
UNIT 6 ICT4D - COMMUNICATION AND DEVELOPMENT

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6.1 AIMS AND OBJECTIVES

This unit will be dealing with the concept of ICT4D or information communication technology for development. It will start with the definitions and concepts of ICT and then engage with the idea of development. For providing in-depth knowledge about ICT4D, this Unit will further explain the different components of ICT4D, the different sectors where there are possibilities of development through ICT and lastly this unit also analyse the various challenges towards implementing ICT for development.

At the end of this unit, you will be able to:

- Understand the concept and meaning of ICT and development;
- Explain the components of ICT4D;
- Analyse the different possible sectors of ICT4D and their uniqueness; and
- Understand the different challenges and issues in the entire process of ICT4D.

6.2 INTRODUCTION

In this unit, we will be having a broader discussion and understanding of the meaning of ICT and its effectiveness in the process of development. Although there is no particular, universal definition of ICT, the word is generally accepted to symbolize all devices or networking components, applications as well as systems that collectively allow folks and communities to interact in the digital world. In the present 21st century, one of the most popular and widely used terms is ICT, which is Information Communication

Technologies. Interestingly, a broader definition of ICT would range from the conventional technologies as that of the printed world to the latest modern communication technologies. It might include technologies like data delivery systems like terrestrial satellites which are capable of downloading digital data to a laptop computer connected to cellular network. One of the simplest ways of demonstrating the significance of ICTs in the development of any nation is by examining the readiness of the poor towards paying for the service.

Development, too, is a contested concept that has been the subject of extensive theoretical debate. Furthermore, in contemporary global and national politics, development policy and action are entangled with competing interests and power dynamics, and international development agencies' policies for economic growth and institutional reform are hotly debated in developing countries. Most ICTD studies avoid delving into "development" debates. They rarely discuss what constitutes development. ICT is critical in all areas of development, including health and agriculture. So far, we have studied how ICT can benefit the poor and marginalised by improving their socio-economic conditions and contributing to the nation's overall development process in the previous three modules. This unit will investigate the potential effects and implications of information and communication technology (ICT) in development. At the same time, we must acknowledge that developing countries are increasingly utilising ICTs today, despite the fact that evidence on the usefulness of ICTs in the development process is rather limited.

Now, we move on to the further discussion of ICT and development, it is important to learn these individual concepts properly before understanding their association. There are several definitions of the term 'development' that are based upon the perspectives of how we look at it like we have socio-economic development, rural development, inclusive development etc. In other words, development can be defined as the growth and progress towards a preferred direction or goal which can vary from social to economic to education. Interestingly, in majority of the cases the term 'development' is often mentioned in the context of economic. For instance, the level of ICT provisions in any nation is directly correlated with income per capita. What must be noted here is that information is the raw material from which knowledge evolves and ICT injects the required efficiencies for the promotion of knowledge and building knowledge communities.

Information and communication technologies play a significant role in every sector of development be it health or agriculture. So, far in the previous three modules we have studied how ICT can benefit the poor and marginalized and improving their socio-economic conditions contributing to the overall development process of the nation. This module will look into the possible effects and implications of ICT in poverty reduction. How effective ICT is in alleviating poverty, which is a major problem of the developing world. At the

same time, we have to accept that the developing nations are increasingly utilising ICTs today yet the evidences on the usefulness of ICTs in the process of development is rather limited.

Information communication technologies for development are popularly referred to as ICT4D. The role of ICT towards accomplishing development goals including gender empowerment, education, poverty reduction or health has gained attention across the world. To put simple, ICT4D is a general expression in which ICTs often refers to new media tools like the internet, mobile phones and computers. Moreover, it can also mean the traditional media like the radio, television or even the landline telephones. Development is basically described as the social and economic progress of the developing world. There are many deliberations around the definitional distinctions, but what is more important is to understand how over the past decade of globalization, the explosion of the internet and convergence across telecom companies, computing and the media have caused massive changes in social as well as professional lifestyles of individuals. People nowadays, can access information, work from home, communicate, shop or do banking through a mobile device across the globe.

The 20th century has witnessed an elaborate search for the causes of rapid progress. It is suggested by the modern growth theories that communications have always played a very significant role and that by having accessible and consistent telephone facility removes some of the physical restraints on structural communication, allowing increased output through improved management in both private as well as public sectors. The diversity of technologies incorporated under the broader term ICT, function differently and have exclusive effects based on the way in which they are put to use. Nonetheless, their association with social and economic development stem from different basic features connected to improved information production and knowledge sharing. From the first time, when email was being sent there was absolutely no doubt that the internet was meant to change several aspects of how we learn or make a living. In many ways, internet which is a networked and open medium is drastically altering the nature of communication and the landscape of larger participation. So, in this context this module will be elaborately discussing the various components of ICT4D, the possibilities of ICT in development of different sectors and the various challenges in the implementation of ICT in development process.

6.3 COMPONENTS OF ICT4D

We have learnt in the opening paragraphs that ICT or information and communications technologies imply the infrastructure and constituents that facilitate modern computing. Moreover, ICT is normally used to represent a broader, more complete list of all the components linked with computer and digital technologies. In this section, we will understand the various components of information communication technologies, specifically

implying the infrastructure and components that facilitate modern computing. Both the Internet enable spheres as well as wireless networks are included within ICT. Further, it also encompasses traditional technologies like landline telephones, radio and television. We must note that all of these old traditional technologies are still extensively used alongside innovative ICT components like the robotics and artificial intelligence.

The list of components of ICT is extensive and it continues to grow. These components like the telephones and computers have existed for years. Others components like the digital TVs and mobile phones are latest entries. In general, ICT means more than the list of components and it also comprises the application of all these components. Along with the advantages and with the real potential the danger of ICT could be found. ICT also reinforces wide shifts in society the communication structure is slowly moving from face-to-face interactions to a more digitally oriented form. This new era is of tende fined as the 'Digital Age'. It is interesting to that despite the remarkable potential of information communication technologies, their potentials have not been explored and spread evenly. It is a fact that effective use of ICT can expand social inclusion. We are aware that economic growth is one of the key challenges faced by the policymakers in contemporary times.

The revolution on the information communication technologies has been found to have profound implications for social and economic development of any nation. The unique characteristics intrinsic to ICT and the evidence from both national approaches as well as micro-level initiatives suggest that a development-specific ICT strategy can be a leveraging factor in the overall development process. There are five major areas where ICT can play the role of development enabler with proper strategic interventions – human capacity, policy making, enterprise, content creation and infrastructure. Today, ICT gives the idea of amassive increase in efficiencies for the creation and transfer of information, while at the same time introducing synergetic efficiencies into knowledge creation and acquisition. ICTs have the potential for increased magnitude of information dissemination and in the creation of a knowledge society, which is much relevant for a society to be considered as developed. But, for achieving holistic development, it is required on the part of the government and the providers for ensuring ICT access reaching even the most marginalized groups while simultaneously ensuring that the ICT projects meet up to the demands and needs of the target population.

The basic components of ICT that enable broad based development could be as follows –

Increased information productivity and knowledge sharing: It is the single most significant benefit associated with accessing of ICTs as it has drastically reduced the cost of production and transmission process of information. Putting simply, usage of ICTs benefits productivity by reducing the risk of uncertainty to a great extent that leads to better decision-making regarding organizational innovation. Thus, we can see how the initial

acceptance of new technologies escalates into increased profits at any organizational or community level.

Openness: Advanced networking and sharing of information also lead to demands for greater transparency at the governance level that in turns helps in forming connectivity at the grass root level. ICTs are a powerful tool for empowerment as through it one can get updated about the decision-making process by any government agency or one can learn about the status of the foreign exchange reserves by centralized banks, etc.

Transcending Geographical boundaries: By now we have learnt how ICTs can act in empowering people and can aid in the fast transmission of information across regions. So, this gives an idea about how ICTs can transcend and overcome geographical boundaries and create a more efficient global marketplace. It has made possible a situation where the consumers and vendors are gradually able to share information on specifications and delivery times and comparative advantage could be more efficiently realized. It is definitely an advantage in developing nations as it can lead to bigger markets and increased access to worldwide supply chains.

Now, what we gather from the above lines is that the enthusiasm with which the developing communities has rushed into adopting ICT associated programmes often seems to overshadow the question of specifically how information communication technologies contribute to overall development of any country. By giving exclusive emphasis on ICT aided projects at the expense of vigilant analysis, observation and consideration of the wider social, political and economic elements that inter-connect with each other for improving lifestyles may likely result in unanticipated wasted resources or failures. As technological changes move rapidly that sometimes it tends to surpass substantive analysis leading to over dependency on circumstantial evidences as justification of ICT projects. If not addressed timely then this can lead to poorly designed programmes and chaotic implementation schemes that might not account for indigenous conditions resulting in initiatives that will eventually fail to meet the desired objectives of development or might also harm the well-being of supposed recipients.

People can be empowered by information and communication technologies (ICTs). They open the door to a world of ultra-fast global communications and decentralised information networks. In a nutshell, we can say that people's lives will improve once they have access to and use of technology.

6.4 ICT IN DIFFERENT SECTORS

The possible inter-linkages of ICT and expansive development may be found in sectors including economic management, governance, education, rural development, health, environment and security. But, for making the ICT usage relevant for the disadvantaged or deprived people, ICT tools must be made accessible as per their necessities like in some regional language or

through community sharing and participation. It must be noted that before initiating ICT frameworks for development process, a detailed valuation of the needs of the underprivileged section must be done. We will now be elaborately discussing all sectors for an in-depth understanding.

ICT in economic sector: As mentioned earlier, usage of ICT is one of the most effective contributing factors for economic and societal transactions as it has significantly changed how people work, connect, acquire and live. Furthermore, ICT continues to transform all parts of the human existence and human experience as firstly the computers and then eventually the robots started doing many of the tasks that were once handled by humans. The importance of information communication technology towards economic development and progress of business has been so enormous that it has been credited with piloting in a sort of revolution that many would label as the “Fourth Industrial Revolution”. The development of modern information communication technologies has undoubtedly altered the world into a ‘global village’ as it overcomes the physical boundaries and generates prospects for a global marketplace. Technological revolutions are intertwined with globalization and they are leading towards new avenues of global economy.

Information communication technologies are considered to be the backbone of capital accumulation and management as we already discussed how new ICTs reduce the cost of information transfer and the outsourcing information-intensive administrative and technical functions have become increasingly easier and cost effective. The present century has definitely witnessed an ever-widening search for the reasons for speedy development. According to the modern growth theories, communications have played a significant role in the development process by allowing a more structured organizational communication and increased productivity. This statement signifies the role of ICT in the improved management in both private and public sectors and aiding the growth of complex organizations.

The advancement of ICTs and the liberalization of national trade-off rules could possibly be a main factor in viable economic development. Moreover, ICT growth provides for the expansion of manufacturing components in different nations aggregating the diversity of service-related activities and their outsourcing. The opportunities offered by e-commerce revolution have been particularly notable. Though the majority of the e-commerce transactions take place in the highly industrialized countries yet the social and economic implications of e-commerce in developing nations have been profound. The capacity made possible by ICT to reach out to a global audience, acquire immediate market related information and conduct electronic business transactions leads to increased economic efficiency by opening markets for products and services from the developing world. It indicates that with the collapse of geographical boundaries due to the evolution of the internet, the ways of doing business have changed drastically. Electronic data interchange system, where one could directly

place an order on the suppliers' network, is not only a fast reliable way but also enables the supplier to plan better, optimise inventories and also reduce the overall cost. It also forms part of e-commerce that refers to purchasing and retailing of goods, services and information through computer mediated networks.

The digital marketplace is considered to be an international platform for goods, services and knowledge, which has the potential to unleash a revolution in entrepreneurship and innovation that is beyond imagination. There is undoubtedly an incredibly massive business opportunities that are propelled by internet service providers today. In this digital technology age, ICT allows firms for spreading of component manufacturing across nations, increase service-related facilities that can be outsourced. This leads to expansive supply chain management and also improves the logistics of goods and services across states/nations. It is stated that the development of ICTs and the liberalisation of national trading regimes are the major viable economic development. Scopes and prospects offered by e-commerce revolution are specifically exciting. Though majority of e-commerce transactions are still happening within the developed industrialized nations, the social and economic implications of e-commerce for the developing world might be intense. ICT makes it easier to reach out to a global audience, gaining instant market related information and conducting electronic business transactions with increased economic efficiency. It leads to the opening of markets for products and services from the developing nations.

Now, we have to understand that there are several benefits of e-commerce. It largely benefits economic development by letting local businesses access to the global markets. It also provides for new openings to export a broader range of goods and services. As we have mentioned earlier that ICTs reduce the cost of information transfer, it makes the process increasingly easier and cost effective to outsource information-intensive technical and administrative functions. Trade in services can be divided into two different categories – first is data entry and secondly, software development. For instance, the expansion of an indigenous software industry in the country can be a worthy example of developmental benefits resulting from expanding trade in business. ICTs are considered to be the backbone of capital accumulation and management. In summation, it can be said that ICTs benefit a developing state's economy by improving risk management techniques and in turn benefitting the financial flows in several ways though it comes with its share of challenges.

ICT in Education Sector: In the education system as well, ICTs have been an integral part and play a significant role in the learning process. ICTs offer influential tools for escalating access to education and improving knowledge and skills. We have noticed earlier how ICT tools have initiated the formation of building block of modern society. The world has changed fundamentally over the past century and it will also continue to do so in an accelerating

pace. With the changes, the education sector across the world face severe challenges that calls for collective change in the approach towards learning process. Since information and knowledge have become the most important elements for increased wealth, competitiveness, prosperity and productivity, nations have placed greater precedence on building their human capital. This, learning a whole new set of abilities is required in the present information and knowledge driven world. It is the aim of all governments to provide the most comprehensive education possible for all its citizens within its constraints. Online databases maintained by governments contain enormous amounts of readily accessible information. Putting simply, these technologies are essentially changing the nature and reach of education sector.

However, evaluating the cost effectiveness of ICT in the educations sector is basically difficult for major reasons such as lack of significant data, unpredictability in the application of ICTs, difficulty in generalizing from definite programmes and difficulty in measuring the value of qualitative learning differences. The efficiency of conventional distance education programmes making use of interactive technologies has been validated by several studies. As mentioned earlier, the effectiveness of ‘virtual classrooms’ and the profits of internet access on educational accomplishments are more difficult to measure. However, some of the positive impacts of ICT on education could include equalising access to education, training of teachers, improved individualised interactivity; access to global knowledge base and acquiring the skills needed to succeed in the digital era. The possibilities of almost unlimited access to information and global communication offered by ICTs give a new dimension to the concepts of open and distance learning. In isolated remote areas and in economically deprived regions, the opportunity of having access to the information resources available on the internet could greatly enrich teaching-learning situations where there could be a scarcity of more traditional educational resources and where educators have little or basically no prospect for professional development.

ICT in Health Sector: ICT can drastically improve the services in the healthcare sector by providing opportunities of remote meeting and scopes for immediate treatment. ICT can play an increasingly significant role in improving the health care delivery to the poor and marginalized section. As per the reports of WHO, it is estimated that 40 per cent of medical systems costs of process of exchanging information could be reduced significantly. The information sharing and the management functions of ICTs can benefit the health sector in many ways like through the process of ‘telemedicine’ where medical images, diagnoses and records could be easily transmitted to remote locations. Internet and telecommunications could be powerful force for managing health care delivery in regions where disease is widespread and communications are poor. For instance, email and medical reports could inevitably deliver recent medical results to a larger audience at minimal cost. The innovative features allow for moderated electronic discussion groups that

can possibly cover topics ranging from evolving trends in contagious diseases to local coordination of research efforts containing a particular geographic component.

There are a number of ways through which ICT could be applied to attain better health outcomes. Some of the most favourable and clearly validated applications for ICT in growth are in the enhancement of health care delivery. In developing nations, ICT is being used and communities for facilitating remote diagnosis, consultation and treatment. It is through ICT that health workers in developing nations are accessing appropriate medical training. It is also facilitating collaboration among physicians across countries. ICT can provide considerable benefits and capabilities to disease prevention and epidemic response efforts. The internet can also be utilized for improving disease prevention by allowing more active observing and response mechanisms.

ICT in Poverty Reduction: In a variety of ways, digital technology affects the lives of an increasing number of people all over the world. Information and communication technologies were not only important at the macro level, such as in the globalisation process, but also at the micro level, where increased use of mobile phones, for example, changed daily communication patterns all over the world. Access to ICT can bring anecdotal improvements amongst the poor, underprivileged and in rural areas by providing scopes of increasing incomes. ICTs can bring in equitable development scopes in rural areas where around fifty per cent of the world's population resides. The recent advancements in technology like the satellite signalling, cellular telephony or microwave relay bases have led to lowering the minimal costs related with telecom rollout in rural areas. It is true that the internet provides for a potentially strong means for accessing information. It possesses the potential of offering a cheap and versatile mechanism connecting users of the rural areas with a global repository of information. The productivity and economic benefits of rural ICT access can be generalized in categories like increased accessibility to markets, access to information on environmental and technical conditions and increased occupational prospects.

Farmers and other rural trade can get the highest possible price for their products and avoid mediators through access to ICTs. As we know that communications are vital to knowing information about where, when, what and how to plant crops and hence the same could be obtained through internet supported communications. Moreover, as with urban capitalists, rural businesses can increase the sales range, increased production resulting in employment opportunities. Thus, what we see here is that internet communications can be used to not only transmit/obtain data regarding crops and fertilisers but it can also be used for tracking weather patterns, monitor expected yields and targeting new markets. However, areas lacking telephone/computer/ internet access witness considerably less entrepreneurial

activities as compared to those with access. The increased opportunities of development offered by ICT also gives rise to large income disparities.

ICT in Governance: Information communication technologies can improve governance in three distinct ways majorly. Firstly, they can assist the policy/decision makers in the procurement, management and flush transmission of complicated policy information and data increasing therefore creating efficiency benefits. Secondly, it offers scopes of transparency and improves delivery of government services and lastly ICTs empower the civil society by rising access to government information and enabling discourse and public feedback on various projects and performances of the governments. All these three factors lead to specific and quantifiable profits in sectors such as health care, education and environmental preservation. ICTs can enhance basic infrastructural services like water, electricity and sanitation both at the national and local levels. ICTs have a part to play in the functioning of government in areas as diverse as trade facilitation and traffic management. Electronic administration enables government transactions more transparent. In the present times, because of all the benefits offered by ICTs many governments are open to experimenting with information provision through the World Wide Web or email communications.

So, from the above discussion we have understood how ICT or new media offer a means of overcoming conventional barriers in different sectors available within the restricted framework. Now, we will have a look at the challenges and barriers faced by the developing nations in having access to information infrastructure. What we discovered in common is a strong correlation between the role of ICT in overall development. It is encouraging that the majority of developing countries are attempting to incorporate ICT into their development plans. Grameen Bank of Bangladesh is one such example of an initiative that has been taken to realise the benefits of ICT in the rural sector's economic growth. In developing countries, there is a high demand for ICT-based services, which can be met by creating an environment with effective regulatory mechanisms. According to social science scholars, ICT can be used to increase market access and efficient e-commerce sectors, allowing local artisans or farmers to trade their products directly to consumers without the use of middlemen.

Although it is possible that poor people are unaware of their rights and basic entitlements, a proper communication and knowledge system can effectively articulate their interests in learning about them and taking steps to meet their needs and extend services. ICT has the potential to transform and revitalise old occupations by adding new dimensions to them, and the government should take full advantage of it.

Check Your Progress 1

Note: 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this unit.

1) What are the different sectors where ICT can play a role in the development process?

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2) What are the different components of ICT4D?

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6.5 IMPACT OF ICT ON DEVELOPMENT

As we have seen, it is now widely acknowledged that information and communication technologies play a significant role in national development. However, the nature of the connection between the two is unknown. Much of this state is due to a misinterpretation of how ICT is defined in this context. While some conceptual frameworks have been proposed, they are lacking in key aspects that can provide a more complete picture. On the other hand, development is not an easy or straightforward linear process. It is a multifaceted exercise that aims to transform society by addressing the entire complex of interwoven strands, living impulses, and organic wholes. New media technologies promise to transform how global citizens obtain news and feature programming, as well as how we communicate with one another and contribute to the emerging decentralised media system. We have seen in above sections that There is a growing recognition that information and communication technologies (ICT) are indeed very powerful tools that can make development more effective on a large scale for disadvantaged or marginalised groups. As a result, an increasing number of development organisations around the world are utilising ICT to promote development, poverty reduction, empowerment, and participation.

Independent of ICT4D programmes, ICT is a part of the daily lives of an ever-increasing number of people everywhere. For those who are literate, have a good education, and adequate resources, information and communication technologies open up new opportunities. Disadvantaged and marginalised groups have few opportunities to benefit automatically from tools like the Internet. This exacerbates social divisions and widens the gap between rich and poor countries, regions, individuals, and even men and women.

The real question for the poor is not whether ICT is desirable, because the technology is already a part of their larger context. The question is whether we accept that the poor should be denied new opportunities to improve their livelihood in addition to the existing deprivation of income, food, and health care, among other things. The strategic choice is whether to accept the rapidly widening gap caused by a highly asymmetric architecture of opportunities, or to use ICT in novel ways to level the playing field in economic, social, cultural, and political terms. To make ICT work for poverty reduction and development, it requires both affordable, market-driven infrastructure and multi-stakeholder efforts at all levels to assist poor, disadvantaged, and marginalised people in utilising the full range of ICT in accordance with their priorities and demands.

6.6 CHALLENGES AND ISSUES

While majority of the nations across the globe have been affected to a bigger or lesser extent by the impact of ICTs in various spheres of life, it has been unfortunately and it still continues to be a very ‘uneven revolution’. The impact of ICTs on development has been mostly witnessed in the rich industrialized nations and large disparities still exist between the developed and developing nations. As we have already discussed earlier that how information communication technologies have provided remarkable opportunities of improving the lives of the poor and underprivileged communities and of reducing the probabilities of vulnerabilities against them. Nonetheless what we also gather from the above discussion is that for guaranteeing equal access to ICT to all despite of the social class is a constant challenge for any developing nation. We have observed that undoubtedly India is slowly be coming part of the ICT concentrated ‘global economy’ yet there are some key social challenges and issues which are required to be properly recognized for attaining comprehensive development.

If ICTs can offer great opportunities for the underprivileged in rural areas to expand the earnings with improved access to information and services then it is also to be noted that the relative lack of access to ICTs amongst these same set of marginalized people suggests huge inequality. The role of information communication technology in fighting poverty and its scope for fostering sustainable development has been the subject of constant debates and research. So, if there are scopes and opportunities then there are bound to be challenges. For example, there are several places where there is no facility of electricity or facilities of telephone accessibilities, so in such places how does technology fit in?

Undoubtedly, new communication technologies are driving an historical change that is transforming the entire world. At this stage, unfortunately any vibrant ICT is mostly taken for granted and constant technological advancements are considered to be the existing norm of daily lives. Today the percentage of skilled or educated population is growing, in turn further

stimulating the advancements in ICT. Most developing nations are not likely to be able to meet the barriers and challenges that hinder ICT4D and require aid and support in combating issues like poverty and deprivation. The word 'digital divide' denotes the gap that exists between the 'haves' and 'have-nots' that is the gap between communities and individuals who own, have accessibilities and can effectively use ICT and those who cannot. Development is not an absolute isolated entity and similarly digital divide is also not an individual entity. The failure in addressing the gap might lead to extreme societal disparities. Under developed nations need to address or respond to these barriers with the support of the donor agencies as the disparity this time is not being centred on literacy but on digital literacy specifically.

Check Your Progress 2

Note: 1) Use the space below for you answers.

2) Compare your answers with those given at the end of this unit.

1) What are the different challenges in ICT4D?

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2) Signify the role of ICT in poverty reduction.

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6.7 LET US SUM UP

The term ICT that is considered to be the combination of software, hardware, equipment, networks and IT industries and it also appropriately recognises the vital role of information services in general in the creation of an information structure. So, what we gathered from the above discussion is that ICT is basically a stand of three poles of information infrastructure, information applications and information technologies that provide for value added services to the deficiencies existing in the socio-economic, political and administrative spheres. Information communication technologies are much more than social networking sites and it rationally aids the numerous aspects of development. ICT has an acute role to play in the development of sectors like healthcare, preservation of environment, natural resources, agriculture, education and poverty reduction, etc. Recent developments in

ICT have only served to support the association between ICT and the broader development. Thus, in summation we can say that ICT applications have an intense impact both directly and indirectly on social, political, cultural, economic and other spheres of everyday life of majority of people especially in the developing world including overall governance, education, job opportunities, health, e-commerce and social systems largely.

We can conclude from the preceding discussions that the field of information and communication technology is undergoing constant change. In this context, a distinction should be made between the sectors of ICT usage, namely direct and indirect ICT use for poverty reduction. The first is the category in which ICT applications are widely used as part of the digitization process. This first category includes the incorporation of ICT into any existing activity, which it can either enhance or possibly alter; it can make the task easier or improve the quality while significantly lowering the usage cost. This first category includes e-governance, e-health, and e-learning. However, direct use of ICTs such as computers and the internet by the underprivileged and poor is much more limited. The new information communication technologies are perceived to be having the prospective to enormously improve working conditions and the inclusive quality of life for humankind, making possible for a better leisure-oriented society.

6.8 KEYWORDS

- ICT** : Information communication technology. Information and communication technologies (ICTs) are defined as the tools that enable the process of communication and information transmission via electronic means.
- ICT4D** : Information communication technology for development, which implies its potential, benefits, effects on various sectors of human interest and human development perspective.
- E-commerce** : Electronic commerce refers to the widespread use of information technology in commercial processes, with electronic tools used to achieve business goals. Electronic commerce enables producers to track the price and demand for their products and locate the best market.
- E-governance** : e-Governance is the use of information and communication technology (ICT) to provide government services, exchange information, conduct transactions, and integrate previously existing services and information portals.
- Internet** : The term “Internet” refers to a global computer network that provides a variety of information and communication services through interconnected networks that use standardised communication protocols.

6.9 SUGGESTED READINGS

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6.10 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) In this age of globalisation, information and communication technology (ICT) has become indispensable and integrated into daily life. The promises of ICT appear to be limitless. It can provide governments, businesses, and citizens with relevant information and enable them to communicate in order to make informed decisions, as well as enable more efficient processes and services to address various economic, social, financial, and educational needs. ICT as a sector has aided in the development of some of the most rapidly growing industries, including electronics, business process outsourcing, and telecommunications and internet services. Based on the adoption and utilisation of ICT in business and society, ICT is viewed as an enabler of economic growth and competitiveness as an infrastructure.
- 2) The major components of ICT could be identified as increased information productivity, knowledge sharing, openness, transparency and transcending geographical boundaries. Moreover, factors, such as vastness in terms of ICT components could be considered as a great potential to support development.

Check Your Progress 2

- 1) We recognise that while ICT is unquestionably a valuable tool for raising awareness and disseminating current information, there are limitations and impediments to its use in combating poverty. Given the current situation, it is possible to say that there is an inequality in the reach of ICT tools. The risk remains that the rich will have greater access to ICTs and the knowledge economy, while the poor will be excluded from all

such benefits. This digital divide may exacerbate existing disparities in finance, skills, privileges, and other areas of social growth. To reduce disparities, technologies must be deployed where information is made available to the poor, their voices are effectively heard, and government operations are transparent.

- 2) We discovered that poverty is a complicated situation characterised by a lack of basic essential assets. Poor people are also subjected to unsanitary living conditions, a lack of resources, a low income, and discrimination. The potential impact of ICT on poverty eradication can be found at the micro, intermediate, and macro levels. ICTs can be used in a variety of ways to improve the socioeconomic conditions of the poor, and they have a direct relationship with economic growth.



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