E-Hospitals

### **e-Kranti:**

It serves as a fundamental supporter of the Digital India programme. The concept and essential elements of e-Kranti have received official approval due to the urgent need for e-Governance, mobile governance, and good governance in the nation. The electronic delivery of services is addressed via the e-Kranti framework through a portfolio of mission mode initiatives that span numerous government agencies.

- i) e-Seva: It has become very popular among the citizens, especially for the payment of utility bills. It is designed to provide ‘Government to Citizen’ and ‘e-Business to Citizen’ services.
- ii) e-District: The Department of Information Technology launched this scheme. At the District level, it strives to supply large volume, citizen-focused services such the issuance of birth/death certificates, income and caste certificates, old age and widow pensions, etc.
- iii) MCA21: The project aims to provide electronic services to the Companies registered under the Companies Act and is launched by the Ministry of Corporate Affairs.

## **IMPACT OF E GOVERNANCE**

### **Incorporating good governance:**

e-governance is an umbrella concept which covers a lot of things under

it. all the sharable official records and government schemes are available online on official sites. The responsibilities are now fixed and transparent. The transparency in the governance brings efficiency in the system. Hence e-governance is a step towards good governance.

### **Incorporating smart governance:**

The role of third party has been reduced under e-governance. Everything going online reduced the role of third party or mediators such as clerks, officers etc. that's why it is also termed as smart governance.

### **Responsive to the changing needs:**

e-governance is a speaking concept which is gives responsive to the changing needs of the public.[5]

## **CONCLUSION AND SUGGESTIONS**

e-governance has brought a digital revolution in India. There has been a keenness towards digitizing the government departments for the convenience of government as well as citizen. However, there are few points of concern in the effective implementation of e-governance. There is a digital divide in India. Most of the people do not have access to technology due to low rate of literacy and regional barriers. The digital divide is in the form of rich-poor, urban-rural, male-female city-village etc. Government needs to make efforts to reduce this digital divide. Secondly, the implementing cost of e-governance and related projects cost a heavy monetary budget. Financial cost is indeed a big challenge for a nation like India. Thirdly, data protection is another concern in this regard. In the wake of e-governance government is providing as well as taking data from general public. Till

date there is no specific legal provision or law on data protection. This area needs to be addressed by government. The workflow inside government departments and agencies should be automated to enable efficient government processes and also to allow visibility of these processes to citizens. IT should be used to automate, respond and analyze data to identify and resolve persistent problems. These would be largely process improvements. Following are some of the suggestions in this direction:

A hybrid approach needs to be adopted for enhancing interoperability among e-governance applications which will encompass a centralized approach for document management, knowledge management, file management, grievance management etc.

The e-governance initiatives in rural areas should be taken by identifying and analyzing the grassroots realities.

The government should also focus on devising appropriate, feasible, distinct and effective capacity building mechanisms for various stakeholders viz bureaucrats, rural masses, urban masses, elected representatives, etc.

Cloud computing is also becoming a big force to enhance the delivery of services related to e-governance. Cloud computing is not only a tool for cost reduction but also helps in enabling new services, improving the education system and creating new jobs/ opportunities.

- i) e-Governance through regional languages is appreciable for the nations like India where people from several linguistic backgrounds are the participants.

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# CHAPTER SEVEN

# 7

## **ICT Based E-Learning in European Union Member Countries During COVID-19 Pandemic – An Analysis**

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## SYNOPSIS

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This paper explains the ICT based E-Learning during Covid-19 Pandemic with reference to European Union member countries. It follows the E-Learning priorities agreed by the European Union institutions and Member Countries during Covid-19 Pandemic. This study basically identifies the challenges posed by the need for quality and efficiency. There is broad impression that the ICT based E-Learning in the Covid-19 Pandemic Era is helping the learning process in schools and produce better results. The Higher education is also reaping major benefits from ICT based E-Learning during Covid-19 Pandemic. The large companies and public administrations report good results from E-learning in the workplace in the era of Covid-19 Pandemic. But, however, it has had little effect on small and medium-sized enterprises. The digital divide, with its increased risk of social exclusion is a growing concern, despite the potential of ICT based E-Learning for disadvantaged learners during Covid-19 Pandemic. The experience presented in this paper appears to indicate a need for policies to focus on embedding ICT-based E-Learning tools in education systems for teaching and learning, for management and administration.

**Keywords:** ICT, E-Learning, Covid-19 Pandemic, European Union, Lisbon treaty, National Policy, Technological innovation, Digital divide.

## INTRODUCTION

The E-Learning during Covid-19 Pandemic is a learner focused approach to the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services. A decade of experience in the European Union member countries has proven



its value as an innovative tool for education and training. This reflects the growing complexity of E-learning and its role as a basic tool for education and training. The European Union's Lisbon Council identified ICT as a core component of the knowledge society and it also argues as a necessary instrument for adapting education and training systems to it. As a result, the E-learning Initiative and Programme were adopted in most of the European Union member countries with specific funding and the strong support of stakeholders.<sup>25</sup>

Later, this led to extensive networking activities through European Union countries wide projects. Together with other E&T programmes, the E-learning was put on the education agenda. Since 2007 ICT based E-Learning for education has become the general priority in European Union member countries. In this way, during Covid-19 Pandemic, the ICT based E-Learning use in education and training has been mainstreamed and an important step towards its integration in the lifelong learning policies. Following Lisbon treaty, the E-Europe Action Plan for the information society Strategy identified E-learning as one of its key objectives, together with E-Health, E-Government. The successive Framework Programmes have funded research on the use of ICT for learning. All the European Union member States have developed programmes to integrate ICT in education.<sup>26</sup>

## OBJECTIVES OF THE STUDY

In the light of above, the proposed research aims to understand the following:

- To understand the ICT based E-Learning process in European

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25 See Cf. <http://www.trumanlibrary.org>

26 See United Nations Development Programme –[www.undp.org](http://www.undp.org)

Union member countries.

- To analyze the ICT based E-Learning in European Union member countries during Covid-19 Pandemic.
- To understand the reasons and motives of ICT based E-Learning process in European Union member countries during Covid-19 Pandemic.
- Internal debate in EU member countries regarding the ICT based E-Learning during Covid-19 Pandemic.
- Impact of Lisbon treaty on ICT based E-Learning process in European Union member countries during Covid-19 Pandemic.

## **METHODOLOGY**

This work on “ICT based E-Learning in European Union member countries during Covid-19 Pandemic -An Analysis” is basically an analytical work. The proposed study will to a large extent rely on primary sources including official, Government documents and publications. The study also proposes to hold interviews with the concerned policy makers and discussions with the experts. The study will also critically examine the secondary sources available on the subject matter such as books, journals, periodicals magazines and tertiary sources such as newspapers.

## **LITERATURE REVIEW**

Review of literature is an important stage of Research as it provides the researcher an overview of what has been done, and what is being done; it also gives understanding the subject matter there exit sufficient number of studies that usefully serve as back ground reference material and which

facilitates better understanding. It is focused and directed towards specific purpose. In this background, there exist several works pertaining to the subject matter of the research that could be usefully employed in the research to mention few-

Johannes Konig, Daniela J. Jager-Biela, Nina Glutsch, (2020), in their work, Adapting to online teaching during Covid-19 school closure: teacher education and teacher competence effects among early career teacher in Germany, *European Journal of Teacher Education*, has analyzed the social contact with students and mastered core teaching challenges and also the potential factors namely, school computer technology, teacher competence such as their technological pedagogical knowledge, and teacher education learning opportunities pertaining to digital teaching and learning. They also analyzed the information and communication technologies, (ICT) tools, and particularly digital teacher competence and teacher education opportunities to learn digital competence in the era of Covid-19 Pandemic. In continuation of their study, they also analyzed the Implications of ICT based E-Learning in the field of education and the adoption of ICT by teachers.

Fernando Ferri, PatriziaGrifoni and TizianaGuzzo, (2020), in their work, online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency situations, Institute for Research on Population and Social policies, National Research Council, 00185 Rome, Italy, analyzed the opportunities and challenges of emergency remote teaching-based experiences of during COVID-19 Pandemic era. In their study as a first step, a thematic analysis of an online discussion forum with international experts from different sectors and countries was carried out. In the second step both the data and the statements of opinion of the readers from secondary online sources, including web articles, statistical data and legislation, was analyzed. From their study results reveal several technological, pedagogical

and social challenges.

## **THE IMPACT OF E-LEARNING IN EUROPEAN UNION MEMBER COUNTRIES**

There has been strong and sustained growth in the installation and use of ICT based E-Learning and internet equipment during Covid-19 Pandemic. Today, access to the internet and its use is general in higher education. But, however, the qualitative impact of ICT based E-Learning is still being assessed. This was seen from number of studies and surveys carried out by the European Commission and the European Union Member Countries. Even though most of these studies are linked to traditional domains of education and training, the recent move towards post-initial, informal and non-formal learning paved the way for leaning towards interactive learning, creative content, personalized and self-directed learning, etc. In other words, the context, community, collaboration, competencies, pedagogy, and motivation of learners play an increasingly important role during Covid-19 Pandemic era. This relates more closely E-Learning to the Lifelong Learning agenda and the creation of a European Lifelong Learning Area in the Covid-19 Pandemic.<sup>27</sup>

## **ANALYSIS AND FINDINGS**

### **School Education:**

The use of ICT based E-Learning in schools across in most of the European Union member countries has increased dramatically since 2000. The European Commission in its survey covers teachers and head teachers and

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27 See A. D' Andrea, F. Ferri, L. Fortunati De Luca, T. Guzzo, (2009), *Mobile devices to support advanced forms of e-learning. In Multimodal Human Computer Interaction and Pervasive Services*, P. Grifoni, Ed., IGI Global Hershey, PA, USA, pp. 389–407

it confirms that the Lisbon treaty targets for equipping and connecting all schools. The survey also shows that the teachers are broadly familiar with computers, using them in and out of work and the Survey also shows that the younger teachers use ICT most readily.<sup>28</sup>

### **Higher Education:**

The ICT based E-Learning use is most widespread in higher education. Practically, all universities have websites and 9 out of 10 have intranets, so the basis for ICT use is in place. This has been reflected in a steady growth of satisfaction among students. However, the sector has been slower to take advantage of the potential of ICT to redesign curricula and programmes. In the Covid-19 Pandemic era, wide range of ICT based E-Learning programmes are now being offered by universities across most of the European Union member countries, and the number of cooperation projects to design and promote innovative e-learning practices is increasing. ICT is fostering the growing internationalization of higher education. Networking is enabling shared courses and learning services and is pointing the way towards virtual mobility. The importance of sustainable business plans, including customer-focused objectives, was becoming evident. Accurate assessment of the student market, quality assurance and strong student support in service provision and robust, accessible technology with good technical support were identified as key features of successful plans.<sup>29</sup>

### **Adult Learning:**

During Covid-19 Pandemic Era, the growing use of internet and ICT-based tools opens up new learning opportunities for adults. In particular, it can

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28 See United Nations Institute for Training and Research –[www.unops.org](http://www.unops.org)  
29 See D.R. Garrison, N. D. Vaughan, (2008), *Blended Learning in Higher Education: Framework, Principles and Guidelines*, Jossey-Bass, San Francisco, CA, USA.

help support the informal learning which is so important to them.

### **Learning at Workplace:**

During Covid-19 Pandemic Era, many large companies have invested heavily in e-learning and content management systems, reporting high levels of satisfaction and significant cost reductions. Many large public sector organizations have also followed this path. Most of these large systems are run as web-based resource centers, which employees can access from work or from home. Home access to ICT opens the way to using them as learning resources, technical support and personal guidance. Many large organizations are now using web applications to support their business development by enabling informal learning and knowledge sharing.<sup>30</sup>

### **The Informal and Self-Directed Learning:**

During Covid-19 Pandemic Era, one of ICT based E-Learning's main strengths is its capacity to support informal learning. Self-learning and informal peer-learning are by far the two most important mechanisms for obtaining skills and competences. Electronic networks of interests or professions provide important platforms to access and share information, to collaborate and collectively develop skills and competences. These new ICT tools not only present new opportunities for e-learning but also offer a great potential to reconnect groups at risk of exclusion to public services, learning and civic engagement. Social networks and software tools such as blogs and wikis can help develop key skills and competences.

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30 See L. Outhwaite, (2020), *Inequalities in Resources in the Home Learning Environment*, Centre for Education Policy and Equalizing Opportunities, UCL Institute of Education, London

## The Digital Divide:

In the Covid-19 Pandemic Era, the strong growth in the use of ICT based E-Learning by enterprises and households is far from being evenly distributed. The result is that while empowering some citizens, the inability of others to use ICT effectively creates a division in society, the so-called digital divide. That is why the Riga Ministerial Declaration drew attention to the broad importance of E-Inclusion. E-Inclusion would increase equity, create new opportunities for work and entrepreneurship, strengthen culture and encourage civic participation.

The Eurostat data shows that this digital divide is not closing and that education is a key exclusion factor. Highly educated people are 3 times as likely to be internet users as the 33% of the population with a lower educational level. Also, the use of computers and the internet is general among young people, and nearly universal among students. 86% of those with higher education and 94% of students use the internet.<sup>31</sup>

Awareness of this challenge gave the e-European Information Society Strategy a strong focus on digital literacy. The 2006 Riga Declaration gave this objective a specific target of halving the gap in internet usage for groups at risk of exclusion.

## ICT for innovation:

In the Covid-19 Pandemic Era, the ICT has transformed society and the economy. The challenge is now to achieve equally innovative transformation

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31 See F. Scheuermann, A. Guimaraes Pereira, (2008), *Towards a Research Agenda on Computer-based Assessment – Challenges and needs for European Educational Measurement*, CRELL, Institute for the Protection and Security of the Citizen, Joint Research Centre, European Commission. EUR23306EN.<http://crell.jrc.ec.europa.eu/CBA/EU-Report-CBA.pdf>

of the provision of education and training. The ICT based E-Learning has a key role to play in achieving this result.

### **Pedagogical Innovation:**

In the Covid-19 Pandemic Era, the ICT for learning is not only improving learning but has the potential to transform the learning and teaching processes and offer as such other and novel ways of education and training next and together with more traditional schooling. The impact of ICT use on learners is closely related to its potential to innovate the teaching and learning approaches. The reviewed studies showed that learner-centered guidance, group work and inquiry projects result in better skills and competencies and that interactive forms of e-learning can lead to a more reflective, deeper and participative learning, learning-by doing, inquiry learning, problem solving, creativity, etc all play a role as competencies for innovation and can be enriched and improved by using e-learning. The ICT-enabled social networks and improved connectivity provide also valuable new life-long learning opportunities and models bridging the distinction between learning, work and leisure.

### **Technological Innovation:**

The technological innovation implies a need for new models of production, distribution and access to digital resources, both in the public and private sectors. In the Covid-19 Pandemic Era, the European Commission under the Research and Technological Development programmes has supported research on the educational use of digital content in projects that bring together the technological, pedagogical and organizational dimensions of the use of ICT. The uptake and commercial development of digital content for education is also one the priorities of the programmes E-Content / E-Content Plus and E- TEN. These innovative trans-national projects



award a special attention to quality, interoperability and accessibility of digital learning resource. The European Commission has supported the programmes aimed at developing digital content and facilitating its commercial development, giving priority to education. It has also supported innovative trans-national projects addressing quality, interoperability and accessibility of digital learning resources.<sup>32</sup>

The Commission is supporting the development of e-learning standards. Stakeholders have launched several initiatives top remote e-learning and quality. These include in particular the European Learning Industry Group (ELIG) and the European Foundation for Quality in eLearning (EFQUEL). These initiatives will contribute to the quality of e-learning as well as developing educational systems as a whole.

### **Organizational Innovation:**

During Covid-19 Pandemic Era, the organizational change will increase the impact of ICT based E-Learning in education and training, as schools evolve towards open learning centers, universities towards teach service providers, companies towards learning organizations and cities and regions towards learning support environments. Changes in pedagogy and organization will come with growing e-maturity. This will require innovative use of ICT based E-Learning, supporting new collaborative approaches. It will be important to involve users, i.e. learners, teachers and workers, who are players in organizational and operational innovation. Assessment systems are essential to effective education. They need to address the impact of ICT in learning, and to make the best use of ICT based E-Learning for assessment. E-assessment can help both the management and the practical

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32 See Y. Punie, Ala, K. Mutka, (2007), *Future Learning Spaces: new ways of learning and new digital competences to learn*, Nordic Journal of Digital Literacy, Vol. 2, No. 4, pp. 210-225

aspects.<sup>33</sup>

## CONCLUSION

The ICT based E-Learning in Covid-19 Pandemic Era, is pervasive in shaping all parts of our society, economy and culture. Since 2000, the most of the European Union member countries has stepped up its activities to improve E-learning and the development of digital competences through education. This has continued under the Renewed Lisbon Agenda and the July 2008 Communication on the Renewed Social Agenda for Europe which have highlighted ICT based E-Learning as a key mechanism to create more social and economic opportunities for EU citizens and improve their access to quality services.

Overall, in the Covid-19 Pandemic Era, the hope is to bring ICT based E-Learning more closely to the task of creating a European Lifelong Learning Area. In the last decade, the EU had made considerable success in introducing ICT based E-Learning to education and training. Today, in the Covid-19 Pandemic Era, the pedagogical, technological and organizational innovations demand a renewed and more comprehensive approach towards the role of ICT in education and training. A first priority is to exploit infrastructure investments fully. The innovation is today seen as one of the main engines of long-term economic growth and social development. ICT, a key driver for change in many fields, must also lever change in education and training. Intelligent use of ICT based E-Learning can scale up the core functions of education and build active learning communities in a networked society. A fresh impetus is needed to enable European education and training to better respond to the growing need for innovativeness.

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33 See <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote>

This calls for more than just improving knowledge base and easily measurable knowledge levels. The system change had happened in other parts of our social and economic fabric and it can also happen in education and training in the near future.

# CHAPTER EIGHT

# 8

## **HOS: Real Time Hook Order Pattern Based Resource Approximation Technique For Efficient Scheduling In Grid Environment**

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## SYNOPSIS

The problem of scheduling and resource allocation has been well studied and there exist number of approaches recommended by various researchers towards this issue. However, the prediction of workflow does not meet by any method. Even though the methods have used different properties of the processes, still many features have not been considered. We consider the resource approximation problem because; the performance of scheduling is highly depending on the utilization of the resource. Based on the corollary, a Hook Order pattern-based resource approximation technique is presented in this paper. The method first identifies the list of processes to be executed and their processing time with the resource required. Using this information, the method generates resource claim set for each resource based on the resources required for different processes. Similarly, the method generates number of patterns on which the processes can be executed over the resources. For each generated pattern, the method computes the resource utilization factor and process completion factor. Using both, the method estimates the scheduling weight for different patterns generated. Based on the scheduling weight, a single sequence has been selected. This will be iterated at each time window and at the completion of each task. The proposed method improves the performance of scheduling and resource utilization.

**Keywords:** *Grid Computing, Resource Allocation, Scheduling, Fault Tolerance, FT-PRA Scheduling, QoS.*

## INTRODUCTION

The increasing growth of modern applications requires different set of resources to perform a single task. As the applications changes, their require-

ments also change. In earlier days, the processes or the task would require a small set of homogenous resources to execute their jobs. In recent days, the multitasking applications have come in to play and they require heterogeneous resources to perform a single task. This makes impossible for the organization to maintain the entire resources in single location but based on distributed computing, this becomes possible for the organizations. The organization has many units with different resources in different locations of the country. To perform a task, the resources of different locations can be accessed in distributed manner.

The grid is the environment which supports this distributed nature and allows the processes to perform their task over the resources. But the challenge here is about the number of processes with resources. There will be always a R number of resources available in the grid but the number of processes claims the resource p will be always higher. So scheduling the resources for the processes will become a challenging issue. How to schedule them is a different play.

**Table 1: Details of jobs and their execution time**

Process	Resources Required	Resource access Time	Completion Time
1	R1, R2, R4	4,7,9	20
2	R1, R3, R5	2,5,9	16
3	R1,R2,R3,R4	3,6,8,9	26
4	R1,R3,R5	6,2,8	16
5	R1,R2,R3	4,7,9	20

Table 1 presents the details of jobs and their resource requirements and access time with completion time.

In olden days, the processes are scheduled based on their execution time over the resources. If a process p requires a resource for the time t, will be

selected when the value of  $t$  should be less than the value of  $t_x$  of all the processes. Similarly, there are approaches which schedule the process  $p$  first according to the number of resources required. If a process  $p$  requires only  $k$  number of resources where  $k$  is a negligible value then it will be scheduled first. This reduces the waiting time of the job. In other approaches, the completion time-based scheduling has been performed. Such method schedules the process according to their completion time. According to Table 1, the process 1 and 4 will be allocated in the first slot. Similarly, there are number of approaches available for the resource scheduling in a grid.

However, the quality of service of grid environment is still a questioning one because the method does not produce higher performance in scheduling. The methods only consider a single parameter in scheduling them. For a fair scheduling algorithm, it is necessary to consider much possible number of parameters. Fair scheduling algorithm includes a fault tolerant scheduling. Algorithm considers waiting time of resources, waiting time of jobs, execution time, resource utilization and more. According to this, the method approximates the resource utilization and performs scheduling. The detailed approach is discussed in the next section.

## RELATED WORK

There are number of approaches discussed in literature for the development of resource utilization in grid environment. This section discusses some of the methods related to the problem.

A hybrid strategy for fault tolerant load balancing in grid computing environments [1], propose a AlgHybrid\_LB, it consists of grid architecture, computer heterogeneity, communication delay, network bandwidth, resource availability, resource unpredictability and job characteristics. AlgHy-

brid\_LB place mutually the physically influential summit of neighbor-based and cluster-based load balancing algorithms.

Grid Service Reliability Modeling and Optimal Task Scheduling Considering Fault Recovery [2], proposed Local Node Fault Recovery (LNFR) technique fabricates a methodical review on grid service reliability modeling and analysis. To create LNFR method sensible, a few restraints, i.e. the existence period of subtasks, plus the amount of development agreed in grid nodes, be inaugurates; and grid service reliability models beneath these realistic restrictions are urbanized. Depends on the future grid service reliability form, a multi-objective task scheduling optimization model is presented, and an ant colony optimization (ACO) algorithm is urbanized to unravel it efficiently.

Resource Allocation Policies for Loosely Coupled Applications in Heterogeneous Computing Systems [3], proposed for giving solutions for multi-user and multi-application workloads in a heterogeneous computing system with three resource allocation policies. There are a fairness policy, a greedy efficiency policy, and a fair efficiency policy. We assess with contrast the recital of the three resource allocation policies in excess of a variety of surroundings of a heterogeneous computing system and loosely coupled applications.

Performance-Driven Load Balancing with a Primary-Backup Approach for Computational Grids with Low Communication Cost and Replication Cost [4], extend a load-balancing algorithm by put beside the burly summits of neighbor-based and cluster-based load-balancing methods. We followed by incorporate the projected load-balancing approach with fault-tolerant scheduling namely MinRC and enlarge a performance-driven fault-tolerant load-balancing algorithm or PD\_MinRC for autonomous jobs. In order to



get better system flexibility, reliability, and save system resource, PD\_Min-RC utilize inactive duplication system. Our major goal is to achieve minimum response time, maximum resource consumption and balanced load over the resources utilized in grid.

A review on resource allocation in high performance distributed Computing systems [5], presents an inclusive inspection includes resource scheduling in diverse HPCs is report. Joint framework is the goal of the work, through analysis and characteristics of the resource management are attained form existing solutions of HPC. Performance enhancement of all HPCs classifications is done through Resource allocation mechanisms and strategies. One of the motivations of this survey is most of the allocation strategies are deployed in HPC environment is required, which is one of the motivations of this survey. Three broad categories are a) cluster, (b) grid, and (c) cloud systems come under HPC systems for describe the characteristics of each class by extracting sets of common attributes.

QoS-Aware Fault-Tolerant Scheduling for Real-Time Tasks on Heterogeneous Clusters [6], propose a QAFT algorithm for Fault Tolerant Scheduling for tolerate permanent failures of one node at one time for real time tasks in addition with QoS on heterogeneous clusters. QAFT attempt to any one from advance the start time of backup copies to adopt passive execution method for improving system flexibility, reliability, schedulability, and resource utilization or to reduce the instantaneous execution time of the primary and backup copies of a task as much as possible to get better resource utilization. To attain high system flexibility, QAFT is correcting the QoS levels of tasks and the execution schemes of backup copies.

On Fault Tolerance of Resources in computational Grids [7], includes a comparative survey of fault tolerance in grid environment. It includes the

established methods of fault-tolerance in grid environment with their significance, combinations and variations have been discussed. To increase resource availability to computing node Replication of job/data is essential. To create controlled guidelines to retrieve system under errors or faults an application of check pointing is important for efficiently avoid system from being led to a failure state. Grid performance significantly improves through agents when Security aware scheduling of grid jobs migrated. Understanding the grid services introduce new concept such as service level behavior or global behavior for representing a one unified service system has changed the whole perspective of fault scenario in grid computing.

Implementation of Load Balancing Algorithm for Grid by Heuristic Approach [8], introduced adaptive, decentralized and dispersed for load balancing along with the combined resources in the grid. Various number of tasks and resources are used through a series of simulations for attain the results. It is identified that computation reduced until it achieved the finest level i.e resources with highest computation ability. There will be comparative contact on others depending on each user's approaches and restrictions when the number of users competing for the same set of resources increases,

A Review on Different Approaches for Load Balancing in Computational Grid [10], evaluate different kinds of load balancing algorithms for the diverse network like grid and to recognize different metric and recognize gaps between them. Several load balancing algorithms be previously employed which workings alongside diverse concerns like heterogeneity, scalability etc. various metrics such as make span, time, average resource utilization rate, communication overhead, reliability, stability, fault tolerance are analyzed through variety of load balancing algorithms for the grid environment.

Optimization of resource allocation in computational grids [11], proposes a Teaching Learning based optimization method for resource allocation in Computational Grid. The projected method is establishing to smash the obtainable ones in provisions of execution time and cost. Simulation results are obtained using GRIDSIM and the simulation results are presented. Improving Fault-Tolerant Load Balancing Algorithms in Computational Grids [12], Adaptive Scheduling Algorithm namely ASA was proposed to defeat these problems. I conclude that ASA distributes a few amounts of jobs to a million nodes with relatively low overhead and high flexibility.

Grid Computing Approach for Dynamic Load Balancing [13], develops an algorithm which optimally balances the loads between heterogeneous nodes. It is based on tree structure where load is managed at different levels such as neighbor-based and cluster-based load balancing algorithms which reduces complexity can and a smaller number of nodes required for communication during load balancing.

Swarm Intelligence Approaches for Grid Load Balancing [14], includes two novel dispersed swarm intelligence enthused load balancing algorithms. First one is depending on ant colony optimization in addition to the second algorithm is depends on particle swarm optimization. GridSim (Grid Simulation Tool) is used for simulation of the proposed approaches. Performance criteria such as makespan and load balancing level are obtained from the algorithms. State Broadcast Algorithm and two random approaches are comparison of our proposed approaches. Boosting adaptability of fault-tolerant scheduling for real-time tasks with service requirements on clusters [15], propose MDSS, a heuristic multi-dimensional scheduling strategy, including three steps. Real-time scheduling algorithm included in first step to decides to accept or reject a task. MQFQ algorithm included in step 2 to improve the QoS levels of recognized tasks, and to make these tasks have

fair QoS levels at the same time. In step 3, ITLB algorithm is projected and used in step 3.

All the above discussed methods produce poor results in scheduling and reduce the throughput performance.

## **HOOK ORDER PATTERN BASED RESOURCE APPROXIMATION SCHEDULING**

The proposed algorithm identifies the list of resource required for each of present in the task set  $T_s$ . Each task would have number of sub task to be performed where each sub task would require different resource. Such tasks and their resources are identified. Then for each task  $t$ , and their sub task  $st$ , the method generates hook order pattern at each completion of task and sub task. For each hook order pattern generated, the method computes resource approximation factor and completion factor. Based on these two, a scheduling weight is computed. Computed scheduling weight has been used to perform scheduling. The detailed approach is presented in this section.

### **Pre-processing:**

The pre-processing is the process of identifying the tasks and the list of resources required. Also the subtask and their consequent resources are identified in this part. The method reads the task set  $T_s$  given and identifies the list of task present and their subsequent task. For each subsequent task, the method identifies the processing time and the order of resources required. Identified details are used to generate hook order pattern in the next stage.

Algorithm:

Input: Task Set  $T_s$ , Resource Set  $R_s$

Output: Preprocessed Task set  $P_t$

Start

Read Task set Ts.

Read Resource set Rs.

For each task  $T_i$

    Identify the list of sub task.

    Sts =

    For each sub task st

        Identify processing time  $P_t$  =

        Identify the resource claimed  $R_c$  =

        Generate Feature Vector  $F_v = \{st, P_t, R_c\}$

    End

    Pts = Pts

End

Stop

The above discussed algorithm identifies the information about the processes and the resources required. Using this information, the method generates the preprocessed set to be used to generate hook order pattern.

According to Table 1, the following pattern has been generated for the resource R1.

Table 2: Sample hook order pattern generated

Hook Order Sequence
1-2-3-4-5
1-2-3-5-4
1-2-4-3-5
1-2-4-5-3
1-2-5-3-4
1-2-5-4-3
....

Table 2, shows the sample hook order pattern generated, similarly 120 number of patterns can be generated according to  $2^n = 2^5=120$ .

**Hook Order Pattern Generation:**

The hook order pattern is the sequence in which the task claims the resource. Each job would require different resource and different resource would be claimed for different process. But the order of the claim will vary and by identifying the order of claim the hook order pattern can be generated. First the method generates possible sequences based on their first task and resource. The generated patterns are added to the hook order pattern set Hps. The pattern is generated for each resource. The pattern has been generated for each resource which contains the information about hook-leave time with task id. Generated Pattern set has been used to perform Scheduling.

Table 3: Estimated hook time and leave time of processes

Process	Resources required	Resource access Time	Completion Time
1	R1, R2, R4	4,7,9	20
2	R1, R3, R5	2,5,9	16
3	R1,R2,R3,R4	3,6,8,9	26
4	R1,R3,R5	6,2,8	16
5	R1,R2,R3	4,7,9	20

Hook Order Sequence	Hook Time	Leave Time	Next Resource
1-2-3-4-5	0	4,2,3,6,4	R2,R3,R2,R3,R2
1-2-3-4-5	5,3,4,7,5	11,7,9,8,11	R4,R5,R3,R5,R3
1-2-3-4-5	12,8,10,9,12	20,16,17,16,20	R4
3	18	26	

Table 3, shows the estimated hook time and leave time of tasks considered.

Now according to the algorithm, the method generates hook order pattern at each level. Consider the pattern taken is “1-2-3-4-5”, then in the second level, the following pattern will be generated.

Table 4: Second level hook order pattern

First Level Hook order pattern	Resource R2	Resource R3
1-2-3-4-5	1-R2->3-R2->5-R2	2-R3->4->R3
	1-R2->5-R2->3-R2	4-R3->2->R3
	3-R2->1-R2->5-R2	
	3-R2->5-R2->1-R2	
	....	

Table 4, shows the second order hook order pattern generated by the algorithm. Similarly, the method generates number of levels of hook order pattern which will be used to perform scheduling.

Algorithm:

Input: Preprocessed Set Ps, Taskset Ts,

Output: Pattern Set Hops.

Start

    Read preprocessed set Ps.

    For each pattern  $p_i$

        For each level  $l$

            For each resource  $r$

                Identify list of all task need the resource.

                Task list  $T_l =$

                Generate possible pattern  $Pos =$  .

                For each pattern  $p_k$

```

        Identify the resource hold time  $H_t$ . of all task
     $H_t =$ 
        Compute hook time  $H_{ot}$ .
             $H_{ot} =$ 
        Compute leave time  $L_t$ .
             $L_t =$ 
        Add to l order pattern set.
    End
End
End
        Add pattern set to Hops.
         $Hops = Hops \cup (p_i \cup L_{ps})$ .
End
Stop

```

The above discussed algorithm generates L order hook order pattern set from the preprocessed set. The generated pattern set will be used to perform scheduling in the next stage.

### **Hook Order Resource Approximation Scheduling:**

The scheduling algorithm reads the hook order pattern set generated in the previous stage. Then for each multi-level pattern, the method computes the resource utilization factor using the hook time and leave time of the pattern with average waiting time of the resources. Similarly, the completion time factor has been estimated using the completion time of the sequence identified and the average waiting time of the job. Using the two metrics, the method computes the scheduling weight for each sequence. Finally, a single one is selected for scheduling.



Algorithm:

Input: Hook order pattern set Hops.

Output: Selected Sequence s

Start

    Read Hops.

    For each pattern p

        Identify all level sequences set.

$S_s =$

        Generate single sequence s with p and ss.

        For each l order sequence

$S = p \cup ss(i)$

            Compute resource utilization factor  $Ruf$  .

$Ruf =$

    Compute completion time factor CTF.

$CTF =$

    Compute scheduling weight  $Sw = RUF \times CTF$

        End

    End

    Choose the most weighted sequence s.

Stop

The above discussed algorithm computes the resource utilization factor and completion factor for each sequence. Using these two, the method computes the scheduling weight for each sequence. Finally, a single sequence has been selected for scheduling.

## RESULTS AND DISCUSSION

The proposed Hook order pattern based resource approximation scheduling algorithm has been implemented and evaluated for its efficiency. The method has been evaluated for its efficiency under various simulation conditions. The method has been implemented using advanced java. The method has produced the following results.

### **Figure 1:** Comparison on scheduling performance

The Figure 1 shows the comparison result on scheduling performance produced by various methods. The proposed Hops approach has produced higher scheduling performance than other methods.

### **Figure 2:** Comparison on resource utilization

The Figure 2, shows the comparative result on resource utilization produced by various methods. The result shows clearly that the proposed Hops approach improves the performance of resource utilization than other methods.

### **Figure 3:** Comparison on throughput performance

The Figure 3 shows the comparison result on throughput performance produced by various methods. The proposed Hops algorithm has produced higher throughput than other methods.

## CONCLUSION

In this paper, a real time hook order pattern-based resource approximation scheduling is presented. The method pre-processes the task set to identify the list of task and their sub task available. Then the method identifies the

list of resources required and their hold time, hook time, leave time are identified. Using the pre-processed data, the method generates first level patterns which are possible in the combinatory. Then for each level, the method generates the L order pattern and adds to the pattern set. Third, using the pattern generated, the method computes the resource utilization factor, completion time factor for each sequence generated. Using these measures, a sequence weight has been computed to select a most weighted sequence for scheduling. The method produces higher efficiency in scheduling and increases the resource utilization factor as well.

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# CHAPTER NINE

# 9

## **ICT And Teacher Education: Are We Preparing For Future Classroom?**

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## SYNOPSIS

The use of ICT is important for giving students opportunities to explore learn and apply their knowledge in different areas. Future classrooms will be integrated with information communication technology that makes learning process full of life and personalized according to needs of students. In this paper insight is given about how teacher education will make use of ICT in developing their student teachers professionally and further how they will use ICT and new technology in future classrooms. ICT is tool that brings real change in pedagogy of teaching when teachers will use this tool particularly in the classroom. Under the changing scenario there is need to redefine the role of teacher educator. Teacher education institutions should help student teacher to grow along the present technological modification. So, there is need to change the role of teachers to bring changes in classroom and to prepare students for accepting new learning environment. The revolution has already begun due to COVID -19 pandemic learning has changed drastically. With technological advancement and online teaching learning teacher's role is changed a lot. Traditional method of teaching in the classroom have been replaced by mobile tablets through the online methods of teaching and learning. New technology and ICT are going to play a huge role in future classroom.

**Keywords:** ICT, New Technology, Teacher Educator, Student Teacher, Future Classroom.

## INTRODUCTION

Classroom in the future is the classroom which will be integrated with information and communication technology that makes learning process full

of life, interactive, synergistic, informative and personalized to the needs of the students. The traditional classroom have been changed into future classrooms through the integration of ICT tools such as computers, interactive whiteboards, digital visualisers (also known as document cameras), projector, audience response systems and educational content. ICT based teaching tools pushes the boundaries of learning and teaching to an end. Digital technology in classroom will enable students to enhance and broaden their knowledge about different subjects instantly.

Integrating technology into classroom instruction does not concern only to teaching basic computer skills, but more than these skills and software programs in a separate computer class. Effective integrated technology must develop the curriculum in such a way so that research studies can be conducted and learning process can be enhanced. In particular, it should support four key elements of learning: active engagement, participation in groups, frequent interaction and feedback, and connection to real-world experts.

William Knoke, in his book *Bold New World* (1996), wanted that technology that is not used and implemented quickly is worthless: “Cutting-edge technology is as perishable as a truckload of ripe bananas: it’s worth a fortune today, but if not used quickly, it becomes worthless” (p. 166). Thus, a major goal of technology training should be to help faculty to bring technology-mediated instruction to the classroom in a time-and cost-efficient manner.

## **What is ICT?**

ICT is an acronym that stands for “Information Communication Technologies”. Information and communication technologies are an umbrella term that includes all technologies for the manipulation and communication of



information. ICT considers all the uses of digital technology that already exists to help individuals, business and organisation. It is difficult to define ICT because it is difficult to keep up with the changes as they happen so fast.

ICT is concerned with the storage, retrieval, manipulation, transmission or receipt of digital data. The definition taken from the guidance in the QCA schemes of work for ICT is “ICTs are the computing and communication facilities and features that variously support teaching, learning and a range of activities in education.”

## **ROLE OF ICT IN THE CURRICULUM**

One can generally differentiate three distinctive roles for ICT in the curriculum, Learning about ICT: ICT as a subject of learning in the school curriculum, such as computer literacy, computer sciences and information literacy.

### **Learning with ICT:**

The use of various computer capabilities such as computation multimedia, internet or World Wide Web (WWW) as a medium to enhance instruction or as a replacement for other media without changing beliefs about the approach to and the methods of teaching and learning.

### **Learning through ICT:**

Here ICT is integrated so completely as essential tool in a course/curriculum that the teaching and learning of that course/curriculum is no longer possible without it. As per the report published by UNESCO in 2003 the advanced countries including Australia, South Korea and Singapore have integrated ICT's into their educational system. Countries using ICT's but have not fully integrated ICT's in education include China, Thailand, Japan,

Malaysia, Philippines and India. The best use of information communication technologies in India has been Video conferencing facility which was introduced to import knowledge about the new technologies by UGC-CEC network with the help of ISRO and Doordarshan in the year 1994. CEC (Consorting for educational communication-an inter university centre of University Grants Commission) is responsible for maintaining the quality of e-content material on higher education. All the CEC material will be available on website through internet all over the world which can be accessed and used for educational purpose in most of the subjects taught in the country in two to three years' time.

## **IMPACT OF ICT ON TEACHER-EDUCATORS AND STUDENT TEACHERS**

1. It acts as the gateway to world of information and enables teachers to be updated.
2. For professional development and awareness of innovative trends in instructional methodologies, evaluation mechanism etc.
3. For effective implementation of certain student-centric methodologies such as project – based learning which puts the students in the role of active researches and technology becomes the appropriate tool.
4. It is an effective tool for information acquiring – thus students are encouraged to look for information from multiple sources and they are now more informed than before.
5. It has enabled better and swifter communication; presentation of ideas is more effective and relevant.
6. The dissemination of ideas to a larger mass now seems possible due

to technology.

7. Student-teachers are transformed into self-learners.
8. ICT creates awareness of recent methodologies and thus teacher educators feel empowered.

## **CHANGING ROLE OF TEACHER EDUCATOR**

Under the changing scenario, there is a need to redefine the role of a teacher-educator. He/she must shoulder the responsibilities outlined below:

1. Act as a role model for pre-service trainees and in-service teachers, demonstrating the use of technology across the curriculum.
2. Encourage technology integration among the trainees, colleagues, teachers and parents.
3. Be involved in planning and implementing ICT professional development training.
4. Be up-to-date with the latest technological developments and advise the institutions concerning technology advancements and up gradation.
5. Interact through e-mail/forum/communities/blogging with trainees, participating schools, and parents.
6. Aid in the implementation of technology plans of the institutions.
7. Plan, design, and demonstrate the use of multimedia applications for instructional use through multimedia projects.
8. Examine a variety of evaluation and assessment tools including electronic portfolio assessment.
9. Become active, competent online users of telecommunication services and act as model in the use of internet as an instructional tool.
10. Direct trainees and teachers to digital resources that will be able to

answer their questions.

11. Use information literacy to access, evaluate, and use information from a variety of sources.
12. Have the competencies in software evaluations and advise the institutions in making the right choices.

## **FUTURE OF ICT IN TEACHER EDUCATION**

The role of interactive multimedia is a perspective where learning is part of schooling, working or just living. ICT also includes web TVs, Net PCs, and Web-Based Education that offers accessibility, flexibility and innovativeness in teaching and learning. ICT integrated teacher education is more important to Indian education system that is committed to maintain global partnership as well as leadership in knowledge-based society. Prof Ram Takwle (2003) says about IT driven education: “They are changing the methods of content generation, content storage, content packaging and content delivery and hence offer a new paradigm of education.” These multimedia programs and packages are also intended to supplement the real classroom activities and help their easy assimilation. ICT especially in the 21<sup>st</sup> Century context of teacher education fulfills the following objectives.

- It envisages excitement to the learner’s eyes, ears and more importantly the head.
- ICT fulfills the needs of learners by providing items and packages of higher standard and interest.
- It helps in transforming the definition of literacy, learning and knowledge; a definition that increasingly includes multimedia digitized literacy.
- Multimedia provides a kind of control over the learning environ-

ment to the pupil teachers and they experience learning from their failures and I practice.

- ICT facilitates the learner to have control on lesson, pace the sequence, content, feedback, which in turn enhances the efficiency of learning.
- Unlike books, it is interactive in nature and creates motivation and interest among the learners, in turn meeting the individual unique needs effectively and efficiently.
- Develops the ability of self-learning and interacting individually, as the learner attains vast experiences effectively, efficiently and expeditiously.
- ICT-empowered simulated situation minimizes dangers in the real world' e.g. practical in science, pilot training driving etc.
- ICT is a powerful new development with ambitions role in teacher education, Digital and Internet-based multimedia transforms the present's trend in the field. It takes just a computer to play multitude of media enabled programs and packages.

## **ROLE OF ICT AT DIFFERENT LEVELS OF TEACHER EDUCATION**

### **Role of ICT at Primary Level:**

The programmed of primary education is to be designed carefully to provide for an all-round. Wholesome growth and development of the children including their new muscular coordination, self-expressions, observation skills, health and hygiene and habit formation. To help primary teacher education centers do their work effectively establishment of learning resource center in a teacher education instruction has to be mandatory. Such a center

may be equipped with picture books audio-video tapes slide showing picture of animals, insects, birds, flowers vegetable, and fruits. ICT is gradually emerging as an integral part of teacher education at primary level. It influences not only teaching system but also the learning styles. ICT results in transformation from teachers-oriented learning to that of exploratory self-learning.

### **Role of ICT at Secondary Level:**

Secondary education is the link between primary and higher stage of education and occupies a crucial position in a system of education because general education terminates here and the students at this level prepare for making choices through appropriate diversification of course.

#### **To achieve these objectives:**

- ICT helps to make multiple innovative and interaction modes adopted for transmission of foundation restated papers and internship in teaching.
- Making of different programmed instruction programmes.
- Use of ICT as vital modes of transaction.
- Methods of teaching would involve use of pedagogical analysis, ICT, new evaluation techniques.

### **Role of ICT at Higher Level:**

It occupies a unique position in the system of education. As teacher education systems exist today, there are pre-service teacher education programmes for preparing teachers at primary and secondary stages. There is no provision however is prepared teacher for higher stage.

Role of ICT to elevate teacher in at higher education to empowering teach-

ers for self-study, reference political thinking, abstract thinking, and of knowledge by adopting various such as project work, acquire skills.

**Role of ICT In-Service Teachers Education:**

Main objectives of in-service teacher education is to enable the teacher to would the assumptions underlying existing national policy curricula and syllabi. In of new educational developments improvements in evaluation as new research proposal must take

*Preservation:* Anything Materials, printers, Books

*Transmission Development:* Radio, education collections & analysis of data education computer, internet accesses, online discussions. TD is the application in the education long with which the teaching process dually mechanized so that maximum they be educated in minimum time.

**Table Showing the Paradigm Shift through ICT**

Teacher educators and teachers education institutions should help the student teachers to grow along with the present technological modifications.

S.No.	Different Teacher Education Stage	Objective	Role of ICT
1.	At Primary level	All round development new observational skills. Habit formation.	Establishment learning resource center “equipped with audio with audio-visual material like T.V.VCR side projectors of animals fruits insects flowers.

2.	At secondary level	Integrated & holistic approach; inculcating social cultural aesthetic. Moral & scientific values responsive & transparent evaluation	Multicultural setting, training of cooperation among teachers. Skill training in undertaking action research online conference. Seminars & expert discussions
3.	At higher level	Empowering teachers to guide learning for self study, reference skills, critical thinking adopting various methods such as project work & tutorials. Research attitude.	Electronic information resources E-journals. E-conferences. Bulletin board services. Global classroom. E-libraries
4.	At in services training level	To know existing educational policies curricula & syllabi skills for effective transaction of curriculum. New educational development	Audio-video teleconferencing. Connectively with the concerned agencies like. NCERT SCERT NCTE UGC, etc. Training of computer & higher learning opportunities through correspondence

Technology also changes the way teachers teach in the classroom. So it becomes essential to train them to have effective ways to reach different types of learners and assess student's understanding through multiple means. It also enhances the relationship between teacher and student. When technology is effectively integrated into subject areas, teachers play the role of adviser, content expert, and guide. To deliver effective presentations, teachers need to learn multiple new skills within a vast array of hardware, software, and peripherals. But before changing classrooms into future classrooms,



there are some suggestions to train teachers.

- Always try to train in the way in which they want. They want to become “end users” of technology, not technicians.
- Different types of hardware or software and Pedagogy-based training should be provided as it is the base of good teaching and learning principles that have wide-applicability; it will be adaptable to any classroom, regardless of discipline or hardware/software standards.
- While training teachers’ face-to-face training should be done and even by keeping them in their own familiar environment, thus optimizing their time spent on task.
- Always try to bring more training to the teacher, not the teacher to the training.

## CONCLUSION

ICT is a tool that brings a real change in the pedagogy of teaching when teachers will use this tool particularly in the classroom. So, there is need to change the role of teachers to bring changes in the classroom and to prepare students for accepting new learning environment. Teachers need to know the area of their subject in which applications can add value in the learning of students because this is not one time activity, rather it involves multiple activities. Teachers have to keep in mind that information environment is continuously changing and with change new and new challenges are arising for teachers, therefore it becomes essential for teachers to select different type skills for students and to work in collaboration with others. There is no doubt that teachers who use ICT in classrooms have to demonstrate high levels of energy, hard work and perseverance, often in the face of considerable odds (Lankshear & Snyder, 2000, p. 110). The revolution has now begun. Learning is going to change drastically in the future. With

technology moving leaps and bounds do not expect classrooms to be on the same mundane places for knowledge and learning. Integrated ICT is going to play a huge role in future classrooms. Paper textbooks will become obsolete in the years to come. With apple creating and developing textbook applications for the iPad it is clear to all what the future of classroom study is going to be.

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# CHAPTER | 10

## TEN

## **A Review: Potential Uses Of Information And Communication Technologies In Indian Agriculture**

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## SYNOPSIS

Agriculture is considered the main occupation for a large part of the population. The agricultural sector plays an important role in the development of India. There is a big gap between rural areas and information in agricultural knowledge centers. In recent years, the agricultural sector in the developing stage due to a lack of environmental changes and agricultural knowledge. E-Farming is an emerging field focused on improving agriculture and rural development through communication processes and advanced information and technology. In this paper, some important issues related to ICT and e-Farming are discussed. This paper provides an overview of rural ICT and the issues related to the use of ICT for rural e-farming applications.

Agriculture is a gigantic sector of the Indian economy as it accounts for almost 17 percent of the gross domestic product (GDP). Over 60 percent of the population pursue agriculture as their main occupation. Despite a large Indian economy, agriculture is lagging in many aspects and is characterized by poor connectivity and market dissolution, unreliable and delayed information to farmers, and small landowners, no or less adoption of improved technologies, and so on. It has become essential to explore different ways to keep our farmers up to date with modern technologies and relevant information. The development and timely dissemination of better-personalized technologies specific to different agroclimatic conditions, land holding size, soil type, crop type, and associated pests/diseases are the real problems that agronomists/experts need to advance. The timely availability of correct information and its correct use is essential for agriculture. ICT-based initiatives can be taken for information dissemination, technology transfer, procurement of inputs, and sale of outputs so that farmers benefit. The timely information and practical solution to the agricultural problems will help farmers to adopt good agricultural practices, make better choices of

inputs and plan cultivation properly.

**Keywords:** ICT, e-Agriculture, Agriculture websites, initiatives, information dissemination, technology transfer.

## INTRODUCTION

ICT or Information and Communication Technologies is an important tool for the development of the rural and agricultural sectors. Agriculture is a major sector on which the majority of rural people in developing countries depend. This sector faces major challenges in increasing production in a situation of dwindling natural resources required for production. However, the large increasing demand for agricultural products also offers producers some opportunities to maintain and improve their lifestyles. Information and communication technologies (ICT) play an important role in solving these challenges and improving the livelihoods of the rural poor. This review paper examines the potential contribution of ICT to smallholder livelihoods and the efficiency of the agricultural sector in developing countries. The agricultural sector plays an important role in the development of India.

The agricultural sector in India is currently going through a difficult phase. India is moving towards an agricultural emergency due to lack of attention, insufficient land reform, poor land management, failure to provide farmers with fair prices for their crops, insufficient investment in irrigation and agricultural infrastructure in India, etc. India's food production and productivity are declining while food consumption is increasing. The situation was further aggravated by the use of grain to meet biofuel needs. Even the solution of importing food grains would be problematic as India does not have ports and logistic systems for large-scale food imports. ICT or Information and Communication Technology, in simplified terms, can

be defined as a basket of technologies that support or support the storage, processing of data/information, the dissemination/communication of data/information, or both. ICT thus includes technologies such as desktop and laptop computers, software, peripheral devices, and the connection to the Internet, which are designed to perform information processing and communication functions. In addition to IT, ICT explicitly also includes the area of electronic communication. The term IT is defined as the study, design, development, implementation, support, or management of computerized information systems, particularly software applications and computer hardware. It deals with the use of electronic computers and computer software to securely convert, store, protect, process, transmit and retrieve information. The relevance of ICT for agricultural development in general and agricultural extension, in particular, is extremely high for a country like India. The use of information and communication technology (ICT) in agriculture is becoming increasingly important.

E-Agriculture is an emerging field focused on improving agricultural and rural development through improved information and communication processes. More specifically, e-Agriculture encompasses the conceptualization, design, development, evaluation, and application of innovative ways of using information and communication technologies (ICT) in rural areas, with a primary focus on agriculture. All participants in the agricultural production system need information and knowledge about these phases to manage them efficiently. ICT is the most natural ally to facilitate the outreach of the agricultural extension system in the country. Despite a large, well-trained, well-trained, and well-organized agricultural advisory workforce, around 60% of farmers in the country remain unmatched and are not served by any advisory agency or official. Of the 40% who have access to agricultural information, the main sources of that information are radio and television. The phone has only just begun to make itself felt in this scenario. Inter-

net-supported information kiosks also serve agriculture in many parts of the country.

Therefore, ICT is of high relevance for agricultural extension scientists, researchers, officials, and organizations. The various applications of ICT that are relevant in agricultural research, education, and extension have been discussed in the sections below. Community. Information and communication are always necessary for agriculture. Ever since humans began growing crops, raising livestock, and catching fish, they have hunted information from one another. With the advent of information and communication technologies, traditional agriculture was reformed, eventually contributing to significant improvements in agricultural productivity and sustainability. Equipping farmers with the right information, at the right time and in the right place, is critical to improving the efficiency and profitability of small and marginal farms. Information and communication technologies enable the agricultural industry to increase the flow of information to all industry participants at a lower cost. The Farm Advisory Mechanism will become dependent on ICT to provide farmers with appropriate and site-specific technologies to provide farmers with timely and expert advice. Diffusion of appropriate, efficient, and tailored technologies to farmers in terms of the agro-climatic zone, farm size, soil type, etc. is lacking in Indian agriculture and is the real challenge for the policymakers in India. Experiences with the integration of ICT in agricultural institutes show encouraging results and complement traditional communication methods (Bisht et al., 2010; Kale et al., 2015).

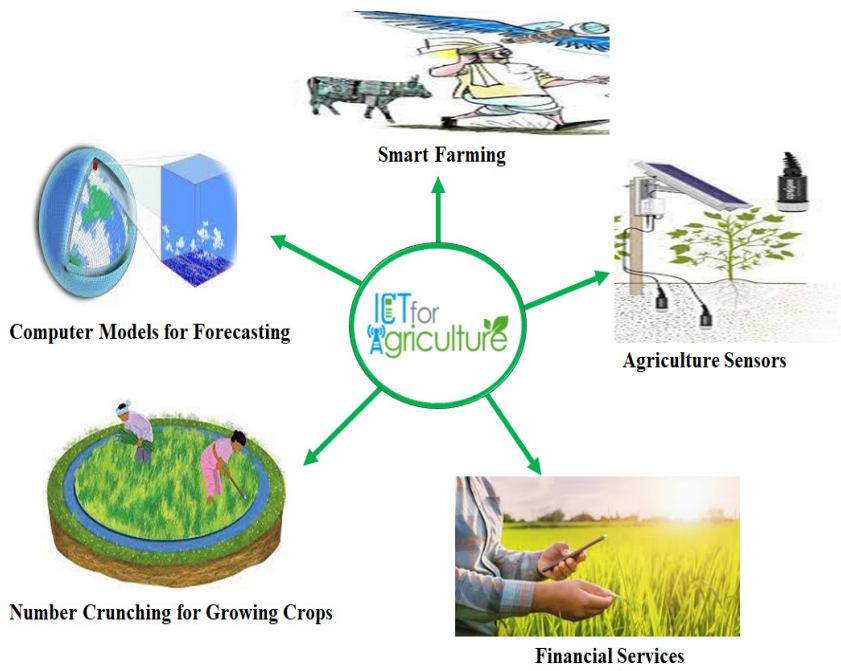
## **THE ROLE OF INFORMATION AND COMMUNICATIONAL TECHNOLOGY (ICT) IN AGRICULTURE**

Lots of tasks for farming development, starting from a decision support



system to trading crops. Information and communication technology in agriculture (ICT in agriculture), also known as e-agriculture, develops and applies innovative ways of using ICT in rural areas, with the main focus on agriculture.

ICT in agriculture offers a wide range of solutions to some farming challenges. An ICT is any device, tool, or application that enables the exchange or collection of data through interaction or transmission. ICT (Information and Communications Technology/ Technologies) is a generic term that encompasses any communication device or application, including radio, television, mobile phones, computer, and network hardware and software, satellite systems, etc., and the various services and applications associated with them, such as video conferencing and distance learning.



**Figure:** Showing the role of ICT in agriculture.

## **Types of computer models:**

Models are something that predicts what does not happen yet that are used for decision making.

### **Climate Models:**

Climate models are mainly used to predict significant changes in the Earth's climate. Climate is the average weather conditions in an area over a long period. Therefore, climate models use a combination of statistical and current data to provide a reasonable prediction. The CFS is one of the primary climate models used for forecasting planetary-scale weather conditions, such as e.g.: El Nino, Madden Julian Oscillations (MJO), and Monsoon.

### **Mesoscale Models:**

Mesoscale models are mainly used to forecast the weather locally. Meteorologically, mesoscale means the atmospheric conditions, usually between two and 20 km. Synoptic and climate models typically do not have enough resolution to predict localized weather conditions, such as B.: Single-cell thunderstorms and tornadoes. The North American Model (NAM) is commonly used to forecast local weather conditions.

### **Dynamic Models:**

Dynamic models are the most sophisticated and expensive tools for forecasting the weather. Dynamic models use advanced fundamental atmospheric equations to predict weather changes based on current conditions. Despite their efficiency, dynamic models can make mistakes on the first runs. According to the National Hurricane Center (NHC), GFS, ECMWF, NOGAPS, UKMET, and CMC are some of the dynamic models used for forecasting.

**Statistical Models:**

Statistical models are mainly used to help meteorologists produce accurate analog forecasts. Statistical models use data from past storms and weather conditions to help meteorologists get a better idea of how to track current weather systems. Statistical models are commonly used to track cyclones in the tropics and mid-latitudes. When dynamic model consensus is not reasonable, meteorologists often use statistical models to provide better forecasts.

**Sensor:**

A sensor converts stimuli such as heat, light, sound, and movement into electrical signals. These signals are passed through an interface that converts them into binary code and passes this to a computer for processing:

*Soil Moisture Sensor:* The soil moisture sensor uses capacitance to measure the dielectric constant of the surrounding medium. In soil, the dielectric constant is a function of the water content. The sensor generates a voltage proportional to the dielectric constant and thus to the water content of the soil.

*Temperature Sensor:* These sensors are devices for measuring temperature readings through electrical signals. The sensor consists of two metals that generate an electrical voltage or resistance as soon as they detect a temperature change.

<b>Sr. No.</b>	<b>Agriculture Sensors</b>	<b>Uses and Functional description</b>
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1.	Location Sensors	These sensors determine the latitude, longitude, and altitude of each location within the required range. To do this, they rely on GPS satellites.
2.	Optical Sensors	These sensors use light to measure soil properties. They are installed on satellites, drones, or robots to determine soil clay, organic matter, and moisture content.
3.	Electrochemical Sensors	These sensors help collect soil chemical data by detecting specific ions in the soil. They provide information in the form of pH and soil nutrient levels.
4.	Mechanical Sensors	These sensors are used to measure soil compaction or mechanical resistance.
5.	Dielectric Soil Moisture Sensors	These sensors measure moisture content by measuring the dielectric constant of the soil.
6.	Air Flow Sensors	These sensors are used to measure air permeability. They are deployed in fixed positions or mobile mode.

### Uses of Agriculture Sensors:

They are used in agricultural weather stations. These devices are equipped with sensors that provide information such as soil temperature at different depths, air temperature, precipitation, leaf wetness, chlorophyll, wind direction, solar radiation, relative humidity, barometric pressure, etc.

They are used in many devices (e.g., dendrometers). Developed by the agricultural industry for agricultural or agricultural applications such as measuring stem diameter, leaf wetness, etc.

They are used in agricultural drones for spraying insecticides and pesticides.

Solar-based pumps that are mobile powered have become very popular due to the reduction in electricity costs.

E-fences have become popular in rural India which helps protect crops from animals like elephants.

### **Benefits of Agriculture Sensors:**

Followings are the benefits or advantages of Agriculture Sensors:

They were invented to meet the increasing demand for food by maximizing yields using minimal resources such as water, fertilizers, and seeds. They accomplish this by conserving resources and mapping fields.

- They are easy to use and easy to install.
- They are cheaper. Besides agricultural use, they can also be used for environmental pollution and global warming.
- They are equipped with a radio chip so that they can be controlled remotely.

## **NEED FOR ICT IN AGRICULTURE**

E-Farming helps disseminate the collected information to the farmers who mainly live in rural areas to use in their routine work. These services are provided via the Internet and related technologies. This ensures the effective and efficient use of information and communication technologies for

the design, implementation, and analysis of innovative and existing applications in support of the agricultural sector. The information disseminated by e-Agriculture can be broken down into several main areas or domains referred to as e-Agriculture services. These are the following:

- Price Information
- Health and Educations Information
- Production Techniques
- Non-government and Government Facilities
- Current Stock and Demands Information
- Weather Information

### **Advantages of ICT in Agriculture :**

1. It can initiate new farming and rural businesses such as e-commerce, satellite office real estate deals, rural tourism, and virtual small farm associations.
2. It can support policy-making and evaluation related to optimal agricultural production, disaster management, agroecological resource management, etc. using tools such as geographic information systems (GIS).
3. It can improve agricultural management and agricultural technologies through efficient agricultural management, risk management, effective information or knowledge transfer, etc., and realize competitive and sustainable agriculture with safe products.
4. Farmers, for example, have to make critical decisions, e.g., B. plant something? when to plant how to deal with pests? IT-based decision support systems (DSS) can certainly help them in their decisions.
5. It can provide systems and tools to ensure traceability and reliability of food, which is an emerging problem in agricultural products

since serious contaminations such as chicken flu were identified.

6. It can facilitate rural activities and provide a more comfortable and safer rural life with equivalent services as in urban areas, such as & advisory scientists, farmers, and other service providers.
7. such as community information centers Development of knowledge management, decision support, and advisory systems to strengthen advisory services and also used for the Farmer Compensation System Efficient management (development, maintenance, allocation, and use) of resources.
8. Improved farmer productivity and profitability through better advisory systems.

## **ROLE OF ICT IN E –AGRICULTURE**

Information and communication technology is a term that includes all communication devices or applications, televisions, radios, mobile phones and computers, network hardware, landline phones and satellite systems, and software, etc., used for the transmission of information in the form of data, images, audio, video, etc. from point P to point Q. ICT consists of all technical means used to handle information and to support communication. Dissemination of information to farmers is increasingly integrated with ICT. Many organizations such as private individuals, cooperatives, governments, and public bodies have also tried to facilitate technology transfer in the agricultural sector. A new concept of agricultural informatics has undergone rapid development in information and communication technologies and the Internet. Rural telecentres provide information on agricultural, educational, and health issues and equip rural citizens with computer skills and basic literacy skills. Information and communication technologies are crucial in

facilitating communication and access to information for rural development and agriculture. In addition, television programs and radio provided agricultural information. Information and communication technologies have a major impact on the rural economy due to their attractiveness and wide application. It may seem paradoxical that modern rents combined with developed markets and capital-intensive methods of production should have any meaning in a country like India, where many millions of people lack basic necessities. Nevertheless, there are many efforts in India and other developing countries to show the concrete benefits of ICT for the rural population and to implement them in an economically sensible way. Some applications of ICT follow.

## **ADVANTAGES OF ICT IN E-AGRICULTURE**

The advantages of ICT in E-agriculture are following:

1. Improved farmer productivity and profitability through ICT and e-Agricultural setup.
2. Efficient use and management of resources.
3. Rain and other important information are available to the farmer in good time.
4. It can support policy and decision-making information and assessments on optimal agricultural production, agri-environmental resource management, etc. using tools like GIS.
5. It can also offer new farming and rural businesses such as rural tourism, satellite office real estate deals, e-commerce, and virtual small farm associations.
6. It can offer a more comfortable and safer life in the countryside with equivalent services to those in the city, such as B. Provision



of telemedicine, distance education, remote public services, remote entertainment, etc.

7. Development of decision support, knowledge management, and advisory systems to strengthen advisory services and are also used for the farmer redressed system
8. It can improve agricultural management and agricultural technologies through efficient agricultural management, risk management, knowledge transfer or effective information, etc., and realize competitive and viable agriculture with safe products. With this help, the farmer has to make critical decisions, e.g., B. plant something? when to plant How to handle Blighter? considering off-farm factors such as market access, environmental impact, and industry standards. An information technology-based decision support system can surely help them in their decisions.
9. It can provide systems and tools to ensure food reliability and traceability, which are emerging problems in agricultural products since serious contaminations such as chicken flu were identified.

## **FUTURE OUTLOOK IN ICT FOR AGRICULTURAL**

For sustainable development of agriculture and the national economy, emphasis on ICT and its use in agriculture is very important. The following topics are very important for ICT management in sustainable agriculture.

1. Farmer information system
2. Marketing information system
3. Research management information system
4. Water and irrigation management information system
5. Production forecasting system

6. Climate change scenarios
7. Stock information systems
8. Agricultural technology database
9. Agricultural product price information system
10. Availability of an updated biophysical database
11. Cultivation zone map

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# CHAPTER | 11

## ELEVEN

### **Digital India Vis-A-Vis Atmanirbhar Bharat**

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## SYNOPSIS

Digital India for Atmanirbhar Bharat is an initiative taken by India's government under the leadership of Prime Minister Narendra Modi to provide a high-speed internet network in rural areas. The Digital India initiative was launched on 1st July 2015 to aid and benefit the other schemes of the government, including Make in India, Start-up India, Stand-up India, Bharatmala, and Sagarmala schemes. As we know that we are going to through a very bad economic condition due to this pandemic covid-19. Therefore, to empower our economic stability, our prime minister shri Narinder Modi had announced Atmanirbhar Bharat Abhiyan. Atamnirbhar Bharat is the vision of the prime minister of India as Self-reliant nation. He announced the "Atmanirbhar Bharat Abhiyan" During the announcement of the coronavirus pandemic related economic package on 12 may, 2020. The law and IT minister, Ravi Shankar prasad, said that self-reliance does "Not mean isolating away from the world. Foreign direct investment is welcome. Self-reliant India translates to being a bigger and more important part of the global economy. In this battle, we not need to protect ourselves but also have to keep moving forward. This chapter covered all the aspect related to digital India to Aatm Nirbhar Bharat.

**Keywords:** Aatm Nirbhar, Bharat, Digital, Information, Covid

## INTRODUCTION

"Aatm Nirbhar" which is a hindi word meaning in English is "self-reliant" which also refers lessdependency on others or don't be dependency on others or don't dependent of others. Aatm Nirbhar Bharat is basically

a term formulated at the time of pandemic COVID-19 in India . it is actually the vision of our hon'ble prime minister Shri Narinder Modi ji to make India and Indians self-reliant by starting production of all mandatory items locally.

India will become a different nation when it adopts the digital technology. Digital India is supposed to promote mobile connectivity and to drive Internet into different spheres which can help India to grow in the digital world. Digital India was the initiative that was taken by the Government of India to provide high speed internet networks in urban and rural areas. Prime Minister Narender Modi launched Digital Indian Mission on 1<sup>st</sup> July 2015 which includes different government schemes such as Make in India, Start up India, Bharat Net, Stand up India and Bharatmala. Digital India campaign is mainly focussed on three areas. Firstly, it provides digital infrastructure as source of utility to every person. Secondly it provides governance and services on demand. Thirdly it looks for the digital empowerment of every citizen. Digital India can be defined as a plan by the government of India to ensure thatthe government services are made available to citizens electronically by improving online infrastructure and by increasing internet connectivity. The aim of this programme is to change India into digitally performed society and knowledgeable country by influencing information technology as growth engine of new India. The three most important component of Digital India are:

- Formation of digital infrastructure
- Delivering digital services
- Digital literacy.

The motto of Digital India is to power to empower. The objective of this Digital India is threefold.

1. To provide high speed internet with easy access to Common Service Centre in all locality.
2. It is an initiative that combines a large number of ideas into single comprehensive vision so that each of them is seen as a part of a larger goal.
3. To focus on restructuring many existing schemes that can be implemented in asynchronised manner.

Atmanirbhar Bharat Abhiyan is the new version of 'Make in India' which was announced by Honourable Prime Minister Narendra Modi on 12<sup>th</sup> May 2020. The idea behind Atmanirbhar Bharat is to ensure that India can emerge as the global nerve centre of the modern multinational supply chain. COVID-19 pandemic has provided India with the opportunity to diversify global supply chain, emerging technologies, artificial intelligence to mitigate the supply chain disruption with the increased use of innovative digital platforms and applications.



## COVID-19 PANDEMIC AND IT'S AFFECT ON ECONOMY

Year 2020 was embarked with the spread of pandemic COVID-19 which has caused many countries to impose lockdown or curfew so as to curb the virus. The virus has caused proliferated loss to economy of many countries including India as well. The whole global supply chain mechanism has been disrupted because of this virus. The effect of this virus is not limited to the parties of contract but also to the employment agreements, insurance agreement, loan agreement etc. The virus has conquered many potential implications on the economy of the country. COVID-19 waves have adversely affected the economy of many developed and developing countries. On the account of all these, International Monetary Fund has predicted moderated global growth of 3.4%, but the COVID-19 Virus has changed the outlook adversely.

Due to such fear and uncertainty profits are likely to lower due to the impact of COVID-19. The International Monetary Fund in the month of March stated that it is expected that the global recession would be at least much worse than 2007-2008 global financial crisis. India in the last few days have reported the largest number of COVID-19 cases and this second wave of the pandemic COVID-19 has badly affected Healthcare infrastructure which has raised many issues and concerns about the role of government in the time of pandemic. An analysis of seven-day average of cases shows that the current wave of this pandemic is at its peak now. The weekly moving average of daily new cases has increased 14 times since March 2021. The curve of COVID-19 cases and mobility trends will have direct bearing on the level of economic activities of the country. India's GDP went down by 24.4% in the quarter ending June 2020. The second wave of COVID-19 estimates that Indian economy is



going to suffer a GDP contraction of 7.96%.

Prime Minister Narinder Modi announced the digital India Atamirbhar Bharat App innovation challenge in a bid to promote existing apps and encourage developers to build new ones. The challenge was launched by NITI AAYOG in partnership with MyGov, Atal Innovation Mission and NITI AAYOG.

It entailed building apps under eight broad categories, which include office productivity and work from home, social -networking, e-learning, entertainment, health and wellness, business including agrotech and fintech, news and games.

In the first part of the challenge, developers are tasked with building sustained tech solutions that would not only serve the country but also the world. The second part of the challenge sought to identify Indian startups, entrepreneurs and companies and also help them with ideation, incubation, prototyping and rolling out applications.

As mentioned above niti- Aayog launches Digital India Atmanirbhar Bharat Innvate Challenge to identify the best Indian Apps that are already being used by citizens and have the potential to scale up and become world class. This challenge includes various awards and incentives of featuring Apps on leader boards seek to create an eco- system where Indian entrepreneurs and startups are incentivized to ideate, incubate, build, nurture and sustain Tech solutions that serve not only Indian citizens but also the whole world.

The mantra is to make in india for india and the world. The atmanirbhar

Bharat Apps Innovation Challenge is being launched in the following broadcategories.

1. Office productivity and work from home
2. Social networking
3. E-Learning
4. Entertainment
5. Health and Wellness
6. Business including Agri-tech and fintech
7. News
8. Games

## **E-KRANTI**

“Reforming e-governance for transforming governance” was the mission statement of the E-kranti initiative, which was authorised by the Indian government. The key tenets of E-Kranti, “Transformation and not Translation,” and “Integrated Services and not Individual Service,” have been adopted by all government e-governance programmes. Government process engineering (GPR) is now required in all MMPs, along with mobile-first, cloud by default, and language localization.

Under the E-kranti mission of the Indian government, several additional social sector projects—including those for women and children—have been introduced as new MMPs. Accountability and openness in government offices will rise as India becomes more digital and offers advantages of plans and programmes to people straight online. As a result, Atmanirbhar Bharat will have a digital India.

## **SELF – RELIANT INDIA**

Taking about the pre and post covid world, prime minister observed that in order to fulfill the dream of making the 21<sup>st</sup> century India's, the way forward is through ensuring that the country becomes self-reliant. Taking about turning a crisis into an opportunity, he gave the example of PPE kits N-95 masks, whose production in India has gone up from almost being negligible to 2lakh each, on a daily basis. Prime minister remarked that the definition of self- reliance has undergone a change in the globalized world and clarified that when the country talks about self-reliance, it is different from being self-centered.

Recalling the devastation in Kutch after the earthquake, prime minister said that through determination and resolve, the area was back on its feet. A similar determination is needed to make the country self-reliant.

He said that a self- reliant India will stand on five pillars viz. Economy, which brings in quantum jump and not incremental change; Infrastructure, which should become the identity of India; system, based on 21<sup>st</sup> century technology driven arrangements: vibrant demography, which is our source of energy for a self-reliant India ; and demand, whereby the strength of our demand and supply chain should be utilized to full capacity. He underlined the importance of strengthening all Stakeholders in the supply chain to Increase, as well as fulfill, the demand.

## **ATMANIRBHAR BHARAT ABHIYAAN**

Prime minister announced a special economic package and gave a clarion

call for Atmanirbhar Bharat. He noted that this package, taken together with earlier announcements by the government during COVID crises and decisions taken by RBI, is to the tune of RS 20 lakh crore, which is equivalent to almost 10% of India's GDP. He said that the package will provide a much needed boost towards achieving 'Atmanirbhar Bharat'.

Prime minister observed that the package will also focus on land, Labour, liquidity and laws. It will cater to various sections including cottage industry, MSMEs, Labourer, middle class, industries, among others. He formed that the details of the contours of the package will be provided by the finance minister from tomorrow, in the coming few days.

Talking about the positive impact of reforms like JAM trinity and others, brought about in the last six years, Prime minister said that several bold reforms are needed to make the country self-reliant, so that the impact of crisis such as COVID, can be negated in future. These reforms for Agriculture, rational tax system, simple and clear laws, capable human resource and a strong financial system. These reforms will promote business, attract investment and further strengthen make in India.

Prime minister remarked that self-reliance will prepare the country for tough competition in the global supply chain, and it is important that the country wins this competition. The same has kept in mind while preparing the package. It will not only increase efficiency in various sectors but also ensure quality.

Highlighting their contribution to the country, prime minister said that the package will also focus on empowering the poor, labourers, migrants, etc., both from organized and unorganized sectors.

He observed that the crises have taught us the importance of local manufacturing, local market and local supply chains. All our demands during the crisis were met 'locally'. Now it's time to be vocal about the local products and help these local products become global, he said.

## **LIVING WITH COVID**

Prime minister noted that several experts and scientists have said that the virus is going to be part of our lives for a long time, but it is also important to ensure that our life does not revolve only around it. He exhorted people to work towards their targets while taking precautions like wearing masks and maintaining 'do gaz doori'.

On the fourth stage of lockdown, he said that its contours will be completely different from those seen yet. On the basis of recommendations received from states, new rules will be framed, and information about the same will be conveyed before 18<sup>th</sup> may.

## **ECONOMIC PACKAGES & SUPPORT PACKAGES UNDER AATM NIRBHAR BHARAT**

To make aatm nirbhar bharat abhiyan more successful Indian government has announced bailout packages and support packages to various sectors to increase liquidity in the market. Our prime minister Shri Narendra Modi announced the economic packages along with various packages. These packages that were released during the lockdown was around US\$ 283.73 billion, which is about 10 per cent of India's GDP. The economic package was expected to provide support and strength to various sec-

tions of the country. It will also give a renewed boost to the development journey of the country in 2020. In order to prove the determination of a self-reliant India, land, labour, liquidity and laws have all been emphasized in this economic package.

### **Benefit of Aatm Nirbhar Bharat Abhiyan:**

Aatm Nirbhar Bharat Abhiyan promoted various innovations and new products development in India. By this import of India will decrease and export will increase thus in the long run our trade deficit will reduce. Export promotion will help us save foreign currency and earn more foreign currency. Aatm nirbhar Bharat package will help in growing Indian small and medium enterprises and the manufacturing sector will flourish. This program will help in achieving 5 Trillion economy vision of Indian government.

A prosperous India can only happen when every India, that is, a population of 130 crores, becomes self-sufficient. India, along with the rest of the world, is embroiled in the Coronavirus crises. Regardless of this, all citizens can work to take the country to a different level by using their capabilities in a safe manner. The plan will cover all the sectors that have contributed to the development of the country so far and will continue to do so in the future.

By taking advantage of this scheme, all Indian citizens can become financial support for their families. All the beneficiaries under this scheme will be eligible for financial assistance. The biggest financial help will be given to them by the central government. There is no doubt that India will become self-reliant, but this crisis must be seen as an opportunity.

The central government of India will come to the aid of every single person, only that person must be overwhelmed with the determination to become self-reliant.

“This economic package is for our cottage industry, home industry, our small-scale industry, our MSMEs, which is a source of livelihood for millions of people, which is the strong foundation of our resolve for a self-reliant India”.

Following efforts through Digital India to enhance and support Atmanirbhar Bharat Abhiyan:

### **Broadband Highways:**

The broadband highway covers three subcategories, namely, Rural, Broadband for All- Urban, and National Information Infrastructure (NII). The Department of Telecommunications will be the nodal agency for making effort to achieve the goals for this purpose.

### **Universal Access to Mobile Connectivity:**

To fill the gaps in India's connectivity, a comprehensive development plan for providing mobile coverage to the uncovered villages has been initiated, and it will be provided in a phased manner. The nodal department of this project will be The Department of Telecommunications. The connectivity to rural India is going to fulfill the Digital India vision for Atmanirbhar Bharat.

### **Public Internet Access Program:**

To strengthen the common services center (CSCs), one CSC in each Gram Panchayat will be set up. It will make the end-points for delivery of the

government and business services more viable and multi-functional.

### **E-Governance:**

Reforming Government through Technology: To simplify and make the government process more efficient and make the delivery of government services more efficient and effective, the Re-engineering process using IT has been completed. It needs to be implemented by all the ministries and government departments.

### **Information for All:**

The use of an open data platform will facilitate the proactive release datasets in an accessible format by the government departments for their use, re-use, and their re-distribution. The online hosting of the information will help the citizens for open and easy access to information. Such an online platform will facilitate two-way communication between the government and citizens and bring in good governance.

### **Electronics Manufacturing:**

The main focus of Digital India for Atmanirbhar Bharat is to promote electronics manufacturing in the country with the target of NET ZERO Imports. To achieve this target, there is a need to coordinate the actions on many fronts like tax, incentives, eliminating cost disadvantages, and economies of scale. With the booming demand for electronic products, the Indian government is taking several steps to promote manufacturing and investment in the electronics sector. With the increased manufacturing of electronic goods, India will become self-dependent, which will help advance the standard of life of the folks and increase employment opportunities. Thus, this factor is a strong base for Digital India for the Atmanirbhar Bharat.



## **IT for Jobs:**

The chief focus of this factor is to provide training to the youth in the skills required for availing employment opportunities in the IT/ITES sector. It targets to train one crore students from small towns and villages for jobs in the IT sector. It focuses on setting up BPOs in every north-east state to enable the growth of ICT in these states. To provide training to the rural workforce on Telecom related services.

## **Early Harvest Program:**

The early harvest program consists of the projects which are to be implemented for a short period. The programs include the IT Platform for messages; it is a mass messaging application that aims to cover the elected representatives and all the government employees. It covers the cities with a population of over 1 million and the tourist centers with public wi-fi hotspots to promote digital cities. It will also help to facilitate real-time information sharing on the lost and found children. It will help to keep a check on the crime rate and to improve timely response. Through these programs and schemes, the government is highly optimistic about achieving Digital India for Atmanirbhar Bharat.

## **The Progress of Digital India towards Making Atmanirbhar Bharat:**

Through the Digital India scheme, the government has decided to connect all the schemes with technology to form digital villages. The digital village will provide the skill development centers that can result in the growth of India's social and economic status, which will lead India towards the Atmanirbhar Bharat goal. The government is working actively toward a 5 trillion dollar digital economy in the future.

# **DIGITAL INDIA ATMANIRBHAR BHARAT INNOVATE CHALLENGE**

Ministry of Electronics and Information Technology and the Atal Innovation Mission initiated by NITI Aayog have launched the Digital India Atmanirbhar Bharat innovate Challenge which has banned 59 Chinese App on 29<sup>th</sup> June 2020. Ministry of Information Technology entreating its power under Section 69 A of the Information Technology Act (2000) read with Rule 9 of the Information Technology (Procedure and Safeguards for Blocking of Access of Information by Public) Rules 2009 has banned the use of Chinese Applications in India through an official order. Banning Chinese App from their application in India will encourage Indian application developers and innovators their own ideas and products. It will be jointly hosted the government and members of tech community to make it more holistic.

## **OBJECTIVE OF DIGITAL INDIA ATMANIRBHAR BHARAT INNOVATE CHALLENGE**

1. To create an Atmanirbhar self-reliant ecosystem
2. To give better visibility and clarity to exiting app to achieve their goals
3. To create tech products helpful in finding solutions to tech problem, with the help of mentorship, tech support and guidance during the entire life cycle.

# **TRACK OF DIGITAL INDIA ATMANIRBHAR BHARAT INNOVATECHALLENGE**

## **Track 1: Promotion of Existing App**

For the promotion of existing app and platforms across the categories of e-learning, gaming business, entertainment, work from home, social networking and office utilities the government will provide mentoring, hand holding and support. The government will also work in mission mode for identifying good quality apps for the leader board.

## **Track 2: Development of New Apps**

For incubating news apps and platforms, the government will create and carry out initiatives by providing support in ideation, incubation, prototyping, roll out and market access.

## **TRACING THE REASON BEHIND THE BAN**

The ban comes in a wake of the time when India and China are embroiled in a border dispute in Galwan Valley where 20 Indian soldiers were martyred in a military clash with the Chinese soldier. This bold move of the government in banning the 59 Chinese Applications was apparently in retaliation to the Chinese action of violence at the border. The second reason for banning Chinese application was based upon the information that Chinese applications were allegedly engaged in activities prejudicial to the sovereignty and integrity of the country.

## CONCLUSION

Both Digital India and Atmanirbhar Bharat are in the process of establishing a new paradigm, which will allow for the conception of novel approaches to the delivery of services in a digital environment. These approaches will not only be focused on the delivery of services, but also on the satisfaction of customers. The Indian government's decision to restrict Chinese app development has resulted in a fresh growth spurt for Digital India. The government of India wants to build its indigenous and domestic sector and show to the world that it is self dependent and self sufficiency in the field of digital services. In order to accomplish this, the government of India has decided to prohibit Chinese applications. Utilization of Indian mobile applications will result in the generation of a substantial quantity of income, which will, in turn, provide the digital economy with further stimulation. The viability of any plan or policy is contingent on the quality of the governance in place, and an adequate mechanism is essential for the program's actual execution. It is vital to raise both the quantity and the quality of the product if one want to achieve the goals of being self-sufficient and a worldwide supplier. It is essential, for the sake of the effective implementation of Digital India and Atmanirbhar Bharat, to recognise the true potential of numerous industries that already exist in urban and rural India and to supply such industries with adequate supplies.

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# CHAPTER | 12

## TWELVE

### **Information Communication Technology And Cryptocurrency: Legal Issues And Challenges**

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## SYNOPSIS

In this chapter the author has made an attempt to analyze the trends of digital era in relation to development of technology and development in the field of Information Communication Technology. The author has made an attempt to analyzed the concept of virtual currencies and difficulties of on-line trading and the trends of Bitcoins and virtual currencies and difficulties in regulating the virtual world. This paper also suggests some recommendations for having legal framework to aid the technological developments and regulations and consequences in fast developing country like India.

**Keywords:** Bitcoins, Online, ICT, Cryptocurrency

## INTRODUCTION

In the emerging era of 21 century *Science and Development* has been in a transitional stage of development and advancement of global technologies and inventions made in informational and computer technologies leading to the development of artificial intelligence, machine learning and humanoid robotic technologies. The best example could be of invention of Quantum Computing invented by Google and invention of Sofia humanoid robot which has advanced the thinking process to provide speedy solutions to complex problems in society. Over a decade there has been a paradigm shift of technology which has advanced the abilities of development of developed and developing countries to develop in terms of technology. This has made the life of the common man easy on click of a button an individuals can access any digital information, take assistance in empowering their skills, and develop their thinking and also access websites like Google chrome, Mozilla Firefox, Safari for using information. But the information

provided may not be authentic enough to take discussions.

Since the Covid 19 pandemic since 2020, the entire world has seen a larger dependence of Information communication Technology. Majority sectors like Education sector, health sector, financial sectors, and having trading online have gained importance to a larger stratum of the society. Many of the people are still facing problems to adopt to the changes of the globalized world as Alvin Toffler points out the changes which have been witnessed in the world as mentioned in his book *The Future Shock*. It becomes inevitable to get adopted to the societal transformation for majority older population. Free flow of internet has occupied a platform in the digital era.

There are various online alternatives to earn money, to trade in stock markets and make investments and have access to other illegal activities anonymously, various trading platforms also have illegal transactions without a legal tender like virtual currencies or digital currencies in which transactions can be made globally.

### **It is important to understanding what is Virtual Currency?**

Virtual currency can be defined as an electronic representation of monetary value that may be issued, managed, and controlled by private issuers, developers, or the founding organization. Such virtual currencies are often represented in terms of tokens and may remain unregulated without a legal tender.

Unlike regular money, virtual currency relies on a system of trust and may not be issued by a central bank or other banking regulatory authority. They derive their value based on the underlying mechanism, like mining in cases of cryptocurrencies, or the backing by the underlying asset. Anyone who watches cryptocurrency prices will see the seesaw effect of psychological



trading.<sup>34</sup>

Going back to 2012, during which the term bitcoin got more impotence labelling it magic internet money. European Central bank coined the term virtual currency to classify types of digital money in an unregulated environment, issued and controlled by its developers and used as a payment method among members of a specific virtual community <sup>35</sup>.

There are various kinds of virtual currencies like Bitcoin, Ethereum. A cryptocurrency uses cryptography technology that keeps the transactions secure and authentic, and also helps to manage and control the creation of new currency units. Such cryptocurrencies exist and are transacted over dedicated blockchain-based networks that are open to the common public.

Market trends of growing value of bit coins around the world from 2015 to 2021 is analysed as

Bitcoin (BTC) was worth over 60,000 USD in both February 2021 as well as April 2021 due to events involving Tesla and Coinbase, respectively. Tesla's announcement that it had acquired 1.5 billion U.S. dollars' worth of the digital coin as well as the IPO of the U.S.' biggest crypto exchange fuelled mass interest. The world's most well-known cryptocurrency, however, suffered a notable correction in April after speculation on government regulation. Another reason, according to experts, was an electricity blackout in the Xinjiang region in China. This unexpected development led to a decline in the Bitcoin hash rate - how many Bitcoins are being mined – and

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34 <https://www.investopedia.com/terms/v/virtual-currency.asp> (Last modified 11 July 2022)

35 <https://news.bitcoin.com/is-bitcoin-a-digital-currency-or-a/> (Last modified 17 July 2022)

potentially spooked investors into selling their assets. According to a 2020 research based off IP addresses from so-called hashers that used certain Bitcoin mining pools, more than half of all the Bitcoin mining occurred in China.<sup>36</sup>

## **Cryptocurrency Market Outlook – 2030**

The global cryptocurrency market size was valued at \$1.49 billion in 2020, and is projected to reach \$4.94 billion by 2030, growing at a CAGR of 12.8% from 2021 to 2030. Cryptocurrency is known as virtual currency. It is a form of currency that exists digitally only and has no central issuing or regulating authority above. It uses blockchain technology to authenticate the transactions. Blockchain is a decentralized technology spread across many computers that manages and records transactions. Furthermore, it does not rely on banks to verify the transactions but is used as peer-to-peer system that enable users to send and receive payments from anywhere in the world<sup>37</sup>

In India the ministry of Finance in 2018 -2019 budget did not consider the cryptocurrencies as legal tender, it also difficult to control unaccountable sources of trading Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, to create a sovereign digital currency and simultaneously ban all private cryptocurrencies.<sup>38</sup>In spite of the bill it does not have effective robust technology to control the private regulators wherein these transactions takes places anomalously by private individuals and it becomes costly to administrate control on technological developments and controlling

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36 <https://www.statista.com/statistics/326707/bitcoin-price-index/> (Last modified 1 July 2022)

37 <https://www.alliedmarketresearch.com/crypto-currency-market> (Last modified 15 June 2022)

38 <https://www.sconline.com/blog/post/tag/cryptocurrency-and-regulation-of-official-digital-currency-bill-2021/> (Last modified 11 July 2022)

the free flow of internet in the digital era it also creates hyperinflation in the economy and also results in sovereign debt in which the citizens do not pay taxes which also results in unregulated money. EL SALVADOR is the first country to consider to have a legal tender. This may also lead to online money laundering crimes, cyber-attacks and also lead to accumulation of Black money.

Firstly it is the duty of the government to create data localization which enables to have limited access of internet data and store the data of the citizens with the Central Data Base Authority, and the changing technology should be adopted by Central Government for having robust Electronic Governance . The sources of the transactions should be scrutinized by internet authorities and who is have transactions with anonymous persons, the transactions should be taxed according to the amount earned.

2<sup>nd</sup> ARC Report suggested recommendation that the state government to outsource and create digital technological platforms for development of administration and to provide comprehensive holistic training to the institutions, self-help groups, pressure groups which can be achieved by ‘networking’ of institutions concerned with various subjects such as financial management, rural development, disaster management and general management<sup>39</sup>

The essence of Information and Communication Technology has led to the development of e governance in order to create smart governance – simple, moral, accountable, responsive and transparent government <sup>40</sup>. As the society has seen an transitional paradigm shift of governance wherein

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39 <https://darpg.gov.in/sites/default/files/decision6.pdf> (Last modified 15 June 2022)

40 [https://darpg.gov.in/sites/default/files/promoting\\_egov11.pdf](https://darpg.gov.in/sites/default/files/promoting_egov11.pdf) (Last modified 15 June 2022)

the information and communication services will be brought to the doorstep of citizens and business in which enable and aid to participate in law making process and formulate policies accordingly.

It is said that regulating the cross-border data connectivity which is considered as the cyber governance. Regulating data is an important task on side of the government which will enable to protect the interest of national security, it helps in maintaining the privacy of the individuals and run the economies and witnessed by the digital economy in the European Union.

In the recent time the European Union has formulated a policy to regulate the Crypto Currency assets which is part of European Finance strategy which decentralises the blockchain technologies underlying the cryptocurrencies but still it is difficult to regulate crypto currencies but solution could be that the small business should not be allowed to enter the digital market<sup>41</sup>.

Thus it is difficult to adopt to the changes of growing Science and technology but regulation of data flow is an important as aspect for many countries this would regulate free flow of data cross border, Data Localization done in few countries like China, Europe could protect the privacy , security of the nation and provide financial security in the Financial market and run the economy.

India has made an attempt to Protect the data on recommendation of Justice BL. Sri Krishna for Personal Data Protection which was initiated in 2019. It is import to regulate free flow of internet because it amounts to cyber-attacks cyber terrorism, cyber frauds, and it is also important to trace source of the transaction which takes place in anonymity and to protect the national security.

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41 <https://blogs.lse.ac.uk/euoppblog/2021/07/05/what-the-eus-new-mica-regulation-could-mean-for-cryptocurrencies/> (Last modified 15 June 2022)

# CHAPTER | 13

## THIRTEEN

### **Information And Communication Technology: Rural Economy And Society**

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## **SYNOPSIS**

The era of information and communication technology as witnessed from the past two decades has brought the revolutionary changes in the rural areas. The concept of rural development is now communicated and adopted with the means of information and communication technology. The digital divide is getting reduced and the economy and society of rural areas are getting reshaped. In the economy of rural areas, the agriculture, manufacturing, marketing and services are progressing with advanced techniques. The rural society is witnessing changes with the adoption of the information and communication technology means and structure. The people are getting connected, the art and culture is gaining importance and at the same time the spread of new order is bringing new issues of traditional resistance. The issues are faced in the form of barriers to adopt the new technologies due to the lack of knowledge and expertise to adopt and install the new technologies powered by information and communication technology.

## **INTRODUCTION:**

Social changes are marked with the emergence of technological developments and the world interconnections in the form of eras in the history of social work. The revolutions transformed the human intellect and reshaped the socio-economic life of the people. The sweeping changes were witnessed in the society with the start of industrial revolution powered by the developments in the technology and advancements in tools and techniques of production which changed the structure of the society along with its mode of production. The world got revolutionized again with the emergence of new era of Information and communication technology witnessed from the last decades with the transformation in social life, work and communication, production and marketing, cultural change and socializa-

tion patterns, agencies and operation in the wider social networks in the society. The barriers in the communication and distance are getting removed with time-space compression has brought changes in the society which are vital for the development and needed to address the issues faced by the society particularly the marginalized group of the society. The rural setup has been found different from the urban locations in several aspects which majorly differentiates the life of the urban people from the rural people. The life chances and the conditions of living differs for the rural people from the urban ones and it can be traditionally found that the opportunities of development and better lifestyle were found more in urban setup than the rural locations and the gap between the rural and urban was more evident before the development of information and communication technology which has reshaped the social structure in such a way that we can find a rural-urban continuum and even it becomes difficult for an observer to find the exact gap and polarizing difference between the rural and urban areas and the way of life of the people living in these areas. The rural locations which were at the back step are been interacted and communicated with anything from anywhere and the more opportunities of work, education, business, market and social relationships of different needs and forms are been introduced due to the emergence of information and communication technologies. The advancement and development in technology can be seen again bringing dynamism in the society and particularly the rural population became accessible to the new emerging developments and reduction of cost and physical efforts. This dynamism and shift demanded the process and control so as to be adopted which created barriers particularly for the rural population which is traditionally found rigid to their cultural ways and techniques of production and economy. These barriers are the challenges faced by the rural people in the era of information and communication technology in every aspect of life when there is lack of knowledge about the use and

management of information and communication technology.

## **RURAL ECONOMY AND SOCIETY IN THE ERA OF INFORMATION AND COMMUNICATION TECHNOLOGY**

The information and communication technology has become the part of the life of the people. The media, shopping, business operation, education has been redefined and the mediums to interact with all the daily needs and livelihood requirements are now linked these technologies. This has provided a market for the rural population to consume, invest, produce and sell which was not easy before the advancements of information and communication technologies. The agricultural practices are gaining focus and with the new technologies and the expert interactions the rural people are now accessible to the technical know-how with the solutions for incompetence's. The agricultural tools which are developed reach the rural locations with the information and guidance of operations. Several technical issues have been learned from the online platforms which provide videos and channels which aware rural people engaged with agricultural activities about the use and faults of technical tools. The weather prediction and the use of forecast applications have gained importance in the field of agriculture as the people in rural areas get updated with the early prediction of rains and other weather conditions which are very important as far as the agricultural practices are concerned. The National schemes which are launched for the agricultural productivity are communicated in different media networks and the television programs which reach easily to the rural locations for the help of rural people in developing the crop productivity. The policy of economic progress in the rural areas is emerging in the light of information and communication technology. The productivity and business in rural areas are transforming to a level of progress and advancement. The agriculture has been now an information-intensive sector (Engelhard, 2000). The



locally contextualized knowledge about the agricultural practices reaches worldwide and similarly the worldly knowledge reach the rural locations advancing the rural agricultural practices. The information and communication technology has opened the business opportunities in the rural areas. The business establishments can be reviewed and communicated easily. The online transactions, GPS, and online communication have made marketing relationships smooth which boosts the employment and economy in the rural locations. The marketing of rural indigenous art and products has been easy with the commercialization of these products through various media platforms.

The connectivity of the people has been reached to a different level. The rural setup has been recognized and understood as self-sufficient and limited to its boundaries. The need arises for the development of the rural people and interaction and communication becomes vital for the people so as to transform their life from restricted traditional morals to the universally accepted human rights and freedom. The network of social relations has been found vital for the mental and physical health. Social ties have been observed as determinants of physical morbidity and mortality (Berkman and Syme, 1979). The social networks are important for the health and wellbeing of the people. Those rural people who are not socially integrated or regulated in the rural setup with strict social environment can find a wide network of social relations with the mediums of information and communication technology and these ties which are expanded with these technologies regulate the life of the rural people who got isolated from their traditional social support and social control. The mediums of information and communication technology in the form of social media networks and software's play an important role in the life of the rural people. The economy is reshaped with the advancement of technologies leading to the introduction of low-cost products and the accessibility of the products which

are an important part of the life of the people. Smartphones are accessible and affordable for the major part of the population and the access of these phones has transformed the social life with combination and internet which link the people from distant places. The employment generation has been an important feature for the emergence of information and communication technology. The rural people have found different choices of employment and the new ways of sales and entrepreneurship for the marketing of the local business and agricultural production which has changed and brought in continuous dynamism in the life of the rural people. The transformation of health and education has brought changes in the rural structure. The means of education and the mode of learning have reached to developing stages with advance ways of learning in rural areas be it the use of projectors, computers, and other scientific tools or the online platforms of learning's. The different rural learners now find accessible learning platforms which they can afford with reduced time and cost. The education and enrollment in rural schools is advancing and transforming towards the modern and developed ways of learning. The development in education for the rural children opens vast platform of opportunities and they get access to the new ways of learning communicated with the use of new technologies. This has changed the life and future planning and progress of the rural children. The health sector with these technologies advanced the healthcare facilities with a goal of increasing life expectancy among the rural people. The information and communication technology has provided health care system so reachable in rural areas that virtual consultation of doctors and online purchase of medicines has become an easy job to do.

## **BARRIERS IN THE ERA OF INFORMATION AND COMMUNICATION TECHNOLOGY**

Whenever there is a technical development which brings changes in the

structure, it comes up with some social issues and elimination of traditions. The competence of technological deployment and the establishment of infrastructure are vital for the use of information and communication technologies and the barriers emerge when the rural people mostly those who live in remote areas are unable to be utilize the technologies necessary for their economic and social activities. The fiber optics, hubs, terminals of network, WIFI technology which needs the installation and proper structure are not available in the remote areas which make it difficult for the people in such areas to have access of different efficient tools and techniques. Thus the people who are not accessible to these technologies remain unaware about the new technologies and remain unaware about the use of these new technologies and in other words remain distant from the developments. The application of information and communication technology software, hardware and infrastructure emerges with barriers due to the lack of accessibility, lack of skilled persons, lack of high-speed networks, lack of the knowledge, cost which is associated with the establishment of these technologies. The one of the important barriers is the culture and traditions which sometimes do not confirm the use of new technologies mostly in the rural areas. In rural areas the level of entrepreneurship becomes a barrier in the use of information and communication technology. The incompetent training and knowledge hinder the use and results in the lack of utilization of the technologies. There is no economy which can be completely termed as digital economy and there is no completely virtual community or any organization which works independently on the digital mode. The human intervention and control is unavoidable in the use of information and technology which needs skills and the knowhow of these technologies bring inequality among the people with the emergence of classes of those who control the technologies and of those who are associated with the process at different levels or the class of those people who become completely de-

pendent on those who control the technologies with further increase in the inequality. In the rural areas where the knowledge and accessibility of technology is limited, very few people are able to invest and adopt in the beginning which develops inequality among the masses. The use of the technologies requires the proper administrative control so as to manage the negative consequences. The crimes increasing in the digital form of transactions and communications are increasing along with the cyber-crimes which impact the rural communicator negatively who lack the knowledge of management of software's, hardware's and other networks powered by information and communication technology. The use and management of these technologies is challenging in rural economy and society.

## **CONCLUSION**

The rural development policy and progress is now reshaped with the emergence of information and communication technology. The move and focus from restricted agricultural economy has shifted to a wide multiple sectors economy with more opportunity of employment, marketing and entrepreneurship in rural areas. The digital divide is getting reduced with the dominance of information and communication technology. The agricultural practices and other forms of business and trade are in progress with the reduction of cost, time and effort. The information and communication technologies are the generally the information operative tools related to the control of goods, tools, services, processing, production, exchange and distribution of produces and manufacturing in an economy. In rural setups the change by adopting new technologies brings different dynamism in economy as well as the society of rural people. These sweeping changes have brought changes in the life of the rural people as evident from the rural population of India. The communication and interaction has reached to a different level for the rural people. The social integration and regula-

tion of the people has been redefined. The progress in rural areas needs the implementation of information and communication technology with the knowledge and accessible to control and manage the new technologies. The lack of knowledge and expertise brings issues in the form of barriers. The social setup in the rural areas gets violated sometimes and the adoption of the new technologies which can be facilitated with information and communication technology remain non beneficial and emerge in the form of social issues faced by the rural people.

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# CHAPTER | 14

## FOURTEEN

### **Demystifying The Delivery Of Services And Local Governance In Kerala**

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## **SYNOPSIS**

Decentralized governance is a process, a meaningful march towards participatory democracy. It has intrinsic value and instrumental importance. It is values that enhance the quality of citizenship. It is a way or process of building capabilities to participate. Equally important is its instrumental importance for development and freedom. To make democracy effective it should progressively improve. Deconcentration refers to the transfer of administrative authority from the higher levels of government to the lower ones in order to give more freedom to the latter in delivering services or producing public goods. Delivery of government services via the traditional paper route is inefficient, time-consuming and prone to errors. This manner is often stalled by the personal biases of the officer's concerned. E-Governance applications shift this process from man to machine. This brings a new level of efficiency and speed to decision making and therefore service delivery. Additionally, service delivery through systems improves the scale at which services can be delivered within a certain time-frame by removing human limitations from the equation.

## **INTRODUCTION**

Traditionally panchayats were self-governing units in the country exercising overall control over the life of the people of the village. They were not democratic in the modern sense and considered mainly of elders of different castes. There were also 'panchayats' for each caste which enforced the caste rules and code of conduct and awarded punishment in case of transgression of such rules and norms. The panchayat and the people of the village did not, of course, have any voice in the overall governance of the territory or region. When kings and rulers changed and imposed their rule on the people, the village and the panchayat continued as basic units looking after a major part of their social and economic life.



## Analysis

During the British days, the Resolution of Lord Rippon in 1882, local bodies were established for the urban areas in the form of municipal boards, sanitary boards and the like. On the analogy of urban areas, statues were passed regarding panchayats also. The decentralization Commissions Report in 1908 and the government of India Act of 1919, Panchayats Acts were revised in the Presidencies in 1920. The panchayats had thus become legal entities, losing their traditional prerogative powers. The village and former local boards, taluk boards and district boards were formed with limited local government powers mainly in the fields of education, health and roads.

Prominent leaders of our independent movement bemoaned the fact that several of the earlier powers of the panchayats had been taken away and that the working of the panchayats had been brought under the control of inspectors and other supervisory officers severely restricting the rights of the people. When Mahatma Gandhi came on the political scene and became the leader of the national movement, he stressed the importance of the village as the basic unit in India and the need for a full-fledged panchayat system.

Following the Government of India Act of 1935, popularly elected governments came to power in British India. However, the basic construction of the laws regulating the panchayats, municipalities and local boards did not change substantially. Several provincial governments endorsed legislations on panchayats and municipalities between 1947- 50 and these legislations carried over to the post –independence scenario and remain valid till the adoption of the new constitution in 1950.

The history of the evolution of decentralization and decentralized gov-

ernance in Kerala, after the formation of the Kerala state (1956) several attempts have been made to give a sturdy legal framework to the local government system. When the Balavantray Mehta Study Team (1957) was at work at the all India level, the first elected government of Kerala state came to power in April 1957. The First Ministry of Kerala State (1957) appointed an administrative reform committee with the Chief Minister, E M S Namboodiripad as chairperson to suggest measures for the democratization of the organs of government at various levels. The committee recommended the strengthening of panchayats in the state as visible units of administration and development in the state. Following the recommendations of the committee, the Kerala Panchayat Bill (1958) and the district council bill (1959) were placed in state assembly. The functions of the district council envisaged included development matters and the council was to become eventually an autonomous executive body. The bills could not be enacted into law as the ministry was dismissed by the Central Government and the State Assembly was dissolved. The new government that was formed after the general elections passed the Kerala Panchayat Act, 1960 incorporating several recommendations of the Balavantray Mehta Study Team (1957) this came to force from January 1, 1962.

When the Municipal Corporations in the cities, the Municipalities in the towns and gram panchayats in the rural and semi –urban areas within the state were empowered to function as Local Self Governments, naturally it raised peoples hopes for better civic services and welfare measures. Every day the gram panchayats and municipalities are approached by people for a variety of services and the efficiency of Local Governments are greatly judged by the efficiency with which they can deliver service to the people. Perhaps the effectiveness of decentralization and empowerment of local self-governments would largely depend on their capability to deliver services to the people in time at the standard quality and with prudence and

in a people-friendly manner. The tormenting ordeal which many people experience at the door steps of these democratic institutions have to change and change significantly. It is in this context that we consider delivery of services by gram panchayats and municipal governments as a key parameter to measure the success of decentralization.

The services delivered by the Municipalities and Gram Panchayats can be broadly grouped under four categories:

1. Statutory permissions/licenses/registrations
2. Welfare measures-social security assistance
3. Statutory municipal functions at settlement level
4. Development services

Statutory permissions/licenses/registrations:

- Permission for land development building construction
- Approval of ownership changes in landed properties
- Grant license to operate commercial establishments
- Birth and death registration and issue of certificates
- Registration of marriages and issue of certificates

Welfare measures-social security assistance:

- Payment of various pensions and monetary assistance to the poor
- Preparation of BPL list and identification of beneficiaries for the various schemes for poor, disabled, destitute.

Statutory municipal functions at settlement level:

- Maintenance of roads and drains
- Providing and maintaining street lights
- Solid waste management and sewage disposal

- Maintenance of health and sanitation
- Maintenance and up-keep of public assets like parks, play grounds, open spaces and water bodies, public markets
- Ensuring potable water to the people.

Development services:

- Krishi bhavan services
- Veterinary services

A local self-government has a wide range of services to perform. They range from statutory permissions /approvals, to maintaining sanitation and cleanliness to social welfare-oriented actions. Every service delivered by the Municipality or Gram Panchayat should be made known to people. It would be desirable to make people to know of not only the type of service but also on how to apply for the particular service, what documents should be produced, when one can expect the service, who are the officers who would scrutinize and approve the application what each officer would look for etc. These can be printed in small hand outs and made available at the information counters.

Municipality or Gram Panchayat functionaries need to be trained regularly on systems, rules and procedures their problems should be heard and addressed. The state should be exposed to best practices with regard to delivery of services that have happened in local governments within the state and in other states. Such exposure training is also required for the elected members of the local bodies. It is the fact that service with reasonable standard and quality to the people is the ultimate goal of governance we set out the necessary condition for good governance.

## **E-Governance Service:**

The concept of e-Governance implies the use of ICT to endorse more efficient and effective government, facilitate better access to government services, allow greater public access to information, and make government more accountable & transparent to citizens. In 21<sup>st</sup> Century, the community has become more conscious of their civil liberties to use required services at their doorway and both the government of India and state government is aware of the requirements to distribute these services faster and efficiently to the general public through e-governance.

The government has decided to scheme of setting up Jena sevana kendra and Akshaya Kendra counters in the Municipal or Gram Panchayaths. Almost every one seeks birth and death registration certificates marriage certificates. Therefore, government has issued directions to streamline the process of registration and issue of certificates. In Kerala, Akshaya is the authorized agency for the issue of Birth and Death Certificates, Adhar Enrollment, Adhar Updation, Ration Card Services, Community Certificate, E-Grants, Income Certificate ,Nativity Certificate ,Trade Licenses, Building Permissions, Permits, etc. can be delivered faster and efficiently online. Child enrolment is being undertaken with the assistance of Anganwadi and District administration. Mobile Akshaya Center units are available to deliver doorstep services for those who are either bedridden or suffering from serious illnesses. Enrolment for Bedridden/Challenged residents is being undertaken with the assistance of Panchayats, Municipalities, Corporations and District Administration.

Citizens can advantage from the efficient delivery of a broad range of public services as a result of this. Improves the quality of government services by increasing their convenience and availability. Government services are

delivered quickly and right to your door, saving your time. In the same way, if you have any questions, you can contact the government directly. This allows for immediate two-way contact between citizens and government entities, eliminating the need for middlemen and lengthy waiting periods.

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# CHAPTER | 15

## FIFTEEN

### **E-Governance and Laws in India: A Critical Analysis**

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## SYNOPSIS

In his *Grundlegung Zur Metaphysik de Sitton*, Immanuel Kant says, “So act as to treat humanity, whether in their own person or in that of any other, in every case as an end withal, never as means only”.<sup>42</sup> Democracy is the soul of the Indian administration. Good governance is considered to be the ultimate goal of the State. To achieve this aim, even Good Governance Day is celebrated every year on Dec. 25. Accountability and transparency are its key features. One way to ensure transparency is to make the information open and accessible to all. E-governance provides the platform to make the information open to the public. Benefits of science and technology may be taken in the public administration also. But, along with it, proper regulation of e-governance is also important to make ensure that none may take undue advantage of it. So, law plays a very important role in it. There are various laws to regulate it, like the Indian Evidence Act, 1872, the Information Technology Act, 2000 and the Right to Information Act, 2005 etc.

**Keywords:** e-governance, Bhoomi, Khazane, laws in India, Information Technology Act, Indian Evidence Act, Data Protection Bill.

## INTRODUCTION

India is the largest democratic country. In a democracy, the main focus is on the common public. Their rights and entitlements are ensured. In e-Governance, there is use of science and technology to governmental functions in order to create a responsible government.<sup>43</sup> Information technology may

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42 Preface of 2<sup>nd</sup> Administrative Reform Commission, 11<sup>th</sup> report, Promoting e-Governance The SMART Way Forward, Dec., 2008 at p-i

43 In the report of Working Group on Convergence and E-Governance for The Tenth Five Year Plan (2002-2007), the concept of SMART (Simple, Moral, Accountable, Responsive and Transparent) governance was given.



be used to provide public services even at the home of the citizens. Thus, a major change may come in the relationship between the public authorities and citizens.

E-governance contains decisional aspect also. It gives a wider scope to public participation in the governmental system. Thus, the ultimate purpose of e-governance is to improve governance and service delivery system. The facilities are better ensured to the public if the government is better established at the local level also. It is so because the local government can better understand the needs of the local people. It has been emphasized in the Constitution of India to organize the village panchayats. The direction has been given to the state to establish village panchayats and assign them such powers and authorities that enable them to function as a unit of self-government.<sup>44</sup> To achieve this objective, 73<sup>rd</sup> and 74<sup>th</sup> amendments were brought into the Constitution of India. With these amendments, rural and urban local self-governments were introduced.<sup>45</sup> If e-governance is ensured at the local level, it will ensure good governance in a better way.

Thus, it is clear that e-governance is very good concept. The need is to regulate it properly. In India, there are a number of laws to regulate it, like the Information Technology Act, 2000, the Indian Evidence Act, 1872 and the Right to Information Act, 2005 etc. By proper enforcement of these laws, it may become possible to fulfill the dream of good governance with respect to e-governance.

## **E-GOVERNANCE: MEANING AND CONCEPT**

In the term ‘e-governance’, ‘e’ stands for electronic. Therefore, e-gover-

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44 See Art. 40 of the Constitution of India. This provision was incorporated on the basis of Gandhian principles.

45 73<sup>rd</sup> Amendment added Part IX titled “The Panchayats” and 74<sup>th</sup> Amendment added Part IXA titled “The Municipalities”.

nance denotes carrying on the functions and liabilities of the government utilizing the information and communication technology. Today, the system has become very complex and due to the concept of welfare state, the State is under more obligation. So, it is very much useful to take advantage of science and technology. In this matter, 2<sup>nd</sup> Administrative Reform Commission rightly states as follows:

“ICT facilitates efficient storing and retrieval of data, instantaneous transmission of information, processing information and data faster than the earlier manual systems, speeding up governmental processes, taking decisions expeditiously and judiciously, increasing transparency and enforcing accountability. It also helps in increasing the reach of government – both geographically and demographically.”<sup>46</sup>

Emphasizing of the utility of Information Communication and technology, it has further rightly mentioned as follows:

“Today, new software tools have enough flexibility, to accommodate the most complex situations. The new technology makes the machine human interface very user-friendly. The Information Technology (IT) and Information Technology Enabled Services (ITES) sectors have created millions of jobs besides improving vastly on the services provided by government undertakings like Banks, Airlines, Railways etc. Thus e-Governance is no longer a far-fetched dream.”

Thus, e-governance facilitates faster and better communication, effective storage, processing and retrieval of data and effective sharing of data among individuals and governmental organizations. Due to such advantages, the emergence of e-governance is found in every sector, be it banking,

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46      11<sup>th</sup> report, Promoting e-Governance The SMART Way Forward, Dec., 2008 at p-1

health, education or public works department etc.

## **E-GOVERNANCE IN OTHER COUNTRIES**

The concept of e-governance is found to be so effective that it is emphasized in other countries also. For example, in the United States of America, a separate legislation titled ‘the Electronic Government Act, 2002’ has been made to regulate it.<sup>47</sup> By this Act, a new agency has been created which is responsible for the electronic information management system and improving public services. In America, electronic governance has three principles. These are as follows:

- 1) It should be citizen-centric and not government-centric.
- 2) Measurable improvements for citizens should be produced.
- 3) Market basis, aiming at the promotion of innovation.<sup>48</sup>

Similarly, in the United Kingdom, a proper system of digital government has been established. The digital government of the United Kingdom has been even appreciated by the United Nations.<sup>49</sup> In the United Kingdom, the Government Digital Service has been set up. It is governed by the Ministerial Group on Government Digital Technology. It contributes in producing and serving in the way that joined-up and personalized government for everyone may be created. A document in ‘A Strategic Framework for Public Services in the Information Age’ has been created. In it, four guiding principles have been mentioned as follows:

“1) Building services around citizens’ choices

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47 This law was signed on Dec. 17, 2002.

48 11<sup>th</sup> report, Promoting e-Governance The SMART Way Forward, Dec. 2008 at p-14.

49 As per the UN E-Government Survey 2016, the United Kingdom got 1<sup>st</sup> rank in the E-Government Development Index. Even in 2020, the United Kingdom has got a position in the top 10 countries.

2) Making Government and its services more accessible over the internet and through mobile phones, digital TV, call centres and personal computers

3) Social inclusion

4) Using information better.”<sup>50</sup>

In Australia, the digital economic strategy has been decided. Some targets have been set to be achieved till 2030. Their goal is to become the best world economy and society.<sup>51</sup> Their strategy has three pillars, which are as follows:

1) Building the foundations to grow the digital economy.

2) Building capability in emerging technologies.

3) Setting Digital Growth Priorities to lift our ambition.<sup>52</sup>

## **E-governance in India:**

India is no exception for the adoption of e-governance. In 1970s, India focused on e-governance, especially in the area of defence and economic monitoring. The Department of Electronics was established in 1970. It was the very first initial step toward e-governance.

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50 <https://ntouk.files.wordpress.com/2015/06/e-government-strategy-2000.pdf> (as visited on July 31, 2022)

51 The Digital Economy Strategy outlines a cohesive roadmap – encompassing initiatives already underway, investments we are making now to take us forward, and areas to be considered to help us identify opportunities into the future. Available at <https://digitaleconomy.pmc.gov.au/strategy/foreword> (as visited on July 30, 2022.)

52 <https://digitaleconomy.pmc.gov.au/strategy/executive-summary> (as visited on July 30, 2022)

Further, National Informatic Centre was established in 1977.<sup>53</sup> The major step, in this line, is the introduction of the National Information and Communication Technology Network (NICNET) in 1987. It was a national satellite-based computer network. Through it, the government was supposed to provide better governmental services and ensure more transparency. It was seen as a tool to promote decentralized planning and management. Thus, it may contribute in efficiency and accountability towards the public. Presently Bhoomi project<sup>54</sup>, KHAJANE<sup>55</sup>, e-seva<sup>56</sup>, e-court<sup>57</sup>, Gyandoot<sup>58</sup> and a National e-Governance Plan<sup>59</sup> are other initiatives that have been taken to e-governance in India.

The pillars of Digital India Initiatives are as follows:

- 1) Broadband Highways
- 2) Universal Access to Mobile Connectivity
- 3) Public Internet Access Programme
- 4) e-Governance: Reforming Government through Technology

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53 It launched District Information System programs at district level to ensure e-governance at local level also.

54 Bhoomi is an e-Governance project which is supposed to facilitate the computerized delivery of 20 million rural land records to 6.7 million farmers of Karnataka.

55 It is an online treasury computerized project.

56 It is a portal for online citizen services of Andhra Pradesh.

57 It is launched by the Department of Justice, Ministry of Law and Justice. It aims at utilizing technology for improvement in justice delivery system.

58 It is an Intranet-based Government to Citizen service delivery initiative of Madhya Pradesh.

59 It has also been introduced by the Ministry of Electronics and Information. takes a holistic view of e-Governance initiatives across the country, integrating them into a collective vision, a shared cause. Available at <https://www.meity.gov.in/divisions/national-e-governance-plan> (as visited on Aug. 1, 2022)

- 5) e-Kranti - Electronic Delivery of Services
- 6) Information for All
- 7) Electronics Manufacturing
- 8) IT for Jobs
- 9) Early Harvest Programmes

It is a matter of pride for the Tax department that it was the first to use Information Communication and Technology for their internal working. At present, almost all governmental, as well as private bodies, have shifted to e-governance.

## **LAW RELATING TO E-GOVERNANCE IN INDIA**

### **The Right to Information Act, 2005:**

The Constitution of India ensures freedom of speech and expression to the citizens of India.<sup>60</sup> Though the right to information is not expressly mentioned in the fundamental rights, the Supreme Court has emphasized on this right also. In *Reliance Petrochemicals Ltd v. Proprietors of Indian Express Newspapers, Bombay Pvt. Ltd.*<sup>61</sup>, the Hon'ble Supreme Court has held:

“We must remember that the people at large have a right to know in order to be able to take part in a participatory development in the PG NO 235 industrial life and democracy. Right to Know is a basic right which citizens of a free country aspire in the broader horizon of the right to live in this age in our land under Article 21 of our Constitution. That right has reached new dimensions and urgency. That right puts greater responsibility upon those who take upon the responsibility to inform.”

Thus, the right to know or information is very much important for the

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60 See Art. 19(1)(a)

61 AIR 1989 SC190

actual exercise of other fundamental rights. So, to provide this right in a more effective way, the Right to Information Act, 2005 was passed. This Act puts an obligation on the governments to provide information to the citizens relating to policies, rules, regulations etc.<sup>62</sup>The objectives of the Act are to empower the citizens of India, bring transparency and accountability to the system to eradicate corruption and enhance public participation in democracy. Even the Information Commissioners have been appointed to ensure the availability of desired information.<sup>63</sup>

The Act has its limitation also, like the applicant may be denied from providing information on matters relating to foreign relations, trade secrets and cabinet papers etc.<sup>64</sup>

### **The Information Technology Act, 2000:**

The Information Technology Act, 2000 is a specific law to regulate e-governance. In e-governance, electronic records, digital signature and electronic gazette etc. are some of the important concepts. Provisions for all these concepts have been given in the Information Technology Act, 2000. Legal recognition of electronic records has been given under Sec. 4 of the Act. Sec. 5 of the Act provides for legal recognition of electronic signatures.<sup>65</sup>Further, Sec. 6 provides for very important and useful aspect. It allows the use of electronic records and electronic signatures in the Government and its agencies. Retention of electronic record has been provided under Sec. 7 of the Act. In gazettes, the Acts, rules, regulations etc., are notified. So, even the publication of the same in electronic form has been provided under the Act. Sec. 8 of the Act provides for the publication of rule, reg-

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62 Sec. 4 of the Right to Information Act, 2005

63 See Chapter-III and IV of the Right to Information Act, 2005

64 Sec. 8 of the Right to Information Act, 2005

65 Sec. 5 has been amended in 2009. By this amendment, The term 'electronic signature' has been replaced with the term 'digital signature'.

ulation, etc., in electronic gazette. Even the Central Government has been authorized to make rules relating to electronic signature.

Data protection is a big concern in present era. The Act provides for specific provision relating to it also. Sec. 43A provides for compensation for failure to protect data. It reads as follows:

“Where a body corporate, possessing, dealing or handling any sensitive personal data or information in a computer resource which it owns, controls or operates, is negligent in implementing and maintaining reasonable security practices and procedures and thereby causes wrongful loss or wrongful gain to any person, such body corporate shall be liable to pay damages by way of compensation to the person so affected.”<sup>66</sup>

Further, the Information Technology Act, 2000 provides for penalties, compensation and adjudication etc. in case of violation of the provisions of the Act.<sup>67</sup> Thus, this is the specific enactment to regulate and maintain e-governance.

### **The Indian Evidence Act, 1872:**

As the name of the Act suggests itself, the Indian Evidence Act provides for what evidence and to what extent, any evidence may be taken into consideration by the court while deciding any case. Under the Information Act, 2000, the legal recognition has been given to electronic records and digital signatures etc. But it has also be decided as to what their relevance is, if any issues arise before the court. So, to determine their admissibility, the provisions have been incorporated in the Indian Evidence Act, 1872.

Sec. 22A of the Indian Evidence Act, 1872 provides for the oral admission

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66 This section was inserted by the amendment in 2009.

67 See Chapter 9 of the Act.



of the contents of electronic records. Sec. 45A deals with the relevance of the opinion of the Examiner of the electronic record. Sec. 47A deals with the situations in which opinions as to digital signatures are relevant. Sec. 65A is providing for special provisions as to evidence relating to electronic records. Sec. 76A deals with proof as to electronic signature. Proof as to verification of digital signature has been provided under Section 73A of the Act. Dealing with the presumption as to Gazettes in electronic form, Sec. 81A reads thus:

“The Court shall presume the genuineness of every electronic record purporting to be the Official Gazette, or purporting to be electronic record directed by any law to be kept by any person, if such electronic record is kept substantially in the form required by law and is produced from proper custody.”<sup>68</sup> Presumptions as to electronic records, electronic signatures and electronic signature certificates have also been given in the Act.<sup>69</sup> Thus, in general laws also, special concern has been shown towards electronic concepts.

### **Data Protection Bill:**

Data is a big asset in present times. The right to privacy has been declared to be a fundamental right.<sup>70</sup> Considering the importance of online services and legal issues relating to privacy concerns, it was realized that particular laws should be made to regulate it. Accordingly, Srikrishna Committee was constituted to frame the Bill. The Data Protection Bill was prepared in 2018. In December 2019, the Joint Committee of Parliament was constituted to refer to the Bill. The Committee submitted its report In December 2021. It found the Bill heavily in favour of the government. Justice Srikrishna

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68 The provision has been inserted in 2000.

69 Sec. 85B and 85C of the Act.

70 K.S. Puttaswamy v. Union of India (2017) 10 SCC 1

called it to be “Orwellian State”.<sup>71</sup> The Joint Committee of Parliament has issued 12 recommendations. It includes extension of implementation period<sup>72</sup>, regulation of non-personal data under the Act, the appointment of Data Protection Officer, regulation of social media companies (which don’t act as intermediary) as the content publisher etc.

The recent development regarding this Bill is that on Aug 6, 2022, the Bill has been withdrawn. Explaining the reason of withdrawal, It has been stated thus:

“The government has withdrawn the Personal Data Protection Bill from Parliament as it considers a comprehensive legal framework to regulate the online space, including bringing separate laws on data privacy, the overall Internet ecosystem, cybersecurity, telecom regulations, and harnessing non-personal data to boost innovation in the country.”<sup>73</sup>

Thus, the Bill which was pending for last four years, have lost its existence. As India is one of the biggest internet market, there is dire need to have an effective law to regulate it. After the withdrawal of this Bill, it is hoped that government will come with a new Bill with the proposed recommendations.

## CONCLUSION

Proper governance is one of the criteria to check the efficacy. With the introduction of information communication and technology, governance

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71 <https://indianexpress.com/article/explained/explained-sci-tech/personal-data-protection-bill-withdrawal-reason-impact-explained-8070495/> (as visited on Aug. 5, 2022)

72 Time period has been recommended to extend 24 months to implement any provision of the Act.

73 <https://indianexpress.com/article/explained/explained-sci-tech/personal-data-protection-bill-withdrawal-reason-impact-explained-8070495/> (as visited on Aug. 8, 2022)

may be made better by online services. It is quick and authentic with instant availability of proof. It has been appraised and appreciated at the international level. Almost all the countries have gone with e-governance. To promote it, even the E-governance Development Index is issued by the United Nations. India has effectively adopted e-governance. A number of schemes and plans have been initiated at both the national and international levels. Bhoomi project, KHAJANE, e-seva, e-court, Gyandoot and the National e-Governance Plan are some of the major examples of it. It is not enough to just adopt it. It is equally important to regulate it properly, as a number of legal issues are related to it. Like privacy is the biggest concern. So, a proper and effective legal framework is required. There are a number of laws in India relating to it. The Information Technology Act, 2000 is specifically dealing with the matters relating to computer and technology. The Right to Information Act, 2005 is another important legislation. It empowers the citizens and intends to increase their participation in the administrative system. It has made mandatory for the public authorities to make their information open for the public. That's why, their official website has been established. Indian Evidence Act, 1872 recognizes the relevance and admissibility of electronic documents, if the prescribed conditions are fulfilled. Data Protection Bill, 2018 is also very important in this line. Though, now, it has been withdrawn, it is appreciable that the concern has been shown over the related issues. Thus, proper laws are of dire need to regulate e-governance properly. Proper e-governance may fulfill the dream of good governance and facilitate the public in better way.

# CHAPTER | 16

## SIXTEEN

### **Role of Information Communication Technology in Women Empowerment in India**

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## INTRODUCTION

Interaction in the digital world has been made easy through the application and the system of modern computing which allows both individuals and organizations to collaborate. The components of ICT such as cloud computing, software, hardware, e-transactions, communication, data, and internet access. The ICT is commonly used as synonymous with IT (Information Technology) but factually ICT represents a broader, more comprehensive list of all components related to computer and digital science than IT. And common components of ICT are the smartphone we use, computers at home, and others used in supermarkets, ATMs machines, telephones, digital TVs, and robots are some of the common examples which make the list of components all-encompassing in nature<sup>74</sup>.

But we see not every stratum of the public gets equal opportunity for the usage of these entrails as the richer section can afford all and use it to the best. But this situation leads to another difficult situation of the digital divide where society is bifurcated into accessibility to some receiving vast advantages and the other underprivileged section struggling to afford it.

Even though in today's world it has turned out to be the most indispensable part of our life. To avoid situations that of the digital divide and all the upcoming circumstances along with it many governmental as well as non-governmental authorities i.e. NGOs are advocating the policies and trying all means to provide its accessibility to the weaker section as well who are unable to afford this. The statement can be well proved by the fact that the United Nations acknowledges one of its Sustainable Development

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74 GK Today, "Information and Communication Technology (ICT) and Women", published march 16, 2017, <https://www.gktoday.in/topic/information-and-communication-technology-ict-and-women/>  
Accessed on July 15,2022

Goals (SDG) to “necessarily increase access to information and communications technology and seek to provide universal and affordable access to the internet in the least developed countries also. Also, economic markets are brought into being in this ICT environment also. Now in the context of the ICT markets which have the capabilities to make the development and delivery of numerous technologies accessible to ICT customers and peddlers at a reasonable rate in fact options are available to customers with choices in delivery and price values of internet and phonic services.

Apart from several advantages, it has some demerits as well which are challenges to both individuals and organizations that are to a society seen as a whole. In today’s digital era the technology expansion has reached such that it has brought in every data on tips now accessible through the device which stands as both advantageous as it is time-saving and effortless work and disadvantageous for it can cause stealing of crucial information from the system by some tech swindlers and thus disrupt the intellectual property or private information or disrupt systems that control critical infrastructure. Now robots are seen to replace human labour as seen in some places now but will gradually increase. The biggest drawback is seen now that communication and technology have turned people to stay in the “online mode” or virtual connections instead of being directly connected and interacting.

So, we hereby see that ICT is more closely connected as the merger and manager of the telecom infrastructure and consolidation of technologies that have common transmission lines. The wireless services stated earlier count connectivity, security, and unified channels also, which come under the ambit of the ICT management.

The reconfiguration of electronic and physical access to four-related resources: information, people, services, and technology by the ICTs. Thus,

ICTs enable to have access to information that can in the long-run change shapes but not necessarily social relationships. However, access to people's communication devices let them perform monitoring and controlled reaction. Thus, the stream ICT is a combination of both information technology that is a combination of varied data, and communication technology is its accessibility on various computer peripherals, on the whole, it is collecting, processing, and transmission of data across the globe. *ICT impregnates all aspects of life, providing newer, better, and quicker ways for people to interact, network, seek help, gain access to information, and learn.*

In a span of few years, the convergence of numerous kinds of technology has been expanding along with the number of preferences that people and institutions have for making contacts and keeping in touch. In retail and other customer-facing environments, the Information and Communication Technology infrastructure that once powered simple credit or debit card transactions and centralized record-keeping for commercial organizations continues to evolve, and e-Commerce now integrates with the shopping practice also and also helpful for other modes of transactions via the online mode. In the manufacturing sector, ICT is a useful support mechanism, conversant with a rendition of design and production more potent, effective, and efficient through the use of computer-based precision engineering, virtualized systems, and computer simulation. As with manufacturing, ICT has plentiful applications in the health care sector – many of which have had a game-changing effect on patient care, public health, running costs, and the traditional bureaucracy associated with the medical profession and life sciences.

## **IT ACT AND WOMEN EMPLOYMENT ACT**

Also called as Information Technology act, 2000<sup>75</sup> an act to provide legal recognition for transactions carried out by way of data exchange and other such means of electronic communication and further deals with cases that fall under the category of cybercrime. And some intermediary guidelines were included in 2011 and the information Technology i.e.(Intermediary guidelines and Digital media Ethics Code) rules, recently in 2021. Another important fact is that in the year 2008 it was amended as well. The structure of the Act is as follows:

It has 94 sections in total which are divided into 13 chapters and 4 schedules which apply to the whole of India without any exemption. Under the new law, the establishment of the Cyber Appellate Tribunal was a major step taken under the law to control the rising disputes arising every then and now and in big numbers. There is a list of offenses indicated there in from section 65 to section 74. But the notable sections among them are Section 66, 66A, 69A,

Section 66 deals with cases of hacking of the computer system, 66A deals with cases of defamation and sedition done by the medium of devices will be directly booked, and section 69 A the section which was in the news when the Government of India banned approx. 59 Chinese mobile apps among which tik-tok was the most famous one, it was done so to save national security interests.

But a lot of critics aroused whenever cases under Section 66A were booked such as that it was controversial in nature as it is unconstitutional in nature in a sense that sedition and defamation charges are booked in as under without seeing the fact that we have a fundamental right of speech and thereby

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75 Wikipedia , Information Technology Act, 2000, Commenced on May 9, 2000, [https://en.wikipedia.org/wiki/Information\\_Technology\\_Act,\\_2000](https://en.wikipedia.org/wiki/Information_Technology_Act,_2000) Last accessed on July 15, 2022



this section which is frequently used is vague in nature.

Section 69 allows intercepting any information and asks for information decryption as refusing for the same turns it to be an offense. Further, there have been controversial cases of phone tapping which is allowed only in specific cases of public emergency but still is used frequently in most political matters.

Thus, we see the Information and Communication (ICT) technology budding as a solution to reduce costs and change sophisticated economic affairs to easier, speedy, efficient, and time-saving methods of transactions.

But like everything has pros and cons and the same goes with this i.e., cyber-crimes are the most talked about drawback of this new digital world, and the concerning part is that most cases arise against women with varying types such as harassment through e-mails, cyberstalking, cyber defamation, child pornography, cyberbullying, cyber grooming where the women in most of the cases fall as prey. The situation is not just in India but also, prevalent at a global level. Here, we shall discuss the acts under the Indian context to safeguard and empower women to come forward and find justice, which is as follows:

The sections are from The Information Technology Act, 2000-

**Section 66C-** Under this identity theft is a punishable offense under which cyber hacking will be one such offense falling under its ambit.

Here the punishment could be imprisonment for a year or it could extend to three years in certain cases and liability for fine may also arise where the amount could be 1 lakh rupee.

**Section 66E-** This IT act is dealt with in cases of infringement of the pri-

vacy of a person. The situation under this could be capturing, publishing, or transmitting the image of an individual without their direct consent will be liable for violating the privacy rights of an individual.

Here, the punishment could be imprisonment could last up to 3 years with a or without fine as per the circumstances of the case.

**Section 67-** The Act prohibits the hauling of obscene content. The definition of obscene content has been defined in section 292 of IPC.

To go against the prohibition can lead to a punishment of confinement for up to three years and a fine for first and second convictions for up to 5 years.

**Section 67A-** The section deals with cases of publication, and transmission of some sexually explicit content as a punishable offense.

The punishment is incarceration for up to five years along with a penalty on the first and second convictions of seven years

**Section 67B-** This section deals with child pornography-related matters where mostly female children are the targets. Under this, any such act falls under a punishable offense.

## **ICT'S IMPORTANCE FOR GENDER EQUALITY**

The concept of gender equality is a matter of concern globally and in our country as well and to combat with this the introduction of ICT has brought in a new dimension with its safeguards policy and stringent punishments for an illegal act.

More specifically if we refer to women who are most deprived of such things and in this digital world are the soft targets of the attacker thus pro-

tection of them is equally important to uplift and equal accessibilities to the devices and use them smartly to do not fall as a prey to this cause. Thus, the ICT introduction has affected the role that women take in different economic sectors such that of health, education, and entrepreneurship. Technology and communication have helped them to lift their career at their comfort and pace as the internet world is a boon for us to access anything on tips which can help build up careers.

Now equality has aroused for people staying in Tier 1 cities or villages accessibility is for all and the only thing matters now is what is one accessing to.

People in common orthodox families where women were only seen to manage kitchen and house chores are coming up with the home-based business tuning themselves financially independent where in many cases their startups are turning them into billionaire women and providing employment to many women who needed this to run their houses. So, all this has been a result of the boon of this technology-oriented environment that has built up in these recent years.

Looking more specifically, ICTs can for one influence public opinions in a positive way about gender equality. And this has been seen although not far reached but at least it has started and if policy maker takes this seriously and include policies beneficial for women's upliftment and therefore this could be highly beneficial for women. Many facilities are available through the main technology center; citizens can browse the internet for job opportunities, gain access to markets they wish to target with their products, learn computer programs helpful for their business, enroll in language training programs, etc. So there are ample unexplored fields that have been explored now all because of its easy accessibility.

But conditions that arise are that worthy accessibility to women can have

various preventing and preposterous factors such as affordability, relevant content, security, and skills.

So, gender equality is a prime concern that needs to be subjugated because of the three-prime reasons, which are as follows:

### **Opportunity:**

The most crucial step taken by the ICT at a bigger level was to create platforms particularly designed for women to enable them to come up with their small or big startups all at a single platform irrespective of its size of the expansion, location, and sector all the minute factors are ignored and emphasis is made particularly on the competitive market at global level i.e. all may compete at an equal footing.

### **Capacity:**

Utilize their capacity in the best private sector acts a crucial role in enabling women to some very basic needs such as healthcare and education. There the major emphasis is given to structural and community-oriented training programs, redistribution of infrastructure, and then delivering a wide range of ICT services to meet the needs. And thereby, to generate these resultants the countries with a goal as such need to create an enabling environment for sustainable investment.

### **Understanding:**

The fact is that women still are less likely to use these digital technologies as compared to men and the survey says that this gap is larger among youth and another age group of 45 + years old. Now, this needs to be understood that to create and promote a system empowering woman the government needs to play a pivotal role. A greater understanding is required to learn

about the ICT ecosystem its working and practice, the hindrances to its accesses, and then how to tackle the challenges and overcome them.

Thus, ICT can be a powerful catalyst for readjusting social rules for interaction, offering new channels for establishing and accessing connections and relationships. The digital divide between men and women is what makes ICT gendered and not neutral. But in the last few years, its effective working has been witnessed where it has aided in its way to closing the gender gap.

## **CHALLENGES TO WOMEN IN THIS PATH<sup>76</sup>**

### **Language as an impediment to internet and mobile usage:**

In the rural areas and remote areas where women are less exposed to the surroundings and the international arena, they many times do not learn the common or the official language spoken and are deprived of its knowledge as they only know to speak their local language thereby they go through language factor as a hindrance in understanding the device language and use commands to operate this.

### **Usage of Science and technology is considered more suitable for men and boys rather than females:**

Since in this orthodox society men and boys are considered to be the most potential personalities to hold the superior power and technology usage is considered no indifferent and thereby girls and women are not considered to use technology as it is of no use to them which has no logical reasoning

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**76** The Economic Times, “Empowering women using technology can be ‘game changer’: India”, <https://economictimes.indiatimes.com/news/politics-and-nation/empowering-women-using-technology-can-be-game-changer-india/articleshow/36764510.cms?from=mdr> Updated June 18, 2014 (Last accessed on: June 21, 2022)

behind this. In our society still, the arts are considered a suitable stream for women and in case they wish to opt for information technology they are often looked at with questioning eyes and are discouraged to choose the same.

### **Newly-made cyber laws are mostly gender blind:**

It has been observed that whenever new laws concerning internet protocols and usage are frequently made through protectionist frameworks and without consulting women's organizations to put their concerns and work in their favor spite laws are passed without going through their concerns.

Also, social media scaffolds are often seen as unwilling to cope with misogynistic remarks and that's why the government and private sectors do not take very stringent actions against any sort of online violence.

### **There is a need for digital safety for both women and women activists:**

We see that IT has been an area which has ample pros but cons attached with it and particularly women fall under its ambit and can have bad consequences which have been discussed before. Thus, online gender-based rampage must be undertaken and women need access to tools for digital security to protect themselves.

### **Poverty has a multidimensional effect on women:**

There is a wide range of income differences between males and females even in cases of the same amount of work although this is a different topic here the chasm is visible globally where their access to almost everything is less and therefore this confines their probability to use all forms of technology, including ICT.

Thus, we see in developing countries like India, more than 90% of women work in the informal sector and also in rural areas. And in those sectors in

rural areas these women engage in economic activities such as handicrafts and sewing and rolling cigarettes, weaving baskets and fabrics, working in cities as vendors, and in this working in a way without any contract or benefits. And thus, these are the women who need or deserve something which may alleviate their poverty-stricken situation by introducing such welfare programs who need these more than any other group of people. And certainly, the IT sector will help such women to get familiar with tools such as telecommunication, media, and broadcast services that will help them in creating markets for their products and services. The tools will surely help them as income-generating like potential features.

We have some strong examples as such where women have been helped through helping hands like the Self-employed Women's Association (SEWA) in India which has done a considerable amount of work previously which has helped women in assisting them to take their first step in the informal sector and has established an ICT program aiming to increase women role and productivity of the rural micro-enterprise activities.

Because women must have equal access to ICT technology and freedom to receive and produce information pertinent to their problems and viewpoints. Therefore, to fully engage in the evolution and take benefit of the new advance in technology each day, they must be included as a major point of discussion regarding their employment. Thus, to overcome these hurdles it is very much important that there be the active involvement of women and gender advocates in the policymaking process and descant because access and cost are some of the biggest obstacles to ICT use. To ensure that women, especially rural and underprivileged women, gain from ICT, a gender-inclusive ICT policy needs to be developed with some serious changes in it.

## SUGGESTION

We have discussed above that ICTS is for everyone and thus no difference be made between men or women and instead women should be treated as equal beneficiaries on par with men.

And we see that the need for the hour is that particularly women be made aware of the new technologies through the promulgation of information regardless of their literacy grounds or understanding of the topic. Thus, ICT models need to create a bridge to cover another cause which is the poverty gap. And for the same, they need to be aided with an equal concerted effort on the part of the government agencies. Some of them could be that government may create in which women may participate in a good number and also incentives be provided to them for encouraging those young birds who wish to fly. Also, it should be taken care of that access to ICTs may not be just restricted only to the upper strata of the society instead there should be a free flow of it reaching deprived people as well so that they can make equal use of it as per their understandings.

Also, an important fact be not undermined that ICT in convergence with other forms of communication has the potential to touch the lives of women who hitherto have not been reached by any other media and thereby empower them to participate in the social and economic progress about the issues affecting them.

Even though we have a good fact that in our developing country where the vision and ideas are changing and women here are examples who have careers in the communication sector also and also, they have achieved far heights but they still anyhow lack in reaching the position of the decision making where their viable views and ideas are heard thus, we need a system where they may be openly allowed to advocated and equally heard



Therefore, government efforts are the one which can be positively seen if they will take a step forward and eradicate the malpractice of ignoring the crucial role of women and let their voices be equally heard and solutions are discussed and made for them.

Government can even come up with an idea of setting Multifunctional Converged Applications Community Centres (MCACs) at panchayat and block levels to derive benefits from services like tele-education, telemedicine, internet access, and hoe this could be an important tool for learning skills and make it income generator later on. Thus, the new digital India Bharat we dream of can be only achieved by working at the grassroots and try connecting more of the rural people under this to collectively develop and make the best use of this technology-oriented environment.

## CONCLUSION

So far, we have discussed the ICT meaning and usage and how this is beneficial in a developing country like India. We primarily discussed the ICTs and women empowerment topic where the means have been broadly discussed as how could it be beneficial to them and also, several challenges in this path have also been discussed. The advantages of the technology-oriented environment are many and the more wisely we use it the more fruitful it can be for acquiring different skills and act as an income generator for so ever deploys energy and time in learning it.

The ICT still is not gender neutral and therefore, women and girls have been deprived of its access the challenges are many which need to be overcome.

Although a few things also go on the other hand such as<sup>77</sup>:

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77 Drishti IAS,” Women in research and Development” published August 21,2020, <https://www.drishtiias.com/daily-updates/daily-news-analysis/women-in-research-and-development> accessed on 17 July, 2022

- According to the All-India Survey on Higher Education (AISHE) report 2018-19, the gender gap in the country narrowed as compared to the previous year, i.e. 2017-18.
- Initiatives like She-box are ensuring workplace safety and boosting better participation of women in all areas of the economy,

Thus, initiatives as such is little less in number now but making a great change and thus, needed more and more in the society. The new opportunities in this field may need to have policies to recruit a good number of women employees securing them better work conditions, including social security benefits and so on.

Digital technologies and Women's Empowerment can affect a lot in the lives of women it can invite numerous ways in which people may communicate, conduct business, and connect because of information and communication technologies that are ICTs. We see job opportunities in ICT sectors are numerous and they include a variety of challenging occupations of various types. But the only problem lies in this gender gap and to turn gender neutral we need to eradicate the discrimination in high-tech education and training. Everyone needs to collaborate to phase out the gender barriers in almost all sectors like health, economy, politics, and digital that we are discussing needs to work on empowering women who can be significant drivers of macroeconomic growth and stability in today as well as in the coming time.

The role of women shall not be disregarded as they are the fundamental participants and critical players in all decision-making processes which have massive potential because of this advancement.

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# CHAPTER | 17

## SEVENTEEN

### **The Role of ICT In Early Childhood Education: A Review**

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## INTRODUCTION

The term “information and communication technologies” is abbreviated as “ICT.” This concept is currently used often in educational research, educational policy, and educational practise. It is meant to serve as a replacement for the earlier word “IT,” which stands for “information technology” and was often used to computer systems and the Internet. In the past, the “information” component of information and communication technologies (ICT) was typically the one that was emphasised the most in the relevant literature and by the general public. Over the course of the last several years, the “communication” aspect of ICT has emerged as an equally important factor. The phrase “Information and Communication Technology” (ICT) refers to a lot more than simply computers. The term “information and communications technology” (also known as “ICT”) refers to “anything that enables us to obtain information, to interact with each other, or to have an influence on the environment by utilising electronic or digital equipment” (Siraj-Blatchford & Siraj-Blatchford, 2003, p. 4). While some writers refer to it simply as technology, others refer to it under the umbrella phrase “learning technologies.” In the context of early childhood education (ECE), the term “information and communications technology” (ICT) may refer to the following categories of hardware and software: computers (including desktop, laptop, and handheld computers); digital cameras and digital video cameras; creativity and communication software and tools; the Internet; telephones, fax machines, mobile telephones, tape recorders; interactive stories, simulated environments, and computer games; programmable toys and “control” technologies; videoconferencing technologies.

Therefore, information and communications technology (ICT) may be described as “everything that enables us to get information, to interact with each other, or to have an influence on the environment by utilising electrical

or digital equipment.” In the context of early childhood education (ECE), the word “information and communication technology” (ICT) may refer to computer hardware and software, digital cameras and video cameras, the Internet, telecommunication tools, programmable toys, and a great deal of other resources and equipment. At least three arguments can be found in the research that support the importance of information and communication technology in early childhood education. To begin, the people and settings that surround young children’s educational experiences are already being impacted by the presence of ICT. Second, the use of these technologies presents fresh possibilities for enhancing the delivery of many facets of the practise of early childhood education. Thirdly, there is widespread support and interest throughout the whole education sector in the development and incorporation of ICT into educational policy, curricula, and practise. This point was brought up in the previous point. However, there is a clear consensus in the research that the introduction and use of ICT in early childhood education should be grounded in a clear understanding of the purposes, practises, and social context of early childhood education. This is a point that has been brought up repeatedly throughout the research. In early childhood education settings, there is a rising awareness of the many varied ways that information and communications technology (ICT) may add to, or modify, the activities, roles, and relationships that are experienced by children and adults in these settings. According to the research, it is essential for teachers and other adults working in early childhood education settings to have access to training, opportunities, and support that will enable them to become capable, competent, and informed about the educational role and potential of information and communication technology (ICT). This will allow them to use ICT to strengthen many different aspects of early childhood education practise.

## **ICT AND THE LEARNING OF YOUNG CHILDREN**

Young children increasingly navigate their physical and social surroundings with the help of information and communications technology (ICT), which is becoming more and more pervasive. It is a vital aspect of the lives of the majority of people, both in their private and professional life. This includes the individuals who assist the learning and development of young children, whether they do so as parents, family members, carers, or early childhood educators. The idea that children's early childhood education should reflect and link with their experiences in the larger world is one that appears rather often in the research that has been done on the topic. Since of this, information and communication technology is important in early childhood education because it already has an influence on the people and situations that surround the development and well-being of young children. There is widespread agreement across the body of academic research that a critical examination of the role and potential of information and communications technology (ICT) for the early childhood education sector is warranted at this juncture in order to direct future development and decision-making in this field.

### **WHAT POTENTIAL FUNCTIONS DO TIC HAVE IN ECE?**

In early childhood education settings, there is a rising awareness of the many varied ways that information and communications technology (ICT) may add to, or modify, the activities, roles, and relationships that are experienced by children and adults in these settings. The research that has been conducted on the topic of the growth of ICT capability in the early childhood education sector (for example, see Brooker, 2003; Downes & Fatouros, 1995; O'Hara, 2004; Sheridan & Pramling Samuelsson, 2003; Siraj-Blatchford & Whitebread, 2003) lends support to two central ideas, which are as follows:



The first concept is to children and the prospect that they might start to build their competence in information and communication technology (ICT) and their “ICT literacy” as part of their experiences in early childhood education. The second concept is that educators and other people working with young children may get assistance in building their skill with information and communications technology (ICT) and “ICT literacy.” According to the research that has been conducted, practitioners require direction, as well as opportunities to become capable, competent, and informed about the educational role and potential of ICT, as well as support to make the most of the opportunities that ICT presents for strengthening all aspects of early childhood education practise. [Citation needed] [Citation needed] [Citation needed] [Citation needed] [Citation needed] The use of information and communication technology is becoming more ingrained and pervasive in the environment that children are growing up in. These technologies are having such a significant impact on all parts of people’s life that they are now becoming to be “taken-for-granted”: Children raised in today’s society are raised in an atmosphere that is rich in communication. They are exposed to a wide variety of electronic and digital modes of communication in their day-to-day lives, which are included among the models of communication that they experience. There are electronic forms of communication in the outside environment, such as on streets as payment machines or pedestrian crossings, as well as in supermarkets and a great deal more. settings all the way through their schooling and into their life as adults. Young children should start developing what is referred to as “technology literacy” as early as possible, in the opinion of writers such as Siraj-Blatchford and Whitebread. This will allow them to be full and competent participants in their settings. ...a new sort of literacy, but one that is widely acknowledged to constitute an important educational entitlement in any comprehensive and balanced curriculum for the twenty-first century.

## ICT USE WITH YOUNGER CHILDREN

When it comes to young children and information and communication technology (ICT), the issue that occupies the forefront of the thoughts of some people is: Should young children ever be exposed to ICT at all? Is it possible that young children might be put in harm's way via ICT? What dangers and perils are associated with the usage of ICT by children? On the other hand, are there advantages to be acquired via the use of information and communication technologies (ICT) by young children, and if so, are these benefits sufficient to support the incorporation of ICT into ECE practise? This section explores comments from the literature on these problems, and it evaluates the evidence that is available to support different assertions regarding the advantages and downsides of young children's use of information and communication technologies (ICT). The majority of the published research focuses on ICT in the context of computer use. The proliferation of information and communication technologies has prompted some parents, teachers, and advocates for children to question the relevance of these technologies to the cognitive, emotional, social, and developmental requirements of young children (Stephen & Plowman, 2003, p. 4). The use of computers and video games by young children has been the primary topic of discussion in most of the conversations that have taken place about these concerns. Specific areas of concern that are frequently brought up in relation to children's use of computers include the following: harmful physical effects of children's prolonged computer use; negative impacts on children's social development (for example, concerns that computer use will encourage anti-social behaviour, including isolation or aggressive behaviour); educational concerns that computer use can interfere with aspects of children's cognitive development; concerns about children's exposure to unsuitable content on the internet; and concerns about children's exposure to inappropriate content on the internet.

The creators of Fool's Gold are of the opinion that children's usage of computers should be minimised in favour of various types of educational and recreational activities for youngsters. ICT should not be seen as a way of superseding or displacing the kinds of experiences that young children have during their early childhood education. The majority of authors believe that computers can play a role in young children's early childhood education experiences alongside a wide variety of other types of activities. For instance, the use of information and communication technologies (ICT) shouldn't come at the price of outdoor or indoor activities that help children develop their gross motor skills via running, climbing, leaping, swinging, and utilising wheeled toys (Siraj-Blatchford & Siraj-Blatchford, 2003). Some writers have voiced their worry that the use of computers prevents children from engaging in free-form, creative play as well as learning. When "computer usage" is seen in terms of software for drills and practises, this is the situation that most often arises. However, other authors discuss ways in which information and communication technology (ICT) can contribute to children's creative play and expression. This is not only through the selective and supported use of particular software applications, but also through the use of a variety of different forms of ICT (for example, digital cameras, programmable toys, or walkie-talkies), both indoors and outdoors, for a variety of different learning and play activities.

What type of pedagogical approach is it that early childhood educators, such as those who participated in the Scottish research referred to above, may be working toward? Is there a method that can be used to evaluate or describe the relative quality of the practise around ICT in early childhood education? The literature on the use of information and communication technologies in early childhood education uses the phrase "best practise" quite seldom, if at all. However, a number of authors have brought together research and theory about the use of ICT in early childhood in order

to develop frameworks or guidelines for what might be considered to represent high-quality practise in the use of ICT in early childhood settings. These frameworks and guidelines can be found in a number of different publications (Brooker, 2003; Downes et al., 2001; Sheridan & Pramling Samuelsson, 2003). In the field of early childhood education, problematic terms include “best practise” and even “excellent,” all of which bring with them a certain degree of subjectivity and the potential for personal judgement. For instance, the phrase “best practise” gives the impression that there is one uniform standard of behaviour that is optimal for all individuals in all settings. But Dahlberg, Moss, and Pence (1999) point out that what is considered “best” by one person or group may not be considered “best” by another person or community. In spite of these disclaimers, there are a number of helpful principles that are beneficial for thinking about elements of practise that educators could aspire towards with the use of ICT. These criteria include: These principles get their substance from their foundation in the experiences of early childhood educators (Brooker, 2003; Downes et al. 2001), or from ideas about what constitutes “pedagogical” excellence in early childhood education practise. [Citation needed] (Sheridan & Pramling Samuelsson, 2003). Assessing the strength of relationships between children, educators, and families; children’s perspectives on their early childhood education experiences; and assessing the physical and material resources available in an early childhood education setting are all possible ways to measure the pedagogical quality of early childhood education. The physical and technical arrangements, such as children’s access to computers and other information and communication technologies (ICT), the placement of computers in the room, and the types of software that are available, are discussed in the guidelines for judging the level or quality of the use of ICT in early childhood education literature. They also highlight educational and social aspects of the learning environment, such as the

nature and quality of children's interactions with, and in the context of, the computer; the role of adults in supporting and encouraging children's use of information and communication technology (ICT); the degree to which ICT-related activities connect with other activities in the centre; and the practitioner's broader learning goals. They also remark on the ways in which children in the early childhood education environment could "experience" information and communication technology. According to Brooker (2003), the usage of computers may be categorised along a continuum with three points, which range from "isolation" to "integration" to "immersion." In a study that takes a similar approach, Sheridan and Pramling-Samuelsson (2003) investigate what "poor quality," "good quality," and "high quality" usage of information and communication technologies (ICT) might look like in an early childhood context. The examples shown in Table 4 illustrate what these various degrees of quality of ICT usage may look like in the context of early childhood education. The use of information and communication technologies by children is self-contained and detached from other learning activities when the quality of such usage is poor (isolation). It's possible that the computer will be tucked away in a quiet nook, away from the other play spaces. The technology is used by children only seldom, and instructors do not encourage the students to utilise it. Teachers do not actively scaffold children's learning when they are using information and communication technologies (ICT), with the exception of making ensuring that children take turns and have the fundamental skills necessary to utilise ICT. When quality (integration) is at a satisfactory level, the computer is moved to a location that is more central among the many activities taking place in the classroom. Children are welcome to use the computers and other forms of information and communication technology (ICT) devices, such as digital cameras. Children interact with one another, talk about different tactics, figure out solutions to issues, and have a good time while

doing so together in front of a computer where they are using instructional software or games. Even though the instructors promote and support the children's usage of information and communications technology (ICT), the technology is still not incorporated into any of the other activities that take place in the preschool. Children utilise computers and other forms of information and communication technology (ICT) equipment as a multipurpose tool that is integrated with other activities and topics throughout the day at a high degree of quality known as immersion. Practitioners and children use computers to document children's activities, make labels and signs as needed, and send messages. Parents can access information about their children's learning or activities, or about early childhood education in general, while they are in the setting. Other uses for computers include making labels and signs for classrooms and lockers. Giving children the drive to explore and create to the edge of both their own capabilities and the limits of the technology is one of the most essential goals that a teacher can have. This helps children develop into effective communicators, information searchers, and content assessors in the future.

## **CONCLUSION**

International literature suggests that the introduction of ICT in early childhood education can have many positive implications for early childhood education practitioners. When used well, the new technologies can provide powerful tools for strengthening and enhancing children's early childhood learning experiences, including relationships between practitioners, children, and parents. Using ICT with children can also stimulate practitioners to reflect on their views and ideas about children's learning and development, and to analyse and question how things are done in early childhood education. For this to occur, practitioners need good guidance, examples, and support for their own professional learning. They need to be well-in-

formed about the potential and possibilities available from ICT, as well as being able to critically review different ICT hardware and software.

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# CHAPTER | 18

## EIGHTEEN

### **The Importance of Information and Communication Technologies in The Empowerment of Women**

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## SYNOPSIS

Women's empowerment is a vital instrument for altering their socio-economic status. The first Prime Minister of India, Pandit Jawaharlal Nehru, famously stated, "To rouse the people, women must be awakened; once she is on the move, the family, the village, and the nation follow suit." Women Empowerment refers to the process of enhancing the social, economic, political, and legal strength of women in order to ensure their equal rights. The world is undergoing an information revolution, which is accompanied by the emergence of wholly new communication technology. Recent advancements in information and communication technologies are truly revolutionary in nature. Through ICT, women obtain security, awareness, knowledge, employment, confidence, and notoriety, among other benefits. ICT offer possibilities for women who can access and utilize them, particularly in terms of lowering poverty, enhancing governance, eliminating isolation, and offering a voice. This paper examines the significance of information and communication technologies in the empowerment of women.

**Keyword:** Empowerment, Technology, Women, Commination, ICT

## INTRODUCTION

Over the past few years, the role of Information and Communication Technologies (ICT) as a tool for development has kept the world's attention. Donors, the commercial sector, and civil society have formed strategic alliances, and working groups and task forces have been established to enhance collaboration among World system institutions. The Economic and Social Council adopted a Ministerial Declaration on the role of information technology in a knowledge-based economy in the year 2000. In 2001, the Secretary-General established a high-level Task Force on Information and Communication Technologies. It was tasked with leading the United Na-

tions as a whole in developing plans for utilizing ICT to aid in development.

The ICT sector includes divisions as diverse as telecommunications, radio and television broadcasting, computer hardware, software, and services, and electronic media (for example, the Internet and electronic mail). Traditional means, such as print media and conventional telephone lines, as well as satellite technology, mobile phones, and the Internet can be used to fulfill information and communication requirements. Large numbers of people throughout the world, particularly in rural regions, continue to find traditional technology indispensable. However, modern technologies have a tremendous potential for emancipation that must be properly realized. The term “information and communication technologies” (ICT) has been used to encompass the technological innovation and convergence in information and communication that has resulted in the development of so-called “information” or “knowledge” societies, characterized by shifts in social interaction, economic and business practices, political participation, education, health, and leisure and entertainment.

Over the past decade, it has become increasingly apparent that these technologies are potent tools for promoting social and economic development through the creation of new types of economic activity, employment opportunities, advancements in health-care delivery and other services, and the enhancement of networking, participation, and advocacy. Moreover, ICT have the potential to enhance interactions between governments and their citizens, thereby increasing accountability and openness in governance.

Although the potential of ICT to stimulate economic growth, socioeconomic development, and effective governance is widely acknowledged, the advantages of ICT have been unequally dispersed within and between nations. Digital gap refers to the disparities in access to and effective use

of ICT for development that exist within and between nations, regions, industries, and socioeconomic categories. Frequently, the digital divide is attributed to limited access to technologies. In developing nations, poverty, illiteracy, a lack of computer proficiency, and language hurdles are among the problems that impede access to ICT infrastructure.

The word “empower” encompasses more than one meaning. Empowerment refers to the development of one’s own abilities to make decisions, evaluate complex situations, adapt to new environments, and overcome obstacles. Due to the anonymity provided by the Internet, people are less likely to be threatened by engaging in conversation with one another. Women in particular have more freedom to express themselves emotionally, philosophically, politically, and otherwise. Because of the impersonal nature of texting, you may be yourself without worrying about how you come across to the other person. It’s not only the physical exertion; the psychological impact of writing gives people fortitude, too.

Women’s empowerment aims to give women more say in the decisions that affect their life, such as where those resources come from, who gets what benefits, and how those benefits are distributed. Information and communication technologies (ICT) provide promise, especially for empowering women who have access to and use them to break the cycle of poverty, strengthen government, break down social barriers, and increase their collective voice. Communication and information technologies (ICTs) were recognized as crucial for women’s empowerment at the World Summit on the Information Society (WSIS) in Geneva in 2003. The WSIS declaration read, in part, “We are committed to ensuring that the Information Society enables women’s empowerment and their full participation on the basis of equality in all spheres of society and in all decision-making processes.”

Using information and communication technologies (ICTs), our esteemed president Dr. A P J Abdul Kalam has launched a nationwide campaign to transform India into a global superpower. Global economic and social transformations have been hastened, and continue to be accelerated, by the invention and spread of electronically conveyed information.

The advancement of ICT is significantly contributing to a shift in society's view of women. Since it equips women with new skills, it helps them feel more confident in their professional lives. Organizational, individual, and societal levels are all suitable contexts for fostering a culture of empowerment. Women's access to news about actual events happening in the globe and the training to deal with them is a major factor in the rise of women to positions of leadership made possible by the Internet, television, radio, and mobile phones.

ICTs are deemed indispensable for the advancements of our society to benefit all citizens. No group should be overlooked or privileged. The only solution is "to make it better for everyone." ICTs have the ability to eradicate gender inequity and empower women in society. There is a growing body of research demonstrating the positive effects of ICT on women's empowerment by expanding their access to health, nutrition, education, and other chances for human growth, such as political engagement. The availability of women producers and traders to markets, as well as to education, training, and employment opportunities, can improve the sustainability of women's livelihoods. By utilizing one of the most significant democratizing aspects of the Internet — the creation of secure online spaces that are protected from harassment — women are enjoying freedom of expression and privacy of communication in order to combat gender discrimination and advance women's human rights.

ICT has created the phrase E-governance, and all developing nations are implementing it. It can achieve greater access to services, greater accountability, transparency, and citizen empowerment, as well as strategic benefits such as improved decision making through information, improved knowledge sharing and organizational learning, enhanced interactions with citizens, other government organizations, and businesses and industry, improved market relationships between the public and private sectors, and enhanced organizational change management.

ICTs have been incorporated to the discussion on women and gender equality. ICTs are offered as a tool that has the potential to contribute to women's 'empowerment,' and a number of ICT programmes that specifically target women have been launched in both developed and developing nations.

## **HERE ARE A FEW AREAS WHERE ICT HAS A DIRECT IMPACT ON WOMEN'S LIVES**

### **Social empowerment:**

Obtaining new and helpful knowledge, information, and understanding regarding a variety of issues, subjects, and activities of interest to women. ICTs are an indisputable component of our society nowadays. They also enter our vision of social transformation. If ICTs truly constitute a technological tipping point that greatly improves our lives and have a primarily positive impact at the socio-structural level, then the mission of social change actors should be quite straightforward. Develop internal capabilities in terms of specialist ICT and social change knowledge. This fresh information and understanding frequently stimulated and expanded the participants' minds.

### **Educational empowerment:**

Knowledge is crucial to the growth of any culture and its inhabitants. It has long been acknowledged in India that education is a key factor in granting people the agency they need to bring about sustainable development. The impact of the Internet on the educational sector has been substantial. Ability to read and write needs a new definition; hence the word “literacy” needs to be rethought as well. Managing digital information in the current social networking context calls for a revised emphasis, one that takes into account the most up-to-date skills and knowledge in this area. The world’s information is brought to people via ICT in a manner and language they can understand. Wide knowledge of each field, grasp of new concepts. ICT aids in non-formal and adult women education.

### **Economic empowerment:**

According to Dell’Anno and Solomon, the influence of ICTs on corporate performance is more beneficial for highly skilled personnel. This leads to the conclusion that ICT adoption has a higher impact in more developed nations. During the past decade, the international community has devoted significant resources to the development of solutions to assist the inhabitants of the world’s poorest nations in reaping the benefits of globalization and escaping the cycle of poverty. Examining the function of ICTs in enhancing people’s standard of living and quality of life seems increasingly crucial in light of this context. They improve their monthly income with the aid of ICT. ICT offer employment prospects and the chance to integrate with large enterprises. Education in ICT empowers women economically, which is the root of all other forms of women’s empowerment.

Governments and international organisations invest enormous sums of money on ICT promotion programmes in so-called poor nations. Typically, the immediate objective of such investments is economic expansion. How-

ever, it is generally acknowledged that economic expansion is not an end in itself. Economic growth is intended to generate jobs, generate prosperity, and better the lot of all members of society. Its objective is to enable individuals to live a fulfilled life of their own design.

### **Political empowerment:**

The information and communication field has been completely transformed by ICTs, notably the Internet. The newfound abilities of citizens to communicate with one another, mobilise, and organise in order to secure their political rights have predictably caused concern on the part of nations. The Internet has always existed as a place beyond the jurisdiction of individual nations, but as it has grown in size and influence, the uncertainty with which it has been entrusted has caused many countries to worry. Now more than ever, activists and civil society organization's all around the world are mobilizing around the cause of defending Internet freedoms. As patriarchal constraints on women's movement and free expression limit their ability to participate in politics in the real world, protecting free speech online has become a crucial agenda item.

Being able to speak up for their liberties. Intuit your ability to make choices. Getting together with other women and men in positions of power in order to talk about the issues that are affecting us. Likewise, it is the responsibility of governance structures to foster the development of digital ecosystems that catalyze local democracy with an eye toward empowering women and girls through initiatives like public Wi-Fi hotspots, digital literacy training, citizen journalism, community media, and the dissemination of public information. As the Internet is a worldwide public benefit, it is essential that public policy frameworks at the international and national levels be put in place to ensure that it remains "open" and available to all people.



Cummings and O'Neil note that in Africa, women are underrepresented, spread out over the continent, and excluded from the political process. If women wanted to achieve political equality, they would need to learn how to access, write, and disseminate information about topics from their own point of view. Analysis, strategy, information gathering, lobbying, and advocacy are all necessary steps in the political process of emancipation. With the help of ICTs, women may create their own communities online, where they can network, offer and receive peer support, organise and share information, and run campaigns.

### **Psychological empowerment :**

Self-confidence, analytical skills, problem-solving abilities, and the ability to exert strategic control over one's life are all bolstered when an individual feels empowered on a psychological level. Individuals are inspired to take charge of their lives by the proactive concept of psychological empowerment. Further, psychological empowerment can be something done to or given to a person, or it can be a process occurring within a person's own mind that is influenced by events outside of themselves. The idea that a person is shaped not just by their genes and their upbringing but also by their exposure to new possibilities and experiences is central to the idea that the external processes at play here. Enhancement of one's own sense of worth and confidence. Feeling more respected and cherished. Greater inspiration, motivation, zeal, and desire to acquire new skills and knowledge. Feeling far less separated from others (especially other supporting women) and, as a result, having enhanced well-being, pleasure, and life satisfaction.

### **Cultural empowerment:**

Women are typically constrained by cultural views, which might inhibit their empowerment. In some societies, women are not permitted to pursue pos-

sibilities that could empower them; rather, they are expected to prioritize family obligations. Numerous feminist critics have suggested that the usage of computers and the internet is fundamentally sexist and dominated by men. Consequently, existing power structures and gender disparities in the globe are examples of the virtual reality of utilizing technology. In this study, women's empowerment can be achieved if they are able to overcome sociocultural constraints that restrict them from accessing-the-telocentric.

### **Technological empowerment:**

Gaining a clearer picture of the kinds of technologies and technological interventions being used by women is an important part of empowering themselves in the context of ICTs. Many authors agree that expanding women's access to information and communication technologies (ICTs) can help close the gender pay gap, improve the availability of health and education resources, end gender-based violence, and ultimately lead to more women in positions of power.

Emerging knowledge, awareness, and comprehension of the possible benefits and impacts of new ICTs. The acquisition of new skills, experience, and increased self-assurance and competence in the use of new communication tools. Advice and help in the use of email and the Internet, offered in ways that frequently fit the needs of the participants.

### **Governance:**

Connecting government operations with the state-of-the-art technology available today is central to the concept of "e-government." Through e-business, e-banking, e-procurement, etc., this technology has already demonstrated tremendous success in delivering efficiency to the private sector. E-government is not only involved in providing services to citizens, but also in enhancing public sector efficiency, openness, and accountability in

government functions, and reducing the expenses of public administration.

Several policies and guidelines, including those on open standards, open-source software, open application programming interfaces (APIs), and software development and reengineering, have been formulated to assist government departments with the development of cutting-edge architecture for applications and the rapid deployment of projects. Digital India is a revolutionary programme. By creating ICT-enabled citizen empowerment through fair access to ICT infrastructure, easy access to government services, digital and financial inclusion in the most remote corners of the country, and citizen involvement in government, we will realise our objective of a genuine Digital India.

### **Social awareness:**

Social networking has become a social norm for many adolescents of the new generation in this digital age. Facebook status updates, Twitter tweets, and Instagram photo uploads have become commonplace pastimes. Their existence is represented on social networking sites, where they save numerous memories by publishing pictures of their happy moments and documenting other emotionally significant occurrences. Simplified family communication, Increase Social consciousness, participating in a variety of activities with other women and influential individuals where you may debate issues openly, share worries and experiences, and reflect on issues that affect you.

### **CONCLUSION**

Women's empowerment means they have the freedom to pursue and achieve their own personal growth and development. Access to information, skills, self-efficacy, decision-making, community engagement, and perceived con-

trol all help women acquire social, economic, psychological, and political control over issues that influence their life. ICTs can facilitate varied, bottom-up, and inexpensive communication. They can magnify women's voices, assist in the dissemination of women's experiences and viewpoints, and integrate their special concerns into the mainstream policymaking and development process. ICT has had an enormous impact on the dissemination of knowledge to modetechnology and its applications.

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# CHAPTER | 19

## NINETEEN

### **Covid-19 Pandemic Impact on Higher Education Teaching and Learning Through Digital Mode**

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## SYNOPSIS

With the introduction of COVID-19, the necessity for social segregation measures developed, necessitating the implementation of extensive lockdowns in several nations. Education has been particularly heavily struck by this unique scenario, which has caused turmoil in many facets of daily life. Many changes were brought about by the closing of educational institutions, one of which was the shift toward an education that was more technologically focused. In the context of the pandemic, this systematic literature review aims to investigate the shift from conventional education, which involves face-to-face interaction in actual classrooms, to online distance learning.

**Keywords:** Covid-19 Pandemic, Online Teaching and learning, Higher Education Sector in India, Govt. Initiatives

## INTRODUCTION

In India, the first case of Covid-19 was reported on 30th January 2020 and this was the beginning of rising Covid-19 cases in India day by day. Covid-19 pandemic was quite similar to the previous pandemics such as SARS, EBOLA, and bubonic plague, so the Ministry of Health and Family Welfare (MoHFW) had to impose travel advisory restrictions and self-quarantine rule for 14 days on all international travelers who were coming to India. There were other steps also taken by the Ministry of Health and Family Welfare (MoHFW) like social distancing, and visa restrictions to minimize the risk of spreading the Covid-19 virus across the country. Meanwhile, after reporting the first case of Covid-19 in the country and daily rising cases in the month of March 2020 our Honorable Prime Minister Shri Narendra Modi announced a Janta curfew to limit the spread of the Covid-19 virus. As a result of this action, it stopped all the major activities like business,

transportation, and educational institutions all over the country. This complete lockdown of 21 days was imposed on 24th March 2020 by the Indian Govt. and extended it time to time. (Kumar & Kumar, 2021) However, this kind of step impacted India in a disruptive way especially, in the education sector in the country. All the educational institutions temporarily closed in the month of March 2020 due to Covid-19. This pandemic disrupted the teaching and learning methodology of many institutions across the country. It tested the preparedness level of the academic institutions and how to deal with this sudden crisis.

The closure of educational institutions in the country affected millions of learners. The method of teaching and learning shifted to online platforms and became the only way of imparting education in India. This transition from face-to-face learning to online learning showed the spotlight on the massive inequalities in the education system of the country. Inequalities like the capacity of teachers, learning outcomes, infrastructure, and access to technology during a pandemic. Although useful digital content was generated by the educators and they really worked hard to provide this content to the learner so that they could continue their learning from home. (India Case Study Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia, n.d.) However, the preparedness level, efficient design, and effectiveness of e-learning were still not properly understood by the educational institution in the country. In India there were and still, there are lots of technical hurdles like bandwidth connectivity, and convenience of devices which posed a serious challenge in the time of the Covid-19 pandemic. (Muthuprasad et al., 2021)

Education organizations and students were experimenting with strategies to finish their required syllabi within the allotted time frame in accordance with the academic calendar when schools and colleges were closed for an

undetermined amount of time. These restrictions undoubtedly caused some discomfort, but they also led to new instances of innovative educational practices including digital interventions. This was a bright spot in an otherwise gloomy picture since academic institutions continued to use antiquated teaching methods like lectures that date back millennia, as well as institutional prejudices that were deeply ingrained. However, COVID-19 inspired educational institutions all across the world to seek innovative techniques in a relatively short amount of time. Most institutions switched to an online format utilizing Blackboard Microsoft Team, Zoom, and many other online mediums. (Madeshia & Verma, 2020).

## **OBJECTIVES OF THE STUDY**

- Spotlight the Impact of Covid-19 on Higher education teaching and learning
- To find out the various digital learning tools used by educational institutions
- To find out how the digital learning tools proved to be useful for the students

## **RESEARCH QUESTIONS**

- What benefits and possibilities are presented by this digital transformation in higher education?
- What comments did both students and instructors have?
- What are the drawbacks of online learning?

## **RESEARCH METHODOLOGY**

In order to evaluate the Covid-19 Pandemic Impact on Higher Education Teaching and Learning through Digital Mode, the current study analyses earlier research in this field and is fully based on secondary data. The infor-

mation for this study was gathered from secondary sources, or other studies in the field, and it was thoroughly examined to arrive at the precise result for this research paper. In order to describe the actual facts in accordance with the current situation, the current study is entirely descriptive in character.

## **IMPACT OF COVID-19 ON INDIAN HIGHER EDUCATION SECTOR**

Due to COVID-19, state governments started closing schools and institutions nationwide around the second week of March 2020. We all know that this was an important time for students since many university and college exams were to be held at this time, along with several entrance exams for various colleges and competitive exams. And because there was no quick way to stop the COVID-19 epidemic, it was necessary to make college, school, and university closures mandatory in order to stop the virus's spread. More than 285 million young students in India have been impacted. Students, particularly those in their last year and those taking the entrance exam, had to deal with serious issues since they were unaware of the upcoming exams. Due to the disruption caused by the closure of educational institutions, the Indian educational system is currently experiencing an unrecoverable crisis in teaching and learning. Thus, the conventional face-to-face classroom technique was abruptly replaced by the online style of instruction. Just like yesterday's disruptors turned into today's survivors, so it went. Online methods were formerly seen as a danger, but they are now helpful. However, the adoption of the online form of instruction in higher educational institutions has brought about a number of problems (HEIs)

The effectiveness of online learning is one of the key questions that come up. The short answer is that it works for people who have access to the correct technology. The internet is extremely important for improved edu-

cation and learning. However, in a nation like India, it is unrealistic to expect all students to have access to all the necessary resources due to the wide socioeconomic divide that exists. As a result, there is a digital divide between the wealthy, who can access all the resources, and the underprivileged, who cannot afford to buy the necessary equipment for e-learning. Because of this, a large portion of the population in India does not have access to fast internet, which is essential for the teaching and learning process and is frequently unavailable to them. The issue of the digital divide is still one that India must address. Due to low student involvement, the absence rate and poor performance in online classes have increased. Unfortunately, the students' passive behavior outside of the classroom is one of the key reasons why online teaching and learning are unproductive.

The virtual meeting hubs are now mobile applications or online meeting platforms like Zoom and Google Meet. Teachers were instructed by educational institutions to engage classrooms online by utilizing online meeting platforms like Zoom and Google Meet. The abrupt switch from face-to-face teaching to online teaching made it difficult for professors who were not familiar with new technologies and mobile applications to engage in online classrooms. Some educators just taught lessons because they were requested to. Many students just entered the classrooms to sign themselves in as a present. Since there is no such thing as class control on these virtual platforms, they scarcely paid attention to what the teacher was teaching. Numerous entrance exams and employment interviews were canceled, which had an adverse effect on the student's life. All of them point to rising unemployment in India. As a result, there was a good likelihood that the fight for food would cause interest in school to decline as the unemployment rate increased. The young people who are India's future are under mental stress as a result of these expanding problems. These were specific issues that the Indian population faced because of the epidemic, which put



the country's future at risk.

## **CHALLENGES AND DIFFICULTIES DURING COVID-19 PANDEMIC**

During the pandemic, the difficulties facing the Indian educational system increased and include:

### **A disparity based on access and technology:**

The availability and accessibility of digital infrastructures, such as the Internet, computers, and phones, are essential for uninterrupted education. Although kids in urban schools often have greater access than students in rural schools, class and gender disparities continue to affect who can and cannot utilize these tools. Access problems are further complicated by other limitations including unstable electrical supply, uncertain home situations, inadequate study areas, etc.

### **Lack of Clarity in Examination:**

There have been numerous discussions about the grading system and the logistics of administering exams to students who are finishing their primary education, but this exceptional circumstance has slowed down the process of formalizing a national policy for allowing students to take their final exams. As a result, a lot of students haven't actually finished their high school coursework and have wasted time trying to pursue further education.

### **Use of e-learning platforms:**

Other interactive e-learning platforms like ZOOM, Google Meet, and Webex may be accessed from home in addition to resources supported by the government. These systems enable teachers to develop online courses where they may manage assignments, quizzes, and online course materials

storage. Exams, keeping track of deadlines, grading outcomes, and giving students feedback all in one location. Similar to this, instructors and students may do video and audio conferences using Skype, and WhatsApp, for course-related conversations, students can use Google Hangouts and other comparable online platforms. There are a lot of videos that capture the screen, such as those made using Screen Hunter, Camtasia, Windows, etc. Teachers may create tutorial videos using these resources.

### **A shift in the goal of education:**

Curriculums may vary, as well as the method they are taught. Aspects of schooling that were originally thought to be basic may need to be changed to mainly account for future life skills. Skills like resiliency, flexibility, teamwork, communication, empathy, creativity, and emotional intelligence will not only be necessary for employment but also for future citizens. The goal of education in schools will change, significantly departing from the information-focused education of today.

### **The Change at Midnight:**

Due to the lockdown, educational institutions were compelled to quickly switch from in-person lectures to online learning platforms. Every stakeholder in the education sector faces a challenging responsibility. For children, homes have become schools, whilst for parents, they have become cubicles for work. Institutions need to teach students how to modify their learning styles more. Institutions, therefore, need to stress the need of instilling in kids' life qualities including creativity, cooperation, emotional intelligence, and ongoing education. Daily assignments and interactive coursework must both be completed at the same combat the sluggishness that comes with staying inside. Teachers need to accept the challenge.

## **Student Passive Learning:**

quick adoption of online education without prior forethought, particularly in nations like India where the infrastructure was not yet ready and the curriculum was not created for this style. The majority of our students now run the risk of becoming passive learners, and they appear to be losing interest as a result of limited degrees of attentiveness. (Mohanty & Datta, 2020) The fact that we could be overlooking a sizable section of the student population as a result of the digital gap in many developing countries, including India.

## **ROLE OF THE GOVERNMENT DURING COVID-19**

To lessen the detrimental effects of COVID-19 on the educational sector, the government has taken a number of actions. The system adapted to distant learning quickly, educators made a concerted effort to change their roles, and communities and parents banded together to promote children's education. The NEP 2020 under the Ministry of Education was authorized by the Union Cabinet in July 2020. As India recovers from the epidemic, the Policy offers the government a number of opportunities to create a more comprehensive and resilient education system. The ambitious NEP 2020 plan calls for a total transformation of the education industry. The government's commitment to achieving the aim is demonstrated by the projected allocation of 6% of India's GDP to the sector. Another initiative is as follows:

### **E-Gyankosh**

The Open and Distance Learning Institutions of India created e-Gyan-Kosh (<http://egyankosh.ac.in/>), a National Digital Repository to preserve and exchange digital learning resources. Items in eGyanKosh are copyright

protected, and Indira Gandhi National Open University has all rights reserved (IGNOU). (Gyandarshan, n.d.)

## **Gyandarshan**

A web-based TV station for open and distance learners, Gyandarshan, is dedicated to meeting their educational and developmental requirements. a website-based TV station with an emphasis on learning and development.

## **Gyandhara**

IGNOU provides an internet audio counseling service at (<http://ignouonline.ac.in/Gyandhara/>). It is an online radio where students may listen to the in-depth talks being held live by professors and subject matter experts on the day's topic and communicate with them through phone, email ([gyandhara@ignou.ac.in](mailto:gyandhara@ignou.ac.in)), and chat mode.

## **Swayam**

SWAYAM is a government-sponsored initiative that aims to uphold the three guiding principles of Indian education policy—access, equity, and excellence. The goal of this initiative is to make the greatest teaching and learning tools available to everyone, including the most disadvantaged. SWAYAM aims to close the digital gap for students who, up until now, have not experienced the digital revolution and are unable to participate in the knowledge economy. SWAYAM offers online certification programs in a range of areas, with tests offered each semester in either computer-based or hybrid formats—that is, CBT and paper and pen.

## **Swayam Prabha**

The SWAYAM PRABHA is a collection of 22 DTH channels that use the GSAT-15 satellite to continuously broadcast high-quality educational pro-

gramming. The students may pick when they want to learn new material each day for at least four hours, which will then be repeated five more times during the day. The channels are uplinked from Gandhinagar's BISAG-N facility. The NPTEL, IITs, UGC, CEC, and IGNOU all contributed to the content. The online portal is maintained by the INFLIBNET Centre.

## **THE FOLLOWING TOPICS MUST BE COVERED BY DTH CHANNELS**

Higher Education: Curriculum-based course materials at the undergraduate and graduate levels that span a variety of subject areas, including the humanities, social sciences, and sciences of commerce, as well as law, medicine, agriculture, and engineering. All courses would be offered in-depth through SWAYAM, the platform being built for offering MOOCs courses, and all courses would be certification-ready.

DTH School education (9–12 levels): modules for teacher education as well as teaching and learning resources for Indian children to help them comprehend the subjects more clearly as well as to aid in their preparation for entrance exams for professional degree programs. courses that are curriculum-based and may be taken both in India and abroad by Indian people who are lifelong learners. Help kids (in classes 11 and 12) get ready for competitive examinations. (Swayam Prabha | 34 DTH Channels | India, n.d.)

### **E-Adhyayan**

A portal called (e-Books) offers more than 700 e-Books for post-graduate courses. Every single e-Book is a product of e-PG Pathshala courses. It also makes it easier to playback videos. (E-Adhyayan | Books for PG Courses, n.d.)

### **E-Pathya**

One of the verticals of e-PG Pathshala, a software-driven course/content package that supports students pursuing higher education (PG level) in both campus-based and remote learning modes, is (Offline Access). It also makes offline access possible. (E-PGPathshala, n.d.)

### **National Digital Library of India (NDLI)**

(<https://ndli.iitkgp.ac.in/>) is a library of electronic information covering a variety of subjects for users of various backgrounds, including students (of all levels), instructors, researchers, librarians, library users, professionals, users with disabilities, and all other lifelong learners. At the Indian Institute of Technology at Kharagpur, it is being developed. It is intended to assist students in getting ready for entrance and competitive exams, to let individuals learn from and get ready for the best practices from all over the world, and to make it easier for researchers to conduct interconnected research from many sources. It is a digital library of educational materials with a single-window search function. (National Digital Library of India, n.d.)

### **E-Yantra**

The website (<https://www.e-yantra.org/>) offers practical training in embedded systems. It has helped more than 2300 colleges and has roughly 380 labs. (E-Yantra Robotics Competition 2022-23, n.d.)

### **Fossee**

Free/Libre and Open Source Software for Education, often known as (<https://fossee.in/>), was created to promote open source software for both professional and educational usage. (FOSSEE, n.d.)

### **Virtual Labs**

Web-enabled curriculum-based experiments created for remote operation

have been created by (<http://www.vlab.co.in/>). It offers more than 100 Virtual Labs with more than 700 web-enabled experiments that are made for remote use. It offers remote access to labs for a number of science and engineering areas. Undergraduate, graduate, postdoctoral, and research researchers are all served by these virtual labs. (Virtual Labs, n.d.)

## **E-Shodhsindhu**

A collection of e-journals, e-journal archives, and e-books with long-term access are available at (<https://ess.inflibnet.ac.in/>). It has about 31.35,000 e-books and 10,000+ e-journals. Academic institutions can access high-quality electronic resources, such as full-text, bibliographic, and factual databases, for a discounted subscription fee. (E-ShodhSindhu: Consortium for Higher Education Electronics, n.d.)

## **ShodhGanga**

Research students can upload their Ph.D. theses on this website (<https://shodhganga.inflibnet.ac.in/>) and make them open access to the whole academic community. The repository may collect, index, store, share, and preserve electronic theses and dissertations that scholars have submitted. (Shodhganga : A Reservoir of Indian Theses @ INFLIBNET, n.d.)

## **Vidwan**

A renowned database and national research network called (<https://vidwan.inflibnet.ac.in/>) contains profiles of scientists, researchers, and other faculty members who work at top universities and other R&D organizations in India. (Vidwan | Profile Page, n.d.)

## **National Educational Alliance for Technology (NEAT)**

The Government (via its implementing body AICTE) and the Educa-

tion Technology businesses of India have joined forces in an effort called NEAT to train students on the newest technology. For the convenience of students, it unifies the top technology tools in educational pedagogy on a single platform. (NEAT, n.d.)

## **Sakshat**

(<https://sakshat.ac.in/>) is one Stop Education Portal for addressing all the education and learning-related needs of students, scholars, teachers, and lifelong learners. The portal provides the latest news, press releases, achievements, etc related to the Ministry of HRD. So one can visit SAKSHAT to know the world of online learning. (Department of Higher Education | Government of India, Ministry of Education, n.d.)

## **CONCLUSION**

The varied effects of Covid-19 on higher education in India have been described in this paper. The current pandemic provided a chance for pedagogical techniques to alter and for the introduction of virtual education at all educational levels. The current dilemma calls for a gradual shift towards online/virtual schooling since we are unsure how long the epidemic scenario will last. Numerous virtual platforms with online repositories, e-books, and other online teaching and learning resources have been launched by MHRD and UGC. Better accessibility and flexibility for education would result from combining traditional mediums (radio, TV, landlines) with mobile/web technologies on a single platform with all depositories. To do this, the service platform would need to be upgraded in order to support the level of educational demands placed on students. To properly grant the underprivileged sectors of the population access to educational service platforms, all service providers must be mobilized. Due to the Covid-19 pandemic, virtual schooling is currently the most popular type of instruction. Education after



Covid-19 appears to be a generally acknowledged online/virtual education, which may perhaps constitute a parallel educational system. To do this, the service platform would need to be upgraded in order to support the level of educational demands placed on students. To properly grant the underprivileged sectors of the population access to educational service platforms, all service providers must be mobilized. Due to the Covid-19 pandemic, virtual schooling is currently the most popular type of instruction. Education after Covid-19 appears to be a generally acknowledged online/virtual education, which may perhaps constitute a parallel educational system. Although the influence of COVID-19 on higher education has not been statistically analyzed in this report, further thorough investigation using statistical research may still be done.

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# CHAPTER | 20

## TWENTY

### **Digital Education – An Initiative of Indian Government**

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# INTRODUCTION

## **Digital India:**

The government of India announced the “Digital India” flagship program in July 2015 with the goal of enhancing online infrastructure and expanding citizen access to high-speed internet networks in rural and distant locations.

## **Digital Education:**

“Digital education” is a method or approach to education that makes use of technology and electronic devices. The goal of the Digital India program, which includes this initiative, is to offer top-notch, free education online in the form of video lectures, audio lectures, and downloadable PDF materials.

It is clear that Primary, Secondary and Higher education in India is increasingly utilizing ICT, Cloud Computing, Artificial Intelligence, and Virtual Reality in daily operations. The Indian government has emphasized a number of complex ICT applications in a push to restore about revolutionary changes, one of which is the Revitalizing Infrastructure and Systems in Education (RISE) initiative. The government is promoting the use of tools like virtual labs, VR-enabled classrooms, or curated online information for both students and instructors, in addition to technology-enabled programs or platforms like SWAYAM (for teacher education).

## **Aim of Digital Education:**

In order to improve students’ conceptual clarity and creativity, digital education aims to expand accessibility, affordability, practicality, and productive education among students by utilizing digital tools, gadgets, and technology during teaching and learning. Teachers can develop engaging learning opportunities in their classrooms by exploring digital technology, especial-

ly partially or entirely online courses and programs. India's education and knowledge-acquisition systems of the future will be based on the usage of technology and digital gadgets.

The Indian government has set up a number of channels to distribute tools and materials widely so that everyone in India has access to free education. The present chapter contains further details about the government's programs and avenues for online learning in India.

For students enrolled in academic institutions, the Ministry of Education 'MoE' formerly the 'MHRD' has made some notable strides in the field of digital education.

1. On May 17, 2020, PM eVidya, a large effort, was unveiled with the intention of combining all initiatives related to virtual forms of education in order to promote equitable, cost-free, and simple access to high-quality education.
2. Nearly 25 crore youngsters in the country who attend school are expected to profit from it.
3. The MHRD's DIKSHA program is one of its most significant efforts.

## **“DIGITAL INFRASTRUCTURE FOR KNOWLEDGE SHARING” (DIKSHA): ONLINE EDUCATION**

For Indian primary, secondary, and higher secondary education, “DIKSHA” is a “one nation; one digital platform” that is a part of the “PM eVidya” program, which was introduced as part of the “AtmaNirbhar Bharat” campaign.

The Government of India began this nationwide educational digital program in 2017 for children in classes 1 through 12. You can use a mobile application or a web interface to access this program.

## **What Does DIKSHA (Digital Infrastructure for Knowledge Sharing) Include?**

- Teachers' courses, tests, and other things
- There will be a tone of curriculum-aligned digital materials available. With the aid of Energized Textbooks (ETBs), which have QR codes.

## **The Swayamprabha TV Channels**

- People without access to school should pursue this form of education.
- Televised are excellent educational programs.
- To meet the criteria, a total of 32 channels are available.
- Higher education and public education are delivered through several channels.
- To increase the viewership of these channels, the "Department of School Education and Literacy" has worked with both private and public DTH providers to broadcast instructional video programming.

## **"E-textbooks"**

- Through the "e-Pathshala" web site and mobile application, "E-textbooks" are simple to access.
- It will also be available for use by parents, teachers, and students.
- There are 3,500 pieces of NCERT audio and video information accessible.
- Textbooks are also offered in a variety of languages, including English, Sanskrit, Urdu, and Hindi as well as in folk languages too.

## **Regarding "Person with Disabilities"**

- One DTH channel with sign languages is accessible for pupils who have hearing impairments.
- For those who are blind or deaf, study materials have been created in the Digitally Accessible Information System (DAISY).

## **Radio broadcasting**

- The radio programs' main goal is to get students actively engaged in their learning through activities.
- The content for the “National Institute of Open Learning” program is being broadcast on more than 280 radio channels.
- For pupils who live in rural areas, this kind of instruction is especially beneficial.
- The “CBSE” produces a podcast series dubbed “Shiksha Vani.”
- Students in the 12th through the 9th grades use digital platform Shiksha Vani.
- In Shiksha Vani, there are more than 430 audio files for every topic from grade 1 to 12.

Another initiative undertaken by the Ministry of Education to improve accessibility, affordability, and feasibility of learning for students pursuing higher education.

These are online resources that higher education students can use in their free time to get high-quality content whenever they desire. It also emphasizes learning outside of the traditional classroom; anyone who wants to pursue their higher education through a digital platform can do so through some of the available digital platforms for learning.

By 2030, there will be over 140 million college-bound students in India, making it one of the world's youngest nations. Every fourth graduate student in the globe will be an Indian who attended Indian high-

er education. Because of this, India recently put into action a number of long-awaited and concrete transformational initiatives to genuinely transform higher education.

About thirty Virtual Platform for Higher Education have been launched by the Indian government.

Here is an overview of Indian higher education's digital initiatives:

**Ariia:** All of Leading Indian Higher education institutions are ranked according to metrics related to the “Development of Innovation and Entrepreneurship” among professors and students as part of an MHRD project called ARIIA.

**Arpit:** The “MHRD” formally launched the “Online Annual Refresher Program in Teaching” in 2018, a substantial and innovative program of online professional development for fifteen lakh higher education professionals using the “MOOCs” platform “SWAYAM.” Discipline-specific National Resource Centers (NRCs) have been established to implement redesigned curricula based on pedagogical advancements and methodologies. The online training materials that these NRCs provide will be centered on the most recent advancements in the field.

**Ask a Question:** Dedicated academics from IIT Bombay answer to questions posted by students from scientific and engineering institutes on this one-of-a-kind website called Ask a Question. Online or in real-time interactive sessions, questions can be asked.

**BAADAL:** It's an MHRD project that was developed as an NME-ICT cloud for educational uses. It is software for managing virtualization and cloud orchestration that was created and is maintained by IIT Delhi under the NMECT program of the MHRD.



**Campus Connectivity:** NMEICT has authorized the establishment of one GBPS connection to universities and twenty 512 Kbps broadband connections to colleges.

**e-Adhayayan:** “e-Adhayayan” is a site that provides more than 700 “e-Books” for P.G. courses. The complete library of “e-Books” is comprised of lessons from “e-PG Pathshala.” Additionally, it can create video content.

**e-PG PATHSHALA:** “e-PG Pathshala” is an initiative of the ‘Ministry of Education’ that the UGC is doing out as a part of its NME-ICT program. In seventy subjects spanning all of the humanities, linguistics, and languages, subject specialists working in Indian institutions have created the best quality, coursework interactive e-content.

**e-Acharya:** A completely incorporated e-content gateway is “e-Acharya”. It houses all of the NME-sponsored ICT’s and generated electronic content projects. Through various Indian colleges, universities, and institutes, more than 70 e-content projects are being generated or are in the process of being established under NME-ICT.

**e-Kalpa:** The “e-Kalpa” MHRD/NMCEICT initiative provides a digital learning atmosphere for innovation in India and has demonstrated the effectiveness of the major feats: Create an online learning curriculum with digital content, Various Digital Design Resources The database includes information about the craft industry.

**e-SodhSindhu:** Thanks to the e-Sodh Sindhu program, all higher education institutions now have accessibility with around 15,000 international E-journals and ebooks.

**e-Vidwan:** The ‘INFLIBNET’ Center launched “Vidwan: Expert Da-

tabase and National Researcher's Network" program through funding from NMEICT.

**e-YANTRA:** By incorporating robotics into engineering instruction, the e-Yantra platform enables students to apply engineering, computer science, and mathematical principles practically. Currently, 100 colleges are using e-Yantra. Through the establishment of lab facilities for project-based learning and the training of instructors, e-Yantra is enhancing skill development at these 100 engineering colleges.

**Fossee:** The FOSSEE project, sponsored by IIT Bombay, promotes the use of mainstream applications in educational institutions. It accomplishes this by offering instructional resources like spoken lessons, documents like textbook supplements, and documentation, as well as awareness initiatives like conferences, training seminars, and internships.

**Gian:** A government-approved program called GIAN, or the "Global Initiative of Academic Networks," aims to tap into the global skilled workforce of researchers and startups to foster their interaction with Indian colleges and universities in order to supplement the country's current educational assets, speed up the speed of excellence systemic change, and uplift the India's intellectual and technological ability to a level of comparative excellence on the global stage.

**Imprint:** In order to enable, empower, and inspire India to achieve inclusive growth and self-reliance, all IITs and IISCs work together to address the biggest concerns in scientific and engineering difficulties. The first of its kind, IMPRINT stands for "Impacting Research, Innovation, and Technology". This ground-breaking effort aims to provide new technical education guidelines as well as a strategy for tackling engineering problems.

**Nad:** The ‘National Academic Depository’ concept was developed in an effort to establish an online archive for all academic honors. The NAD, a 24-hour online archive, is home to all expected educational, such certificate, diploma, degree, mark sheet, and so on, that have been entirely digitalized and uploaded by higher education institutions, boards, and concerned assessment authorities.

**Ndli:** The “National Digital Library Initiative” is a library that holds data on electronic content such as thesis, books, articles, movies, audios, and other educational materials useful to users with different educational backgrounds and skills. For accessing both currently accessible digital resources in India and other digital sources, it provides a unified search tool.

**Nirf:** A mechanism for classifying organizations all around the nation is outlined in the NIRF (National Institutional Ranking Framework). The following factors form the basis of the rating methodology: Some of the subjects covered include outreach and inclusivity, graduation outcomes, classroom education and materials, research and organizational practices, and perspective.

**Nishtha:** NISHTHA –An Integrated Teacher Training Portal and Mobile App.

**Oscar:** Learning objects, a collection of interactive internet graphics and experiments, are kept at OSCAR “Open Source Courseware Animations Repository”. These instructional materials provide college-level engineering and scientific courses in addition to elementary math and physics. These learning tools are available for both educators and learners to browse, utilize, and download.

**Nroer:** The Ministry of HRD created the great NROER program, which has 14527 e-learning resources and almost 16000 registered users.

**Shakshat:** In order to support the idea of lifelong learning for those who are employed, students, and teachers to gain knowledge for free, this portal was developed. The ‘National Institute of Open Schooling’ University of Delhi, Kendriya Vidyalaya Sangathan, Navodaya Vidyalaya Sangathan, IGNOU, and ‘National Council for Educational Research and Training’ all contributed to the creation of the materials.

**ShodhGanga:** An online library for Indian electronic theses and dissertations is called Shodh Ganga. It opens up Indian “theses and dissertations” to the global educational public.

**ShodhGangotri:** All researchers and research supervisors of academies are needed to submit their allowed synopses in electronic form on this e-platform in order to register for the Ph.D. program.

**Spoken Tutorial:** With the aid of this initiative, anyone can independently learn how to use various Complimentary and Web Apps Software programs. This self-paced, multilingual course is available to anybody with a computer and a willingness to study from any place as per their convenience time and in any language of their choice. Speaking tutorials do not require the use of the Internet.

**Swayam:** The SWAYAM interactive learning platform was created by the MHRD, NPTEL, IIT Madras, and Persistent Systems Ltd for digital education.

## THE FUTURE OF DIGITAL EDUCATION IN INDIA

1. To address the multiplicity of Indian languages, producing excellent

internet content in local tongues.

2. The inclusion of courses for skillfulness, online labs, and online occupational training.
3. Making Online and Digital Education Policies to Close the Digital Divide
4. creating digital classrooms by integrating technological systems with educational ones.
5. Emerging an evaluation system for the period of online learning.
6. maintaining a consistent user experience by offering multi-mode access to quality education via mobile apps, internet, TV networks, radio, and audio.
7. The emphasis will be on growing mobile phone usage in order to offer “anytime, anywhere” access and enhance penetration.
8. All students in schools should have full access to e-content and e-infrastructure at all times; yet, e-content is being generated with significantly varied priorities
9. E-learning resources will be taught to teachers.

## **THE BENEFITS OF DIGITAL EDUCATION IN INDIA**

During the 2019–20 academic year, students in India only attended digital schools while the COVID–19 pandemic spread throughout the entire world. A discussion of a few more advantages of digital education in India is provided below:

Students can now acquire not just academic information but also practical and technological understanding thanks to this effort. The locations where students can learn or study are unrestricted. A learner can take part in online classes or other learning activities through web-based learning at any time and from any location. Due to the availability of online study materials, students can take their time learning any subject. Learning may be made more

dynamic and entertaining for both students and teachers through the usage of digital education.

### India’s Digital Education Challenges

For students across the nation to have access to digital education, the government will need to undertake a number of technological changes. Some of the main issues with digital education in India include the following:

- Universal internet connection is one of the most crucial prerequisites for digital education. For simple information access, the government will need to do this.
- Another difficulty is ensuring that those from socioeconomically disadvantaged backgrounds have access to technology and equipment so they can benefit from schooling.
- Teachers can only run digital classrooms when they possess the necessary technological skills. The government should place a high priority on lowering the cost of digitization.
- To guarantee that public colleges and universities have enough digital classroom infrastructure.

The government aims to make online or e-learning for students widely accepted by 2020 through a number of initiatives launched under the COVID-19 paradigm for the growth and dissemination of Digital Education in India.

WORD	ABBREVIATION
ICT	Information And Communication Technology
SWAYAM	Study Webs of Active-Learning For Young Aspiring Minds

MOOCS	Massive Open Online Courses
DIKSHA	Digital Infrastructure For Knowledge Sharing
MHRD	Ministry Of Human Resource Development
MoE	Ministry Of Education
DAISY	Digitally Accessible Information System
CBSE	Central Board of Secondary Education
ARPTT	Annual Refresher Program In Teaching
ARIIA	Atal Ranking of Institutions On Innovation Achievements
FUSSEE	The Free and Open Source Software for Education
RISE	Revitalizing Infrastructure And Systems In Education
NDL	National Digital Library
NDLI	National Digital Library Of India
NAD	National Academic Depository
INFLIBNET	Information And Library Network
GIAN	Global Initiative Of Academic Networks
IMPRINT	Impacting Research The Innovation And Technology
NIRF	National Institutional Ranking Framework
OSCAR	Open Source Courseware Animations Repository
NIOS	National Institute Of Open Schooling
NCERT	National Council for Educational Research And Training
NVS	NavodayaVidyalayaSangathan
KVS	KendriyaVidyalayaSangathan

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yantra.org/

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# CHAPTER | 21

## TWENTY ONE

### **E-Governance: A Review**

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*Governments around the world tell us that to interoperate effectively they need a more structured approach to building information technology (IT) systems. Deploying an e-Government Strategy will help governments improve productivity and service delivery through seamless interoperability--as well as dramatically help cut costs.*

-Bill Gates

## INTRODUCTION

Governance is “the exercise of Economic, Political and Administrative authority to manage a country’s affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences<sup>78</sup>. Governance is about the culture and institutional environment in which citizens and stakeholders interact among themselves and participate in public affairs.

The concept of e-governance emerged with the emergence of the internet. The internet has brought many changes in our life, the first change is social media, the second is e-commerce and the third change is e-governance. In simple words, e-governance means providing the service of the government to the citizen with the help of the internet. Today we are enjoying many government services because of e-governance like feeling the online form, applying for different schemes and paying electricity bills, water bills etc sitting at your home. E-governance makes the life of people easy and getting government services easily accessible. We can say that e-governance is the revolution in the field of good governance.

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78 Source: <https://www.parlicentre.org/about-us/area-expertise/governance> Accessed on June 16, 2022)

E-Governance has been made up of two words e and Governance where stands for Electronic and Governance means to govern, to govern the system by electronic means is known as e-governance, where electronic means include the internet and its different types. E-governance carries out the functions of governance through the utilization of Information communication and technology.

## **E-GOVERNANCE IS A SMART GOVERNANCE**

E-governance is also known as SMART governance. The process of utilizing modern technologies and ICT to ensure a collaborative, transparent, participatory, communication-based and sustainable environment for citizens and governments<sup>79</sup>.

E-governance in its true sense means the application of Information and Communication Technology to government functioning to create 'Simple, Moral, Accountable, Responsive, and Transparent (SMART) governance.

**S-Simple:** The use of Information and Communication Technology brings simplicity to governance through online service delivery. e.g., online ticket booking, online submission of documents etc.

**M-Moral:** E-governance is moral. It reduces the moral hazard of no response or delayed response to public grievance or request.

**A-Accountable:** It makes government agencies accountable.

**R-Responsive:** It makes government agencies accountable and responsive because of non-compliance. It is easy to detect noncompliance and fix answerability, therefore, the response time of such services is very fast.

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79 Source: <https://www.igi-global.com/dictionary/do-smart-city-solutions-contribute-to-the-achievement-of-the-sustainable-development-goals/58493> (Accessed on June 18, 2022)

**T-Transparent:** Online availability of the information makes government functioning transparent. Therefore, it is rightly said that E-governance is SMART governance.

## DEFINITIONS OF E-GOVERNANCE

UNESCO defines e-Governance as

“Governance refers to the exercise of political, economic and administrative authority in the management of a country’s affairs, including citizens’ articulation of their interests and exercise of their legal rights and obligations. E-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.<sup>80</sup>”

According to Harnon, 1992 “E-Government is “simply using information technology to deliver government services directly to the customer 24\*7”<sup>81</sup>

David L. McClure stated that the electronic government refers to the government’s use of technology, particularly web-based internet applications to enhance the access to and delivery of government information and services to citizens, business partners, employees, other agencies and government entities<sup>82</sup>.

“E-Government” refers to the use by government agencies of information

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80 Source: <http> (Accessed on June 19, 2022)

81 Baum, C. and A. Di Maio, 2000. Gartner’s four phases of e-government model. <http://www.gartner.com/DisplayDocument?id=317292>.

82 David L. McClure, “ELECTRONIC GOVERNMENT Challenges Must Be Addressed With Effective Leadership and Management” available at <https://www.gao.gov/assets/gao-01-959t.pdf>

technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions<sup>83</sup>.

Dr APJ Abdul Kalam, former President of India, has visualized e-Governance in the Indian context to mean: “A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen<sup>84</sup>.”

Gartner Group’s definition: “the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet and new media.”

“E-governance is the application of information & communication technologies to transform the efficiency, effectiveness, transparency and accountability of informational & transactional exchanges within government, between govt. & govt. agencies of National, State, Municipal & Local levels, citizen & businesses, and to empower citizens through access & use of information”. In other words, e-Governance is the implementation and delivery of government services through information communication technology to provide Transparent, Effective, Efficient, Responsive and Ac-

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83 Source: <http://go.worldbank.org/M1JHE0Z280> (Accessed on June 18, 2022)

84 Dr. APJ Abdul Kalam, *Citizen centric e-Governance: Technology and Management policy*, International Conference on e-Governance, Held on (IIT Delhi, 18 December 2003) available at <https://egovindia.wordpress.com/2006/06/21/president-of-india-e-governance-iceg-2003-iit-delhi-18-december-2003/>

countable governance to society<sup>85</sup>.

Good governance has eight major characteristics i.e. Participation, Transparency, Effectiveness and Efficiency, Responsiveness, Accountability, Equity and inclusiveness, and Rule of Law, for the effective and efficient governance

## BACKGROUND

E-Governance started in America in 1969. In 1969, the precursor to the Internet began with the U.S. Defence Department's ARPAnet (Advanced Research Projects Agency Network). With the help of ARPAnet US Department of defence connected the computer via a local area network<sup>86</sup>.

E-governance in India originated during the 1970s for elections, census, text administration etc. In 1970 the department of electronics was established in India to oversee all aspects of electronics, including computers. Afterwards, in 1976 National Information Centre was established to provide technology-driven solutions to Central and State Governments. It was one of the biggest steps in the development of e-governance in India<sup>87</sup>.

The main push for e-Governance was provided by the launching of the National Information Centre network (NICNET) in 1987 – the national satellite-based computer network. Through NICNET, NIC has been steering e-Governance applications in Government Ministries/ Departments at the Centre, States, Districts and Block level facilitating improvement in

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85 Sanjay Kumar Dwivedi & Ajay Kumar Bharati, "E-GOVERNANCE IN INDIA – PROBLEMS AND ACCEPTABILITY" *Journal of Theoretical and Applied Information Technology* 37-43 (2010)

86 A Brief History of NSF and the Internet available at: [https://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=103050](https://www.nsf.gov/news/news_summ.jsp?cntn_id=103050)

87 Source: <https://www.nic.in/mandate/>

Government services, wider transparency, promoting decentralized planning and management, resulting in better efficiency and accountability to the people of India.<sup>88</sup> NICNET was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country for which free hardware and software were offered to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990. In the ensuing years, with ongoing computerization, Tele connectivity and internet connectivity established a large number of e-Governance initiatives, both at the Union and State levels.

In 1999 the Ministry of Information Technology was set up by merging it with the ministry of communication. The vision of the ministry was to promote e-Governance for empowering citizens, promoting the inclusive and sustainable growth of the Electronics, IT & ITeS industries, enhancing India's role in Internet Governance, and adopting a multipronged approach that includes the development of human resources, promoting R&D and innovation, enhancing efficiency through digital services and ensuring secure cyberspace<sup>89</sup>.

On June 9, 2000 Information technology act 2000 was enforced in India and after that National Institute for Smart government was set up in Hyderabad in 2002 for promoting e-governance.

The National E-governance plan was started by the government of India on 18<sup>th</sup> May 2006 comprising 27 Mission mode projects and 8 components. The National e-Governance Plan (NeGP), takes a holistic view of e-Governance initiatives across the country, integrating them into a collective

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88 Source: <https://www.nic.in/servicecontents/nicnet/>

89 Source: <https://www.meity.gov.in/about-meity/vision-mission>



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<sup>90</sup>.

In 2006 the concept of the Common Service Centre was started and these are considered the basis of e-governance in India because 70% of India's population are living in rural areas and providing e-services to the villages was the biggest task for the government, then the government opened a Common Service Centre in every village. A policy was made for this in 2006 and in 2009 it started working at the ground level. The common service centres are the means by which government can reach the people, especially the people who live in the villages.

In 2015 Government of India tried to boost the e-governance system by starting the Digital India flagship programme with a vision to transform India into a digitally empowered society<sup>91</sup>. In 2016 Ministry of Electronics and Information Technology was carved from the ministry of communication to boost e-governance in India.

## OBJECTIVES OF E-GOVERNANCE

- Better service delivery to citizens.
- Ushering in transparency and accountability.
- Empowering people through information.

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90 Source: <https://www.meity.gov.in/divisions/national-e-governance-plan>

91 Source: <https://csc.gov.in/digitalIndia#:~:text=Digital%20India%20is%20a%20flagship,Prime%20Minister%20Shri%20Narendra%20Modi.>

- Improve efficiency within government i.e., between centre-state or inter-state.
- Improve interface between business and industry.

## STAGES OF E-GOVERNANCE

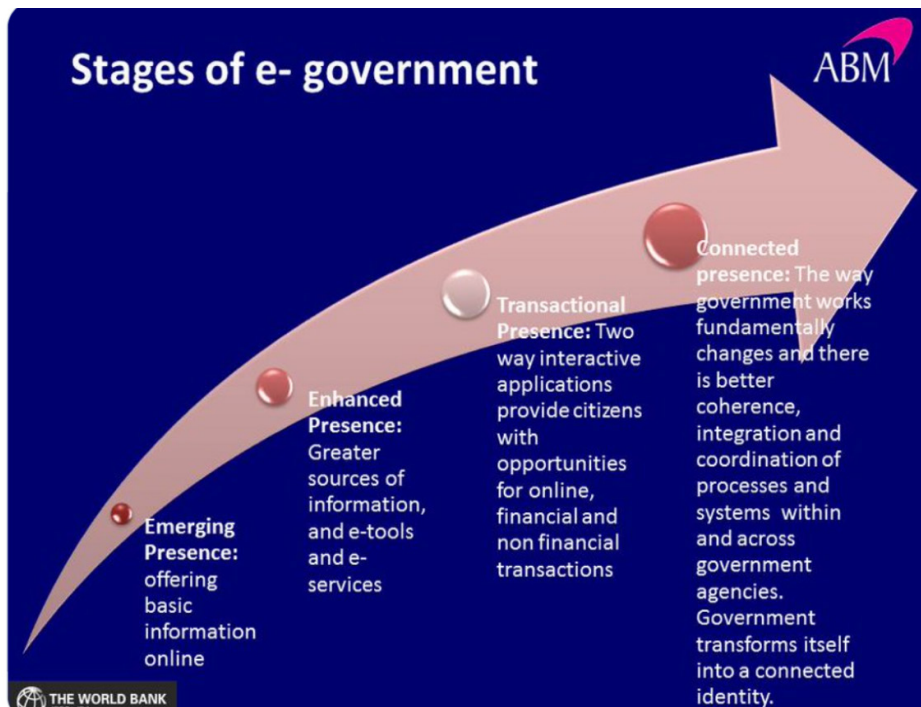
There are originally four steps in e-governance and these stages are discussed below

**Emerging Presence:** This is the first stage in which the government tried to provide and offer the basic infrastructure or amenities to their stakeholders and citizens. Like Providing computers in all offices of the government and opening a common service centre for those people who are not able to buy on their own.

**Enhanced Presence:** At this stage government work on interconnecting the computers or resources with each other and when we do the work of interconnecting computers in a big country like India, this work is possible only through the internet. These types of initiatives are designed to help the customer avoid a trip to an office or make a phone call by making commonly requested information and forms available around the clock. These resources may include instructions for obtaining services, downloadable forms to be printed and mailed back to an agency, or perhaps e-mail contact to respond to simple questions<sup>92</sup>.

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92 Jeffrey W. Seifert(2003), A Primer on E-Government: Sectors, Stages, Opportunities, and Challenges of Online Governance, available at <https://sgp.fas.org/crs/RL31057.pdf>



Source: The World Bank

**Transactional Presence:** At this stage, Government websites act as a portal to connect users and service providers and the interaction takes place at a more sophisticated level. They enable clients to complete entire tasks electronically at any time of the day or night. These initiatives effectively create self-service operations for tasks such as license renewals, paying taxes and fees, and submitting bids for procurement contracts. Although the level of interactivity is of a higher magnitude than second-stage initiatives, the activities still involve a flow of information that is primarily one-way<sup>15</sup>.

**Connected Presence:** The highest order of evolution for e-government initiatives is transformation. Initiatives at this level utilize the full capabilities of the technology to transform how government functions are conceived, organized, and executed. Such initiatives would have the robust custom-

er relationship management capabilities required to handle a full range of questions, problems, and needs<sup>15</sup>.

## **TYPES OF GOVERNMENT INTERACTION IN E-GOVERNANCE**

There are four types of e-governance

**Government to Government (G2G):** G2G means the exchange of information and services between the government to government through the internet. Pragati is the most suitable example for G2G e-governance. It is an online platform of the government of India, where the government checks whether the schemes which were being run by the central government are being implemented properly or not.

**Government to Citizen(G2C):** It is the most important type of e-governance which we generally use. When the government provide its services to the citizens, it is called Government to citizen e-governance. Mygovt.in the perfect example of G2C e-governance. SWAYAM is another example of Government to Citizen e-governance in which government provides the educational content to the students.

**Government to Business (G2B):** When the government provides the facilities to the people who are doing business or to promote business, it is called G2B e-governance. The GST portal is a great example of G2B e-governance.

**Government to Employees (G2E):** It is an online platform that the government creates to facilitate their employees. G2E provides online facilities to the employees like applying for leave, reviewing salary payment records, and checking the balance of the holidays. E Mitra, E Seva projects etc are some examples of G2E e-governance.

# CHAPTER | 22

## TWENTY TWO

### **Local Self-Government in India: Tradition and Challenges**

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Conceptually, while local government can be regarded as the offspring of administrative decentralization, local self-government is the manifestation of political decentralization the significance of which received a lot of attention in the 19<sup>th</sup> century. The constitutionalisation of the local governance has changed the legal status of the Panchayati Raj system. Panchayati Raj is no longer an idea but a practice. The constitutional provisions have laid the foundation stone of local government the superstructures of which have to be built up for which what is urgently needed is spontaneous initiative on the part of the people. There is some ray of hope following the rise and growth of the civil society organization in India working for democratization of governance.

The concept of local government as we understand it today, gathered momentum in Europe in the first half of the 19<sup>th</sup> Century when inadequacies of the existing democratic government came to light, thanks to the contribution of the enlightened scholars and activists. The liberal school of thought felt that the institutions of local government need to be developed primarily for effecting improvement in administration, ensuring participation of the citizens in the processes of government, protecting individual liberty and training the citizens in the art of the democratic government. For Tocqueville town meetings are to liberty what primary schools are to science; they bring it within the people's reach, they teach how to use and how to enjoy. John Stuart Mill stressed the educative function of the local government for securing two benefits to the nation; provision of a democratic training ground for the 19<sup>th</sup> Century town and country gentlemen in the local bodies some of whom might eventually be called upon to perform duties of national importance in Parliament and education for the broader electorate in the complicated task of exercising choices in matters of elections of representatives and allocation of resources. Bryce concurrence with Mill in the virtues of local government institutions resulting from division of la-

bor, political education and community of interests local institutions, he felt train men not only to work for others but also work effectively with others. Bentham's vision of sub-legislating constituting a nursery for the supreme legislative body, a school of appropriate attitude, in all its branches for the business of legislation may be referred to in this connection. Broadly speaking, local government may be regarded as a contrivance of human wisdom primarily to protect and expand the base of democracy and ....institutional device for improving the functioning of democracy.

## **THE TRADITION OF LOCAL GOVERNANCE IN INDIA**

The self-governing village communities had however, existed in India from the earliest times as is evident from their reference to the Rig Veda the origin of which can be traced back to 1200 BC. The village sabhas(village assemblies) and Gramins (senior persons of the village) used .....act as links between the villagers and the higher authorities. In course of time these village bodies came to be known as the panchayats which remained unchanged even during mediaeval and Mughal period despite the fact their judicial powers were reduced.

## **THE COLONIAL PERSPECTIVE OF LOCAL GOVERNANCE**

The administrative system in India broke down almost completely on the eve of the colonial rule. This was why the colonial government had to pass through "long and weary experiments in order to develop a sound administrative system".It was in the last phase of the rule of the East India Company and in the period immediately following the establishment of the direct rule of the Crown that consideration was paid, though in small scale, to the supply of the services like health, sanitation, education.... roads and the like. This need was highlighted by the Report of the Royal Army Sanitation, 1863. It was also realised that the imperial finances were under strain due to

the effects produced by the revolt of 1857-58. It may be recalled that the Finance Member of the Government of India. Charter Treveleyan (1864) had focused on it and it was repeated in the Resolution of Lord Mayo in 1870 in which decentralisation of powers was looked as a tool for administrative efficiency and raising resources “with a view to meeting growing needs of the country”.

The Sepay Mutiny caused a significant shift in the political perspective of the colonial rulers. Andrew Laing, member (Finance) of the Viceroy’s Council observed that the revolt of 1857 had put imperial finances under considerable strain and it was necessary to finance local services out of local taxation. They experienced and realized the inadequacy of the centralized system of governance and felt the need for some institutional arrangement at the local level to raise money for replenishing the colonial exchequer and to deal with the antagonism and resistance against the colonial rule.

The other important compulsions included fuller political and economic integration, need for building reliable information system extending right up to the villages because even after the Sepay Mutiny there were sporadic peasant movements throughout the country and the need for recruiting new set of collaborators in the countryside apart from the existing zamindars. These collaborators represented big intermediaries, traders-cum-merchants and moneylenders who were becoming economically strong due to commercialization of agriculture. Their strength grew further following their being a part of the local governance system.

It was around this time that Andrew Laing eulogized the spirit of local self-governance and India’s village communities including panchayats. Lord Lawrence, another member of the Viceroy’s Council, came out with resolutions emphasizing that Indians are capable of governing their local affairs



themselves and the village communities were the most abiding of India's institutions. They suggested that local services should be financed out of local taxes. Lord Mayo's Resolution of 1874 led to the birth of local self-government in the villages primarily to harness local interest, supervision and care for the management of funds devoted to education, sanitation, medical charity and public works.

Ripon was an ardent and *crudit * reformer of local governance in India. He was the first to suggest that it was not primarily for effecting improvement in administration that local government has to be promoted. He argued in his famous resolutions which is regarded as the *Magna Carta* of the local democracy in India, that political education and administrative efficiency needed to be put into the perspective. He stressed the need of democratisation by suggesting that all boards should contain two-thirds majority of non-officials; these should be elected wherever possible. He wanted that the chairpersons of all local boards should be non-officials, wherever possible. Ripon was no doctrinaire disciple of ballot box. He was interested in reviving and extending the indigenous system and to making "full use of what remains of the village system". The most remarkable innovation proposed by Ripon was the establishment of a network of rural local bodies – six years before there were any such Councils in England." Ripon's proposals were given warm welcome by that stratum of society which was active in politics, namely, S.N. Banerjea, G.K. Gokhale. But he was unsuccessful in implementing his scheme. The District Boards met very infrequently. The landlord-members did not attend the meetings as they could not follow the unfamiliar procedure. A small group of lawyers could follow but they were not allowed to speak.

The Royal Commission on Decentralisation (1907) recommended the constitution and development of village panchayats for the administration of

the village affairs. But as in the case of the Ripon's resolution, the recommendations of the Royal Commission of Decentralisation remained on paper for which the Indian National Congress blamed the "inefficient bureaucracy". Against this backdrop came the Montague-Chelmsford Reforms Act of 1919 in terms of which local government became a transferred subject. Although it meant transfer of the local government to the hands of the Indian ministers in the provinces local government could not emerge as democratic and vibrant instruments of self-government at the village level. Till about 1920 local bodies were practically consultative bodies set up by the provincial governments to help them in administering local affairs. The concept of local government as the agent of the higher-level government practised by the colonial rulers remained the guiding premise of local governance in colonial India. Democratisation process which was sought to be unleashed by Lord Ripon, did not blossom fully.

The so-called democratisation was very limited because the franchise was restricted to local magnates and their cohorts. Secondly, the local government institutions set up by the colonial rulers were imposed from the above and as Bandopadhyay and others observe, remained loosely grafted to the indigenous rural society. They rightly observe that the old community based self-governing institutions and the newly created and superimposed bodies of local government failed to develop and creative relationship.

## **THE RISE OF THE FIRST GENERATION PANCHAYATI RAJ: BACKDROP AND CONTRADICTIONS**

Strikingly, the post-colonial India failed to make significant and visible break with colonial past despite tall promises at the time of the nationalist movement and Gandhi's insistence on village *swaraj* as the starting point of the India's democracy. The architects of the Constitution were primarily con-

cerned about the unity and integrity of the country and the trauma of partition created necessary objective conditions to plead for it. This led to a situation where the colonial model of federalism with strong unitary bias was accepted for the country choking the rise and growth of liberal democratic local self-governing institutions in India. There was no mention about the *panchayati raj* in the objective resolutions presented before the Constituent Assembly. The chairman of the Drafting Committee, Dr. B.R. Ambedkar was opposed to the empowerment of the village panchayats presumably because of his unhappy personal experience in the villages in the early years of his life. He said in the Constituent Assembly, to quote, “Indian villages are sinks of localism, ignorance, narrow mindedness and communalism...”

A close study of the background leading to the rise of the first generation panchayati raj in India in late 1950s clearly indicates that there was unavoidable political compulsion at the end of the ruling party. The leaders of the Indian National Congress realised that as the freedom movement had a strong urban bias, rural people who stayed away from the mainstream, needed to be roped in through institutional mechanism for the consolidation of the political strength of the party. The ruling class has also felt the need for enlisting participation of the rural people in the implementation of the development programmes conceived and directed from the Centre and through this, winning their political support. This gave birth to the first generation panchayati raj in India on the basis of the recommendations of the Balwant Rai Mehta Committee report. There were internal contradictions because an attempt was made to involve people without replacing the strong colonial bureaucratic structures by the democratic structures. Added to it was the highly centralized governing system of the country initially created by the Constitution and subsequently promoted by the hegemonic rule of the Congress.

## **THE SEARCH FOR BETTER AND MORE EFFECTIVE ALTERNATIVE**

Indian state continued to express concern about the institutions of Panchayati Raj as was evident through the constitution of the G.V.K. Rao (1985) and L.M. Singhvi Committee (1986). The first committee was concerned about developing panchayats as instruments of planning and rural development while the second one focused on participatory democracy for which they recommended the creation of the Gram Sabha as a deliberative body of decentralised democracy and urged on the constitutionalisation of panchayats.

## **THE EMERGENCE OF THE THIRD GENERATION PANCHAYATS**

The most significant development in the career of rural local self-government took place in 1992 when the Constitutional Amendments were made to empower local government in both rural and urban areas. These two Amendments (73<sup>rd</sup> and 74<sup>th</sup> Amendments) constitutionalised local governance and sought to ensure democratisation of the governing processes by making it mandatory to hold elections to local bodies at regular intervals under the aegis of a constitutional body called the State Election Commission. Added to it was the mandate for creating direct democratic institutions in the form of Gram Sabhas in the countryside. They clarified the status of these bodies by defining them as institutions of self-government and instruments of planning for economic development and social justice. The amendments gave directions to the state legislatures, though not mandatory, to develop power and responsibilities to them in order to enable them to function as institutions of self-government for which it provided for the Eleventh Schedule in the Act. These two amendments provide for inclu-

sive governance by providing for reservations of seats for women and the marginalised sections of the Indian society known as the Scheduled Castes and Tribes. Care was also taken to strengthen the financial base of the local bodies through the setting of Finance Commission at the state level.

## **DEMOCRATISING LOCAL GOVERNANCE: WHERE THE SHOE PINCHES**

In this section the author proposes to examine some of the major impediments to democratising governance. One of the primary objectives of the amendment is to democratise governance by making provision for holding of elections at regular intervals. But the hopes, as the experience indicates, are belied. Some of the states have taken years to hold elections. Postponing elections under one pretext or another has become a routine matter. For example, in Bihar a series of legal battles led to the delay in the holding of elections. The matter was resolved finally when the Supreme Court intervened to compel the state government to hold elections pending the decision on legal issues before the court. The case of Orissa is more interesting. The elections of panchayat bodies were due to be held before February 2002. The State Election Commission had promptly intimated the state government its preparedness to conduct election on time and suggested delimitation of wards and reservation of seats beforehand, if required. The District Magistrate had in fact done the work. The state government had ordered limited delimitation of seats in consonance with the Orissa Gram Panchayat Act, 1964. To cause further delay in this regard the state government brought a bill in the monsoon session for the reservation of seats in favour of the Other Backward Castes. The SEC chose to file a case in the High Court. At this state the state government decided to hold elections. Gujarat has recently set a unique example. The State Government has announced incentives to the extent of Rs. One lakh to those panchayats, which would

be able to hold election on the basis of consensus. The scheme called *samras gram* (harmonious village) is out and out anti-democratic. It is regarded as a recipe for reward-induced guided democracy.

Interestingly, what is happening in some states in the name of achieving unanimity is a cause of serious concern. During the panchayat elections in Karnataka in 2000 some of the seats were auctioned. The Election Commission could not interfere on the ground that if the voters made an arrangement among themselves to ensure unanimous election it was beyond the legal competence of the Commission to intervene. In order to augment the resources some of the seats were put to bidding in Andhra Pradesh in 2001. Even the reserved seats were not spared. The highest amount for the post of the Sarpanch in Velpur village under Guntur district was 10.10 lakh. Seats are auctioned in Madhya Pradesh and Rajasthan. In 2005, auctions were held for the post of Sarpanch in a least two gram panchayats. In Madhya Pradesh it was a case of trade off in – the post cost 1.80 lakh. In Rajasthan it was the caste factor which mattered most. The panchayat dominated by the *Gujjars* was reserved for the SCs. Disturbed by the sudden loss of power, some of the influential *Gujjar* leaders decided to extract a price for the post. An announcement for open sale was made at the village *chaupal* (meeting place) assuring unanimous election of the highest bidder. The auction took place two weeks before the day of polling. The reserved price fixed at Rs. 50,000. One person offered Rs. 2.7 lakh and the seat was allotted to him. But the effort proved to be abortive because of the intervention of the District Collector who got three of them arrested.

The electoral processes have been criminalised in some of the states like Uttar Pradesh (U.P.) and Bihar. In the intermediate panchayat elections in U.P. there was blood bath, which resulted in the killing of 200 persons. *Dalits* were threatened with dire consequences. The Election Commission

had to ban the entry of two ministers into their native blocks wherefrom their wives were contesting. One contestant for the Z.P. Presidentship had 42 criminal cases against him.

There was large scale distribution of gifts and allurements offered by the candidates in U.P. elections held in 2005, some of them were financed by the non-resident Indian relatives. There was a free flow of money and liquor in many villages. Hand pumps were installed outside each house in one of the villages and voters in one of the villages received silver rings and glasses. A candidate in one village called Pratapgarh promised gold rings to each woman in the G.P. if he won. In several constituencies whisky bottles were distributed liberally. There was hardly any serious candidate who did not exceed the expenditure ceiling fixed by the SEC. The well-to-do candidates splashed the local newspapers with advertisements.

## **DEVOLUTION IN THE CONFORMITY LEGISLATIONS**

The Eleventh Schedule does not list subjects or functions but only matters, as T.N. Srivastava points out. There is no constitutional mandate that rural local bodies would perform these functions or these would be transferred to rural local bodies or the schemes related to them will be entrusted to them for implementation. The legislature of a state is required to endow these bodies with such functions as may be necessary to enable them to function as institutions of self-government. Such law may contain provisions for devolution of powers and responsibilities subject to such conditions as may be specified therein and for the implementation of schemes for economic development and social justice as may be entrusted to them including those mentioned in the Eleventh Schedule. The state legislature is thus sole determinant of self-government. The repeated usage of the word 'may' in the Article fails to make it mandatory on the part of the state gov-

ernment to implement these provisions, thus leaving power-sharing with the state government solely at the disposal of the political leadership at the state level. Presumably the Parliament was compelled to use the word ‘may’ because some of the items come under the purview of the state list. It is also a clear indication that the Indian state lacks genuine will to create a vibrant third layer in the governance structure of the country. It is also indicative of the fact that it is not possible to strengthen the process of decentralisation in India without overhauling the existing Centre-State relationship. Thus panchayats cannot enjoy full autonomy, as they are set within the states and form part of the state list. Nor can the states for that matter as they are placed within the Indian Union. What the 43<sup>rd</sup> Amendment has done, as Mukerjee tells us, is to constitutionalise three strata of government.

It is found that while the states like Kerala, Karnataka and West Bengal have carved out a clear path of devolution to PRIs, other states like Rajasthan, Maharashtra, Gujarat and Bihar have different levels of momentum in their initiatives in this regard. States like Haryana, Uttar Pradesh have still to make necessary progress. As per the information available in November 2006, only eight states and one Union Territory have formally transferred all the 29 functions or subjects to the PRIs. The Working Group on the Decentralised Planning observed, “...items listed as responsibilities in the states are couched in vague terms. A glance at the variety of these items reveals that they are shopping list of sectors and sub-sectors, broad activities in a sub-sector and activities, sub-activities/ specific responsibilities under a broad activity, with no role clarity.... In some states the line departments still exercise the powers of supervision and control over the scheme of subjects transferred to the panchayats”. The Parliamentary Committee in its 37<sup>th</sup> report submitted in 2003 expressed concern at the pace at which the states are working in this direction. The Report of the Task Force on the Devolution of Powers and Functions to the PRIs brought out by the



Ministry of Rural Development has admitted that the mandatory provisions of the 73<sup>rd</sup> Amendment Act are yet to be implemented in letter and spirit by most of the states/UTs even eight years after the said Act brought into force in April, 1993". The conformity legislations of most of the states have not significantly altered the functional domain of gram panchayats. A close scrutiny of the Acts in different states tends to indicate that except in a few states clear functional mapping for the different tiers does not exist. There are states like U.P. where departmental heads at the district level could function independently of the PRIs.

The lack of clarity in functional allocation and absence of desegregation into detailed activities as Panchayati Raj Development Report 1995 mentions, has led to considerable overlapping and duality of control in most cases. It has been argued in the report that the functional autonomy is rendered difficult because in almost all the states, the state governments retain the power to assign, amend or withhold functions which as per the 73<sup>rd</sup> Amendment of the Constitution, is a job only the state governments are authorised to do.

## **TRANSFER OF FUNDS**

The transfer of functions without corresponding transfer of funds does not make sense. But this has happened. Mahi Pal rightly says that before listing the functions to be performed by the panchayats, the states have introduced certain qualifying clauses. In Andhra Pradesh, Haryana and Tamil Nadu it is "within the limits of its funds". In Punjab "it is to the extent its funds allow to perform". In Madhya Pradesh and Himachal Pradesh, it is "as far as the gram panchayat funds at its disposal".

A critical review of the provisions in the Acts of the different states regarding tax assignments, tax sharing, non-tax revenues makes it very clear that

the PRIs at the level of the samiti and parishad do not have independent taxing powers. Most of the taxes are assigned at the GP levels.

Provisions for independent budgeting by the three tiers is another prime requisite to ensure autonomy. In some states like Andhra Pradesh and Orissa for PS, Punjab for ZP, Rajasthan for PS and ZP, Tamil Nadu for all tiers, the preparation and presentation of budgets is left to the executive authority rather than to elected representatives.

The Constitution provides for setting up of the State Finance Commissions (SFCs). By mid-1990s the first SFC had submitted its reports. Referring to the role of the SFCs the mid-terms appraisal of the Ninth Plan pointed out, “more buoyant taxes like sales tax and excise are kept out of the purview of the PRIs. All SFCs have put great emphasis on internal revenue mobilisation but none has suggested any effective mechanism for PRIs to generate their revenue. The SFC reports have paid less attention to issues of autonomy, financial management and auditing proceedings. The state governments have also been slow and hesitant in accepting the recommendations where they are useful in terms of improving the revenue generation capacity of the local bodies. Only two states – Karnataka and Sikkim have devolved funds to the panchayats for 29 subjects.

A study of 15 select states, namely, Andhra Pradesh, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, Orissa, Punjab, Haryana, Assam, and Goa reveals that where middle or top tiers have been constituted, states have not endowed them with adequate functional responsibility. Most states have granted a plethora of functional responsibilities but to executive follow up of granting adequate powers, staff and financial resources.

## **TRANSFER OF FUNCTIONARIES**

To function effectively as institutions of self-government PRIs need to have the power to recruit and control staff required for managing its functions. Staff is a resource that an organisation must possess to perform its activities. Strangely, Part IX and IXA of the Indian Constitution remain silent on this vital aspect of institutional autonomy. Viewed from this perspective the state panchayat legislations too present an indeed gloomy picture. The state governments still have retained for themselves the power for inspection, inquiring into the affairs of the panchayats, suspension of panchayat resolutions and issuing directions. Besides in most states the key functionaries, namely, the secretaries and executive officers at all the three levels of panchayats are state government employees who are appointed, transferred and controlled by the state government. Being under the direct control of the state administrative hierarchy they are often reluctant to work under the administrative control of the elected panchayats. Moreover, provisions for the deputation of officials from the state government to the panchayats have been made in the state panchayat Acts without consultation with the panchayats. The state government also decides the tenure, transfer and the promotion of deputationists without consulting the panchayats.

## **RISE OF PARALLEL BODIES AND THEIR DIFFERENTIAL IMPACT**

The emergence of a series of parallel bodies in different states has been very detrimental as they infringe on the jurisdiction of the panchayats. Broadly speaking, the functions performed by the parallel bodies can be classified as ensuring user/beneficiary participation, convergence of programmes and promoting/ensuring efficiency. While these are the basic functions of the PRIs, the matters like irrigation, watershed management and development and minor forest produce come under the purview of the Eleventh Schedule which lays down the functions of the PRIs. The *Gram Vikas Samitān*

Haryana and the Vigilance Committee in Himachal Pradesh, for example, encroach upon the statutory functions of the panchayat bodies as spelt out in the Panchayat Acts of the respective states. The Task Force on PRIs has argued that the Village Development Committee set up by the Government of Haryana negate the provisions of the 73<sup>rd</sup> Amendment Act regarding reservation of SC, women and seems to replace the elected gram panchayats. The *Janmabhoomi*(JB) programme in Andhra Pradesh tends to mobilise local people, the entire state administrative machinery and draws upon the entire existing Central and State government schemes as resource for development work and thus substitute the functions of the Gram Panchayat. Although the *Sarpanch* is to preside over the JB Gram Sabha, the real player is the officer. It has created another problem. The Gram Sabha meetings convened by the Gram Panchayat have become less important because of the realisation on the part of the people that fewer benefits are available through panchayats. The Task Force on PRIs observes that it has a content of people's participation and social mobilisation, but it bypasses PRIs.

It is a veiled attempt to bureaucratised rural governance, bureaucrats in local governments, especially gram panchayat secretaries, continue to exercise considerable influence over elected representatives as they are the repository of information contained in the government orders that may not be readily accessible to the elected representatives who lack an understanding of the official procedures or basic literacy skills. In Assam the coordination committee of the PRIs in Tinsukia district complained against the block development officers (BDOs) who were keeping the chequebooks, ledgers and other important files with themselves. Instead of the panchayat leaders, the bureaucracy still holds the power balance in rural governance and the elected representatives have minimal influence over local development priorities and exercise limited supervision over line department officials. In the name of control and supervision the bureaucracy has been given over-

riding powers over the elected panchayats in every state legislation. Such laws permit the higher echelons of bureaucracy to suspend and supersede panchayats. In a couple of states like Haryana, the Act had given the Chief Executive Officer of the *Zila Parishad* the authority to refuse to implement any of its resolution if considered by him not to be in the public interest.

There have been cases when the senior officials were found trying to thwart the role of the PRIs and curtail the power of the elected panchayats. The point has been succinctly brought out in the NIRD study. In Madhya Pradesh it was reported in the newspaper in 1996 that there were at least half a dozen cases of district level government officials being involved in brawls with the panchayat leaders. As a result of this rift the functioning of panchayats in at least 12 villages came to a halt.

There is another set of parallel bodies in some states where exist traditional panchayats with different legitimising sources. In Maharashtra, for example, there exist village “collectives” called *gavki*. The *gavki* is constituted by the upper caste elites, the rich and undoubtedly, only the (patriarchs) of the village, women excluded. Before the amendment of the constitution these bodies functioned alongside the elected panchayats. Unfortunately, they continue even today. Lelenarrates an interesting case of how a *gavki* defied the elected panchayat. The *gavki* decided to auction the sand from the riverbed and the money earned was to be a contribution to its own und. The GP raised objection to it leading to a conflictual situation. The persons who raised objection to this issue, were the more informed active villagers, some *dalits* and women, associated with a local NGO who were in favour of the panchayats. However, they do not have strength to go against the *gavki*. The *gavki* has been found to be more effective in areas where women or *dalits* are in power. Thus, as Lele rightly observes “reservations which intended to empower both these marginalised sections in rural governance are being

made ineffective by the established powers in the rural areas”.

Caste Panchayats in some states have outgrown their functions a local dispensers of justice. Recently a caste panchayat in Nauranjabad village in U.P.’s Meerut district ruled that a young woman pregnant with the child of her second husband, had to return to her first husband who had reappeared after five years. The argument was that the first husband, though assumed dead, had never divorced her. Married off at just 14 to soldier Mohammed Arif Gudiya had barely spent a week with him when Arif was called to duty at Kargil War. Declared deserter by the army soon after he was given up dead as time went by. After four years ‘widowed’ Gudiya’s parents with the consent of the Community married her off to her cousin Tontiq. Gudiya became pregnant. Now the caste panchayat declared her second marriage illegal. The constitutional panchayat has nothing to do.

## **ANOTHER MODE OF BUREAUCRATISATION: DISTRICT RURAL DEVELOPMENT AGENCIES**

The bureaucratic District Rural Development Agencies (DRDAs), which function independently of the Zila Parishad and handle crores of rupees, should have disappeared from the scene following the 73<sup>rd</sup> Amendment of the Constitution. But no such signs are visible even after more than one decade of the Constitutional Amendments. Instead both the Government of India and the state governments are not only continuing with them but are also adding to the list, circumscribing the powers, authority and prestige of the panchayats. The DRDAs were constituted as late as in 2002 in Goa. Some state governments have refused to comply with the Central Government guidelines to ensure that the DRDAs get merged with the ZPs and the Central Government has failed to enforce it. In consonance with the repeated recommendations made by the Standing Committee, only a few

states like Kerala, West Bengal, Madhya Pradesh, Chhattisgarh and Karnataka could successfully work towards the merger of the DRDAs with the District *Panchayats*. In all the other states the DRDAs/DRDA cells enjoy a separate existence and are functioning independently. Besides, the State Panchayat Acts contains no provisions to ensure coordination between the DRDAs and the three tiers of the panchayats. These parallel bodies having no effective organic linkages with the constitutionally mandated panchayati raj institutions only serve to marginalise the PRIs.

### **THE MP LOCAL AREA DEVELOPMENT (MPLAD) SCHEME**

The actions taken by the Indian State after the amendment of the Constitution did not prove that there was strong political support for strengthening decentralised and participatory local governance in rural India. Mention may be made of the decision of the Indian State to introduce Members of Parliament Local Area Development (MPLAD) Scheme. Under this scheme a large sum of money per year is placed at the disposal of the MPs. The MPs are allowed to spend the money to undertake local area development schemes outside the purview of panchayats and municipalities. In this way the constitutionally mandated local government institutions are bypassed. Under the scheme each MP can suggest to the District Collector works worth up to Rs. Two crores (now increased to 4 crore) in a year. The Ministry releases the funds directly to the Collectors who get the works done on the advice of the concerned MP. The funds should be used for creation of durable assets to be vested in government. The Central Government has given an illustrative list of 28 items. There is also a list of works not permissible such as raising of memorials, building of places of worship and the like.

Incidentally, the state governments are also not lagging behind in undermin-

ing the authority of the decentralised constitutional bodies. Some of the state governments have also introduced similar programme for the MLAs.

However, the Report of the Comptroller and Auditor General (2001) showed that the MPLAD was plagued not only by the inadequacy of funds but also by the increasing underutilization, misuse and diversion of money earmarked for the project. Most of the plans undertaken form part of the 11<sup>th</sup> and 12<sup>th</sup> Schedules incorporated in the 73<sup>rd</sup> and 74<sup>th</sup> Amendments of the Constitution which clearly refer to the functions that are to be transferred to the local bodies. The Report noted that out of Rs. 5018 crores only Rs. 3221, i.e. 64 per cent of the released amount could be spent. Also, the release of funds was not linked up to their end-use, with utilisation certificates being received for only 28.78 per cent of the projects taken up and completed by the implementing agency. While during 1993-97, 89 per cent of the work sanctioned by the collector was taken up, only 56.13 per cent of it could actually be completed. The corresponding percentages further declined to 86.41 per cent and 39.42 per cent respectively, during 1997-2000. This was due to the fact that the Ministry often released funds without any co-relation with the end use and it did not insist on the utilisation certificates from the implementing agencies.

Similar has been the findings of the sample study of audit in 106 constituencies where it was found that out of total expenditure of Rs. 265 crores reported by the Collectors, a sum of Rs. 82 crores, that is, 31 per cent of the total money was, in fact, not spent at all. The guidelines seem to have been observed more in their breach. In Nagaland, for example, the money was spent for building roads connecting the Church, in Orissa temples were built, in Madhya Pradesh money was spent for building housing complex for the police officials.



The Centre for Budget and Governance (2004) in its report, *The Rhetoric and Reality of MPLADS* reviews the working of the said scheme in seven constituencies spread across six Indian states – Rajasthan, Madhya Pradesh, Gujarat, Uttar Pradesh, Jharkhand and Orissa. The report holds the legislators of both the houses responsible for the underutilisation of funds. While the Lok Sabha members (till 2003) used only 77 per cent of their total entitlement, the amount used by the Rajya Sabha members did not exceed 50 per cent. In sharp contrast to the MPLAD guidelines, the responses of the MPs to the CBGA questionnaire reveals a significant bias towards the construction of conspicuous infrastructural works, especially roads and bridges which leaves room for rampant misuse of development funds along with greater involvement of private contractors in the process of implementation. With water supply, education, health, sanitation and electrification continuing to remain the chief concerns of the masses, these areas are found to attract a negligible investment. The report also studied the scheme's beneficiaries across six states. The overall picture that emerges is that a lion's share of the MPLAD funds is spent in a top-down manner without taking into consideration people's actual needs. Beneficiaries also alleged that they were paid much less than the specified minimum wages in employment works under the scheme and an overwhelming number (62%) agreed that the quality of assets created was either bad or very bad.

## **PARTICIPATORY DEMOCRACY: THE WORKING OF GRAM SABHAS**

Gram Sabha did not figure prominently in the scheme of the Panchayati Raj introduced in most states in early 1960s. We find from the report of the Ashok Mehta that the sporadic efforts to revive the institution were the successful due to "the lack of interest on the part of the office bearers and the apathy on the part of the public, the Gram Sabha has not been functioning

satisfactorily.”

While the constitution makes it mandatory to establish Gram Sabha of the village level, it does not stipulate any details regarding the structures, powers, and functions of this institution. In terms of Article 243G these details are to be spelt out in the Panchayati Raj legislations passed in each state in compliance with the 73<sup>rd</sup> Amendment to the Constitution. Accordingly, all the state governments have provided for the institutions. Gram Sabha in their respective panchayat legislations. But the jurisdiction of the Gram Sabha (GS) in state legislations is too big to facilitate effectively participation of the people. In states like Kerala, West Bengal and Orissa the problem has been resolved by creating another body down the line in the electoral constituency level to ensure effective participation of the people.

Hardly any State Acts empower the GS to have control over the GP and to take final decisions in matters of village development. Its role is only advisory. The accountability of the GP to this body has also not been clearly spelt out in most of the state legislations.

In most of the states the functional domain of the GS is limited to discussions of annual statement of accounts, administration report, and selection of beneficiaries for poverty alleviation programmes. Only in a few states like Haryana, Punjab and Tamil Nadu, the GSs enjoy the powers to approve the budgets.

The Gram Sabhas are yet to take off properly in almost all the states. Report from the states indicate that the Gram Sabha meetings are not being held regularly. The Institute of Social Sciences team had found in a village in Madhya Pradesh that by December 1995, three meetings were held as against the legal requirement of six meetings.

The MP study done by Participatory Research in Asia (PRIA) group of researchers shows that majority of them did not attend meetings because the people felt that nothing happened at such meetings. Nirmala Buch conducted a study of 11 Gram Panchayats in MP in December 1997 and found that far from an adequate number of GS members attending the meetings even all the *panchs* were not present. To cap it all, there was no quorum in more than 50 per cent of the GS meetings. There is a provision for mandatory attendance of one-tenth members in the Gram Sabha.

But the fact still remains that in some of the states Gram Sabha meetings are generating a new atmosphere in the countryside. Social auditing at the Gram Sabha meetings has also started yielding desirable results. The Gram Sabha meeting in Karnataka successfully combated the time-honoured Devdasi system, which prevailed in 167 villages of Belgaun district. The UMA Research team of Bangalore had witnessed a Gram Sabha meeting at Indore Gram Panchayat in Uttar Kanada district. The Sabha witnessed uproarious scene when the people demanded an explanation from the secretary about the activities despite the fact a handful of members were familiar with the Act. Most of the questions were raised by the youth.

## **THE LESSONS AND DIRECTIONS**

The constitutional attempt to break colonial tradition in 1992 does not seem to be working properly on the ground because the threats to local democracy in rural India lie deeply embedded in Indian Constitution, polity and economy. The demand for a thorough restructuring of the Centre-state relationship was first strongly put forward after the re-organisation of the country in 1950s as it created contradictions between decentralised polity and centralised constitution. The Indian state had to appoint a committee to review this issue again in 1980s but nothing substantive has emerged so far.

The National Democratic Alliance government in Delhi had taken steps towards this direction but without any results. The present United Progressive Alliance government is not lagging behind but nothing visible happened so far. All these initiatives underscore the need for thorough re-examination of this aspect of the Indian Constitution as an essential step to empower local government in rural India. The Constitution was amended to strengthen local governance in rural India without resolving these basic contradictions. Local government continues to be in the state list but the state governments in India are very weak. Can a weak state government deliver a healthy baby of local self-government?

The fact, however remains that the constitutionalisation of the local governance has changed the legal status of the Panchayati Raj system. Panchayati Raj is no longer an idea but a practice. Elections can no longer be felt to the sweet will of the ruling parties or parties at the state level and had been the case earlier. The constitutional provisions have laid the foundation stone of local government the superstructures of which have be built up for which what is urgently needed is spontaneous initiative on the part of the people. There is some ray of hope following the rise and growth of the civil society organization in India working for democratization of governance. Right to Information has strengthened their hands. But one has reasons to be doubtful about the bright future of grassroots democracy because globalization and liberalization are hitting the local hard. One more argue that the current emphasis on local autonomy and resource mobilization for financing local services smacks of the colonial brand of local governance.

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