UNIT 3 ICT AND DIGITAL DIVIDE

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3.0 INTRODUCTION

Digital Divide means the gap in access and usage of Information and Communication Technology (ICT). Initially, the Digital Divide indicated the division between those with and without telephone access. However, since the late 1990s, the term has been used mainly to refer to the divide between people with access to the Internet (particularly broadband) and people without access to the Internet. Over the years, the term Digital Divide has achieved numerous connotations and can be found to manifest at multiple levels. It may manifest as a divide between rural and urban areas, rich and poor, literate, and illiterate, socio-economic groups, or more developed and less industrially developed nations. It may also exist due to a technological divide in the form of low-performing computers, low-speed wireless connections, or an economic divide in the form of broadband or internet services pricing. In developed economies where the service sector plays a vital role in GDP, a higher digital divide can prove counterproductive to Development since Information and Communication Technology (ICT) plays a vital role in such economies, and a higher digital divide is indicative of the fact that access to ICT is not uniform across the social and economic strata.

3.1 LEARNING OUTCOMES

After completing this Unit, you should be able to:

- Understand what the Digital Divide means;
- Explain the interlinkage between Digital Divide and Development;
- Understand the level of internet penetration in India;
- Explain the role of social media in driving internet access in India; and
- Enumerate influences of ICT in commerce.

3.2 WHAT IS THE DIGITAL DIVIDE?

The Digital Divide may refer to the gap between demographics and regions with access to ICT and those that do not have access to it or, at the most, have restricted access due to economic, technical, or social reasons, say lesser bandwidth (technical reason). The Digital Divide may also refer to the gap in access and usage between people of the same region due to inhibiting reasons of socio-economic disparity. A poor person who has to manage the daily bread for himself and his family hardly has the time and resources to access Information and Communication Technology (ICT), either for his leisurely or economic activities. A country like India, where 55% of the workforce is engaged in agriculture (Census 2011) with 118.7 million cultivators, hardly has access to ICT for the population living at the subsistence level. Coupled with this is the high cost of Internet access, which inhibits even the well-off from accessing ICT for leisure or economic activities.

Therefore, the Digital Divide essentially refers to the gap between people, households, and geographic areas at different socio-economic tiers concerning their opportunity to access ICTs and their Internet use for several chores. The term "Digital Divide" might have raised several doubts and questions in you, such as 'Where does it occur and why?', 'What are its causes?', 'How can it be measured?', "What are the factors which affect it?', 'How can it be reduced?' etc.

Well, we will investigate each one by one. But first, let's understand the term ‘Development’.

3.3 WHAT IS DEVELOPMENT?

There are various definitions of development, depending upon the perspective from which we are looking. Consequently, we have Economic Development, Social Development, Material development, Immaterial Development, Inclusive Development, etc. In its simplest sense, development can be understood as progress or growth towards a desired direction. This progress or growth can have an economic or social dimension, material or immaterial, inclusive, or exclusive. However, in most cases, the word development is often spoken with economic intent.

The term "development" in international usage implies the need and methods for providing better living conditions for people, especially those residing in poor countries. It includes not just economic growth, though that is crucial, but also human development—which implies providing for health, nutrition, sanitation, education, and a sustainable environment.

The United Nations Development Programme (UNDP) uses a more elaborate definition of development, which aims 'to enable people to lead long and healthy lives, to be knowledgeable, to have access to the resources which enable a decent standard of living and to participate in the life of the community.’

Development is, therefore, empowerment. It should be aimed at unshackling people from obstacles that constrain their abilities to advance their lives and

those of the communities. In 2000, the UN Millennium Declaration was adopted, which aimed to remove poverty, buttress human dignity and equality, and realise peace, democracy, and environmental sustainability. The eight goals enshrined in the declaration reflect the meaning and aim of development that the UN envisages. These eight goals are-

1. To ensure environmental sustainability.
2. To remove extreme poverty and hunger
3. To ensure gender equality and to empower women.
4. To improve maternal health
5. To achieve universal primary education
6. To tackle the menace of HIV/AIDS, malaria, and other diseases
7. To develop a global partnership for development
8. To reduce the child mortality rate

The role of ICT in pursuing the aforementioned objectives of the UN can be that of a facilitator.

3.4 HOW DEVELOPMENT AND DIGITAL DIVIDE ARE INTERLINKED?

If we chart the growth of the economy since early civilisation, we will come across three stages:

i. Agricultural economy phase
ii. Industrial economy phase, and finally
iii. Service economy phase.

Agriculture played an important role in human civilisation. Civilisation develops only with settled agriculture. During the agricultural phase, man uses his skills upon nature to produce and fulfil his material needs. He lived in this phase for centuries, where he carved out glorious empires and built magnificent buildings. However, a turning point occurred with the Industrial Revolution's advent in 18^{th} C. AD. The whole process of production undergoes a drastic change. The earlier manual mode of production gave way to the machine mode of production, drastically reducing the time required for production and increasing the quality of goods produced. Technology played an important role in this phase, and the growth or development of the economy became contingent upon technology.

However, the third phase, i.e., the emergence of the service economy, played (and continues to play) a dominant role in a country's economy and, consequently, its development. It must be noted that the emergence of this sector coincided with the emergence of Information and Communication Technology. ICT prepared the ground for the emergence and proliferation of the service sector. It is here that ICT (and its demographic corollary- digital divide) plays an important role in development. Given the role ICT has attained in the service sector, the transition of any country from a developing to a developed economy without it is considered unimaginable.

Since there is no unanimity upon the definition of a developed and developing economy (or country), the basic difference, as far as our study is concerned, can be presumed to be the relative share of the primary and tertiary sectors in the economy of the country. While developed economies usually have a larger tertiary sector and most of the workforce is engaged in its service industries, agriculture (primary sector) is the major contributor to the country's GDP in less developed economies.

Therefore, ICT becomes pivotal in a developed economy since the service industry is existentially dependent on 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. How would you define the Digital Divide, and what factors contribute to its existence in today's society?

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2. Explore various dimensions of development beyond economic growth and discuss how they relate to societal progress and well-being.

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3. Discuss the interconnectedness between the Digital Divide and Development.

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3.5 ICT IN INDIA

It becomes pertinent to peek into the role and reach of ICT in India. Before we proceed, let us have a statistical look at the level of internet penetration in India. Though India has 460 million Internet users and is ranked as the second largest online market after China, its Internet penetration is dismal when counted in terms of the percentage of people accessing the Internet. Nevertheless, ICT has stimulated progress across various dimensions of society, from connecting individuals to spreading across businesses and governments. Unfortunately, a digital divide exists in accessibility between higher-income and lower-income nations. High-income countries will inevitably show greater penetration of information communication technology than less developed countries. What is needed is that to be able to uphold greater social development in the world, it is vital to escalate access to digital technology universally.

There has been exponential growth in internet users in the past two decades. The increasing penetration of information communication technology by bridging the existing digital divide is directly related to any nation's greater social growth. It is also important to build up the consistent human capital required to use the technology optimally. ICT can benefit the economy by increasing output, but only if people with access to the technology have the necessary potential to make the best use of it.

We can state here that to bring greater diffusion of information communication technology to society, we must make it more affordable so that people of every class can afford it. This is possible through support from multilateral organisations to the developing nations by assisting them in building their communication infrastructure. Moreover, promoting healthy market competition in Internet provision and reassuring public-private partnerships in building digital infrastructure could increase the affordability of ICT and thus improve access to it. Further, digital divides can also be lessened by bringing greater awareness among citizens about the use of digital technology, which could help decrease information inequality in society.

Retail e-commerce sales in India stood at 16.08 billion US dollars in 2016, making it the second-largest online market after China. It is expected to surpass 45 billion USD in 2021. From the above figures, it is evident that most Indians use the Internet for socialising and purchasing. Though the former may be discarded as a leisurely activity, the latter can be an index of economic development since the volume of online trade that is taking place in India, as is evident from the figures above, is indicative of the country's economic robustness. After looking into facts, figures, and statistics, let us revert to the basic question: What role does ICT play in development, and how is the digital divide an impediment in its pursuance?

3.5.1 Role of ICT in Development

You are already aware that the scopes of ICT in Development are numerous and can be summarised in the following points as per a United Nations report-

- The ICT sector’s output directly contributes to the economy.
- Advancement in public administration through ICT in governance by bringing administration closer to people through e-portals of the government departments. In this way, transparency in the procurement process for public service contracts can be ensured, thereby reducing corruptive practices.
- ICT can be used to improve education, including distance learning and training.
- ICT can be used to improve the delivery of healthcare services, including the application of telemedicine.
- ICT can be used to monitor ecological situations and maintain environmental stability.

The benefits of ICT can be used to tackle the problems of poverty, illiteracy, and universal healthcare, as well as to bring governance closer to people and make it more citizens centric. As said before, a country's transition from a developing to a developed economy is contingent upon the spread and use of ICT in its service industry.

An economy evolves in a dialectical fashion. On one hand, it opens up newer opportunities and professions, thereby playing a pivotal role in employment generation; on the other hand, it throws up the complexities of managing and governing vast urban expanses which face a shortage of amenities and services. Consequently, cities today face the problem of urban implosion, whereby the services and basic amenities required are falling short of demand, nullifying the very reason for the migration of people from rural to urban areas. The above problem can be addressed by employing ICT in governance and in the provisioning of services.

3.5.2 ICT and Governance in India

The majority of Indians reside in rural areas. As per the Census 2011, 69% of the population resides in rural areas (in the previous Census, this figure stood at 72%), and 55% of its workforce is in the primary sector. To enhance and sustain the overall prosperity, economic growth and social development in the global competitive regime, the Government of India initiated a National E-Governance Plan (NeGP), which is an initiative of the Government to make all its services available to the citizens of India via electronic media. The rural e-Governance projects implemented in the recent few years have aptly demonstrated the importance of ICT in the areas of rural development that are in question. Some of the schemes introduced in rural India have improved government services immensely. Instances like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Online Income Tax, Online Central Excise, Unique ID (Aadhaar), e- Stamp, E-office, online payment of bills, online booking (of goods and services), e-Choupal, e-Krishi, online FIR etc has not just accelerated the growth of respective areas and contributed to country's economic development, but also brought governance to every doorstep. The ambitious Aadhaar project is linking every citizen digitally and curbing the malpractices of bribery, red-tapism, tax evasion, etc, by bringing more transparency into governance.

ICT not only impacts citizen service delivery but also provides the much-needed stimulus to economic growth due to its focus on crucial social and industry sectors. The extensive use of ICT in governance not only provides better citizen service but also enhances the efficiency, transparency, and accountability of various government departments and agencies.

3.6 PREREQUISITES FOR PROPER FUNCTIONING OF ICT

However, the objectives mentioned above can only be achieved if a proper ICT infrastructure exists in the country. Infrastructure does not imply only the physical infrastructure (the availability of cheap internet services being a prime reason) but the social infrastructure as well, which means the

acceptability, readiness, and digital literacy of the citizens to use ICT to meet the demands of their service. It is here that the digital divide plays a role. With just one-fourth of the population having access to the Internet, the benefits of ICT in governance and development are constrained.

The digital divide does not exist merely at the level of availability of ICT, but also (and more importantly) at the level of adaptability and ability to use ICT for furthering one's development and that of the society in particular and the nation as a whole. Thus, there exists a digital divide between people living in urban areas and the ones living in rural areas, between rich and poor, between the young (who are more capable of using ICT for their own needs and desires) and the old generation (who find technology a bit difficult to comprehend). The digital divide also exists between men and women, as data suggests above. Men dominate internet usage in India with 71% compared to 29% of women. Thus, it is evident that the digital divide manifests itself at multiple levels and is not concentrated in a particular section or strata. This digital divide acts as an impediment towards growth and development.

Check Your Progress: 2

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

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

1. What factors have influenced India's growth in internet usage, and what challenges persist in bridging the digital gap across different regions and demographics?

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2. Explore the role of social media in driving internet access in India. How has the widespread adoption of social networking platforms contributed to increased connectivity and digital inclusion?

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3. Investigate the impact of Information and Communication Technology (ICT) on commerce and economic development.

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3.7 LET US SUM UP

With a global shift towards a service economy, ICT's role in any country's development has become inevitable. It is not just development that also plays an important role in governance. Apart from providing better citizen service, ICT has also ushered in transparency and accountability in government

departments and agencies. It has brought administration closer to people, has radically transformed the way education used to be imparted, has ushered a revolution in healthcare through telemedicine or medical transcription, improved monitoring of welfare policies, improved management of ecology and maintenance of environmental stability, etc. ICT has no doubt brought about a revolutionary transformation in the economy as well as in the society. However, its benefits cannot be inclusive unless a large digital divide incapacitates three-fourths of the population and puts them outside the domain of ICT. Consequently, if this digital divide is not bridged or addressed on time, it will again give rise to socio-economic disparity, with the disparity not being centred on literacy but on digital literacy.

3.8 FURTHER READINGS

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3.9 CHECK YOUR PROGRESS: POSSIBLE ANSWER

Check Your Progress 1

1. The Digital Divide refers to the gap between those who have access to modern information and communication technologies (ICTs) and those who do not, exacerbating social and economic inequalities. Factors contributing to its existence include economic disparities, infrastructure limitations, educational barriers, and socio-cultural factors. Additionally, disparities in digital literacy and skills, as well as issues of affordability and accessibility, play crucial roles. Discrimination based on gender, age, ethnicity, and geographic location further widens the divide, hindering marginalised communities from benefiting from digital advancements.

2. Development encompasses various dimensions beyond economic growth, including social, environmental, and political aspects. Societal progress and well-being hinge on factors such as healthcare, education, environmental sustainability, equality, and political stability. Quality of life indicators, like life expectancy, education levels, and access to basic amenities, reflect a society's holistic development. Addressing social inequalities, promoting environmental sustainability, ensuring political inclusivity, and fostering cultural preservation are integral to achieving comprehensive development and enhancing overall well-being.

3. The Digital Divide and Development are intricately linked, with access to digital technologies playing a significant role in socio-economic progress. Bridging the divide can enhance education, healthcare, employment opportunities, and access to information, thereby fostering overall development. Conversely, unequal access to digital resources can exacerbate existing inequalities, hindering socio-economic advancement. Development efforts must prioritise closing the digital gap to ensure inclusive growth and empower marginalised communities. Additionally, digital literacy and skill-building initiatives are essential to maximise the benefits of technology and promote sustainable development.

Check Your Progress 2:

1. India's growth in internet usage has been influenced by factors such as technological advancements, government initiatives, and increased mobile penetration. Initiatives like Digital India aim to expand digital infrastructure and promote digital literacy, driving internet adoption across the country. However, challenges persist in bridging the digital gap, including inadequate infrastructure in rural areas, affordability constraints, linguistic diversity, and disparities in educational attainment. Additionally, cultural barriers and gender disparities contribute to unequal access to technology. Efforts to address these challenges require holistic approaches, including infrastructure development, affordability measures, and targeted interventions to empower marginalised communities.

2. Social media has played a pivotal role in driving internet access in India,

facilitating connectivity and digital inclusion. Platforms like Facebook, Twitter, and Instagram have provided avenues for communication, networking, and information sharing, particularly in rural and underserved communities. Social media's popularity has spurred internet adoption, especially among youth and urban populations. Furthermore, initiatives like Facebook's Free Basics have aimed to provide free access to essential online services, further promoting connectivity. However, challenges such as misinformation, privacy concerns, and digital divides based on socio-economic factors persist. Leveraging social media for digital literacy efforts and community engagement can enhance its role in promoting inclusive connectivity and bridging the digital gap.

3. Information and Communication Technology (ICT) has significantly impacted commerce and economic development, transforming business models, markets, and trade practices. ICT facilitates global connectivity, enabling businesses to reach wider markets, streamline operations, and enhance productivity. E-commerce platforms have revolutionised retail, providing convenience and accessibility to consumers while promoting entrepreneurship and market competitiveness. Moreover, ICT-driven innovations like mobile banking and digital payment systems have expanded financial inclusion, empowering individuals, and businesses. However, challenges such as digital security, infrastructure limitations, and skill gaps need to be addressed to maximise the socio-economic benefits of ICT. Overall, embracing ICT can foster economic growth, create employment opportunities, and drive sustainable development.