

ICT and Social Order

SOC 205



**University of Ibadan Distance Learning Centre
Open and Distance Learning Course Series Development**

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Vice-Chancellor's Message

The Distance Learning Centre is building on a solid tradition of over two decades of service in the provision of External Studies Programme and now Distance Learning Education in Nigeria and beyond. The Distance Learning mode to which we are committed is providing access to many deserving Nigerians in having access to higher education especially those who by the nature of their engagement do not have the luxury of full time education. Recently, it is contributing in no small measure to providing places for teeming Nigerian youths who for one reason or the other could not get admission into the conventional universities.

These course materials have been written by writers specially trained in ODL course delivery. The writers have made great efforts to provide up to date information, knowledge and skills in the different disciplines and ensure that the materials are user-friendly.

In addition to provision of course materials in print and e-format, a lot of Information Technology input has also gone into the deployment of course materials. Most of them can be downloaded from the DLC website and are available in audio format which you can also download into your mobile phones, IPod, MP3 among other devices to allow you listen to the audio study sessions. Some of the study session materials have been scripted and are being broadcast on the university's Diamond Radio FM 101.1, while others have been delivered and captured in audio-visual format in a classroom environment for use by our students. Detailed information on availability and access is available on the website. We will continue in our efforts to provide and review course materials for our courses.

However, for you to take advantage of these formats, you will need to improve on your I.T. skills and develop requisite distance learning Culture. It is well known that, for efficient and effective provision of Distance learning education, availability of appropriate and relevant course materials is a *sine qua non*. So also, is the availability of multiple plat form for the convenience of our students. It is in fulfilment of this, that series of course materials are being written to enable our students study at their own pace and convenience.

It is our hope that you will put these course materials to the best use.



Prof. Abel Idowu Olayinka
Vice-Chancellor

Foreword

As part of its vision of providing education for “Liberty and Development” for Nigerians and the International Community, the University of Ibadan, Distance Learning Centre has recently embarked on a vigorous repositioning agenda which aimed at embracing a holistic and all encompassing approach to the delivery of its Open Distance Learning (ODL) programmes. Thus we are committed to global best practices in distance learning provision. Apart from providing an efficient administrative and academic support for our students, we are committed to providing educational resource materials for the use of our students. We are convinced that, without an up-to-date, learner-friendly and distance learning compliant course materials, there cannot be any basis to lay claim to being a provider of distance learning education. Indeed, availability of appropriate course materials in multiple formats is the hub of any distance learning provision worldwide.

In view of the above, we are vigorously pursuing as a matter of priority, the provision of credible, learner-friendly and interactive course materials for all our courses. We commissioned the authoring of, and review of course materials to teams of experts and their outputs were subjected to rigorous peer review to ensure standard. The approach not only emphasizes cognitive knowledge, but also skills and humane values which are at the core of education, even in an ICT age.

The development of the materials which is on-going also had input from experienced editors and illustrators who have ensured that they are accurate, current and learner-friendly. They are specially written with distance learners in mind. This is very important because, distance learning involves non-residential students who can often feel isolated from the community of learners.

It is important to note that, for a distance learner to excel there is the need to source and read relevant materials apart from this course material. Therefore, adequate supplementary reading materials as well as other information sources are suggested in the course materials.

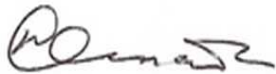
Apart from the responsibility for you to read this course material with others, you are also advised to seek assistance from your course facilitators especially academic advisors during your study even before the interactive session which is by design for revision. Your academic advisors will assist you using convenient technology including Google Hang Out, You Tube, Talk Fusion, etc. but you have to take advantage of these. It is also going to be of immense advantage if you complete assignments as at when due so as to have necessary feedbacks as a guide.

The implication of the above is that, a distance learner has a responsibility to develop requisite distance learning culture which includes diligent and disciplined self-study, seeking available administrative and academic support and acquisition of basic information technology skills. This is why you are encouraged to develop your computer skills by availing yourself the opportunity of training that the Centre’s provide and put these into use.

In conclusion, it is envisaged that the course materials would also be useful for the regular students of tertiary institutions in Nigeria who are faced with a dearth of high quality textbooks. We are therefore, delighted to present these titles to both our distance learning students and the university's regular students. We are confident that the materials will be an invaluable resource to all.

We would like to thank all our authors, reviewers and production staff for the high quality of work.

Best wishes.

A handwritten signature in black ink, appearing to read 'B. Okunade', written in a cursive style.

Professor Bayo Okunade
Director

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Course Introduction

You are welcome to SOC 205. This course engages the role of Information Communication Technology (ICT) as a predictor of social order. Like we all know that change is the constant part of social and human life, it is important for us to know why and how ICT is an effect of change and social order in our modern society. ICT is a characteristic of modern society, but social order is not. Social order is characteristic of all of human history and probably the future. Therefore, we shall examine the state of social order in the periods where there was no ICT (ICT was not fully developed) and now that ICT is widespread, ubiquitous and highly dominant/predictive of social life. Invariably, we shall be comparing historical and present realities of our society. In this course, you will be introduced to comparative sociology – although all sociology is comparative. We shall be examining the influence of ICT upon the structures of society. This perspective will therefore help to know the dimensions of changes and how society can leverage on them for the greater good. This study assumes that in a few ways, the students have connected with the changes in our world and our present society, which is powered by ICT development. It is believed that students have seen ICT at work, especially with regards to instituting or disintegrating social order.

Like we have the independent and the dependent variables, the course title already reflect that we attribute ICT as an instrument of social order, and it is in the light of this, that the course will focus. By extension, we shall focus basically upon the role of ICT in Society, Social Institutions, Family, Education, Religion, Politics, Economy, Criminality, Globalization, Health, Social Change, and the Future. By this, we shall understand how ICT has influenced and shaped human interaction in the past and in the 21st Century.

The Course is concerned with a consideration of the basic institutions of the society in the context of social order. How social institutions have fostered social order in the past and how they build cohesion in the present time. How social institutions have been transformed and are made to function in the midst of technological change and the expansion of social life. It is important to note that ICT has influenced the dimensions of social interaction, between and among individuals/structures of society. Therefore, there is a constellation of unpredictable engagements in social life. It is necessary to understand how social structures, social institutions, and social practices are conserved and maintained in the face of these dominant technological changes, which has predicted human social life in modern society.

SOC 205 is a course for 200 level undergraduate students of the University of Ibadan Distance Learning program and it is developed to deepen the student's knowledge of change, contemporary sociology and an introduction to the comparative nature of sociology.

Study Session 1: Definition and Evolution of ICT, Social Order and the Debates about the Basis of Social Order

Introduction

This study session is committed to the introduction and explanation of the concept “Information and Communication Technology” (ICT). The ICT is simply defined as a broad based technology (including its methods, management and application) that supports the creation, storage, manipulation and communication of information.

The ICT serves as a means of effective communication and access to other people both within our country and outside the country – all over the world. You will consider the idea of what social order is and the different explanation of social order.

Furthermore, the three major approaches to the understanding of social order – the functionalist, Marxian and ethno methodological debates about what really makes up social order shall also be examine. Why do we have the structures in society and do the structures really exist? If the structures exist, how do they function?

Learning Outcomes for Study Session 1

When you have studied this session, you should be able to:

- 1.1 Describe the concept of ICT and explain the Processes/History of ICT (SAQ 1.1)
- 1.2 Examine the conclusions of the three debates about Social Order (SAQ 1.2)

1.1 Concept of ICT

Information and Communications Technology (ICT) is the fundamental transformation of society from the state of monotony to dichotomy. It is a system of unification and integration of communication channels which enables a system of direct access, storage, transmission and manipulation of information.

ICT is a technological process, which seeks to merge the audio-visual, telephony and computer system into a single framework, by means of a link system – whether cable or wireless, as a means of communication. ICT is a process of condensing the multiple functions of every means of communication into a single interface.

According to French (1996), ICT is a broad based technology (including its methods, management and application) that supports the creation, storage, manipulation and communication of information”. (French 1996 in www.webpages.uidaho.edu/~mbolin/nwabueze-ozoiko.htm).



Figure 1.1 ICT Model

Although there has been increasing diversification of the idea, every invention in the light of ICT had been to improve the status quo and a march towards a virtual society. It is believed that ICT has capacity for cost-saving/effectiveness, increased management performance, and more effective social interaction.

- ICT saves cost and increase management performances, kindly suggest two ways to achieve this?
- ICT helps to save cost by increasing efficiency and reduce consumption during recruitment in an organization. In the management performance, information dissemination is carried out speedily with ICT.

In the same light, Info communication is a shorter form of ICT. It describes the combination of telecommunication and information processing and content handling functions on a common digital technology base (Sallai, 2012).

ICT is the way/system of technological ideas that seeks to connect the various means of communication, thereby forming a whole and performing on a single technical interface. The computer system is the binding nerve of ICT development. The system of the ICT combines information technology (as defined by computer-based application or process) and telecommunication technology (as in fax machine or video calls).

This multimedia integration, based on the computer, makes for information communication technology. You may be wondering, “How then are these things connected to form a whole?” The answer is a technological development that has evolved around the use of cables, terrestrial and television satellites, fibers and cloud technology (which are regarded as wireless).

1.1.1 History of ICT

The term “ICT” had existed in the 1970s and been in use in the academics since the 1980s. but the term gained more popularity in 1997 when **Dennis Stevenson** used it in a report submitted to the UK government and in the revised National Curriculum for England, Wales and Northern Ireland in 2000 (**Melody 1986, Scott and Marshall, 2009**). Prior to the period of the advent of ICT, the core dimensions of ICT (Communication through telephony, printing, signals) had gone through a process of evolution.

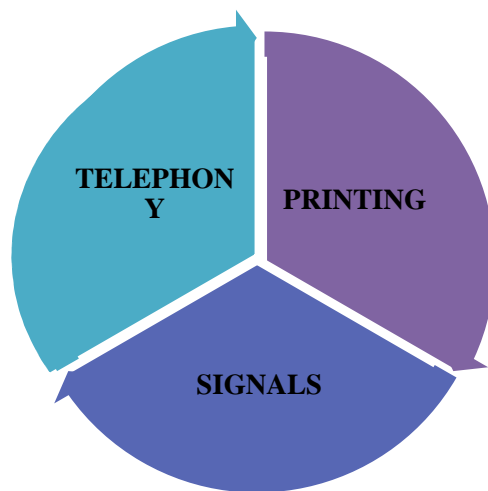


Figure 1.2 Core Dimension of ICT

Emerging from **Alexander Graham Bell’s** telephone in 1876, market competition made the telephone invention to expand and people were able to communicate at about half mile (800m). More telephone inventions were developed in the 1880s, 1904 (over three million phones in the US), 1930s, 1960s (mobile phones), 1973 (Motorola made the first cellular phone call). In the 1980s and 1990s, telephony services became widespread via cable operators.

The 21st Century witnessed a newer dimension of telephone service, through the Internet Protocol (IP) telephony (VoIP – Voice over Internet Protocol).
(en.m.wikipedia.org/wiki/Alexandar_Graham_Bell; en.m.wikipedia.org/wiki/History_of_the_telephone)

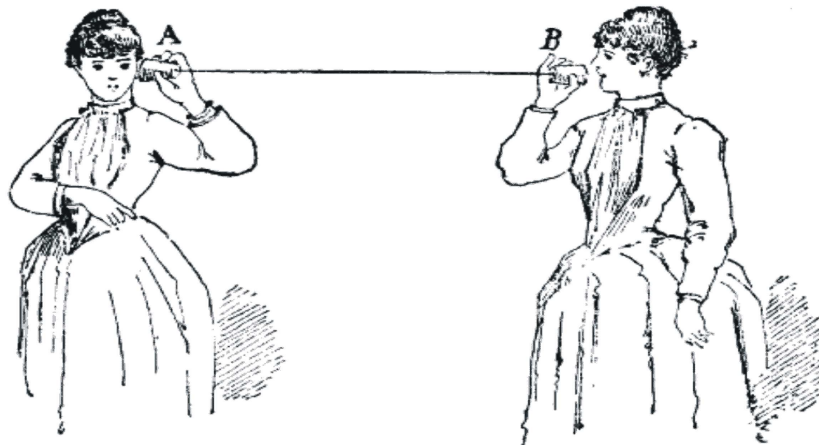


Figure 1.3 Voices over Internet Protocol

1.1.2 The Telegraph

This is a device for human-to-human transmission of coded text messages which uses electrical signals conveyed via telecommunication lines or radio. This was developed alongside the telephone technology (1832 – Baron Schilling; Carl Friedrich and Wilhelm Weber – 1833).

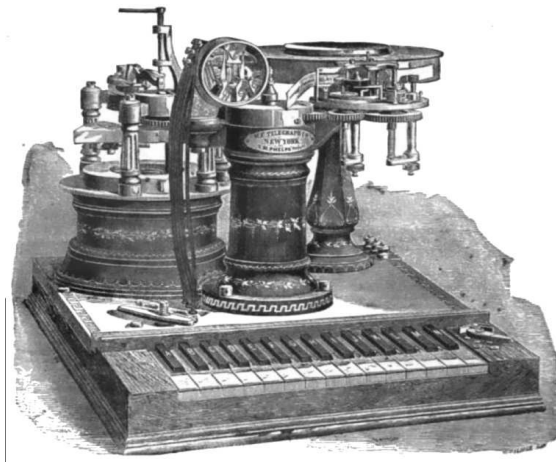


Figure 1.4 Telegraphs

Source: en.wikipedia.org

In fact, the telephone emerged from the creation and successive improvement upon the technology of the telegraph. Electric telegraph networks permitted people and commerce to almost instantly transmit messages across both continents and oceans with widespread social and economic impacts.

In the US, Western Union discontinued all telegram and commercial messaging services on 27 January 2006. This change was evidently a product of the increased effectiveness of ICT ([en.m.wikipedia.org/wiki/Electrical telegraph](http://en.m.wikipedia.org/wiki/Electrical_telegraph)).

1.1.3 The Computer System

The computer system is the mainstay of the ICT evolved through the Abacus (an addition and subtraction device), unto the Mechanical clock in the middle ages. The discovery of logarithms by **John Napier** in the 1600s translated to the invention of the first real calculator in 1642 by **Blaise Pascal**.

Box 1.1

Gottfried Van Leibnitz Machine Invention

The German mathematician – Gottfried van Leibnitz in 1690, invented a machine that could add subtract, multiply, divide, and calculate square roots.

The invention of punched cards by Joseph Jacquard in the early 1800s, led to another invention by **Charles Babbage**, who developed the difference engine and he is regarded up till date as the father of modern day computers.

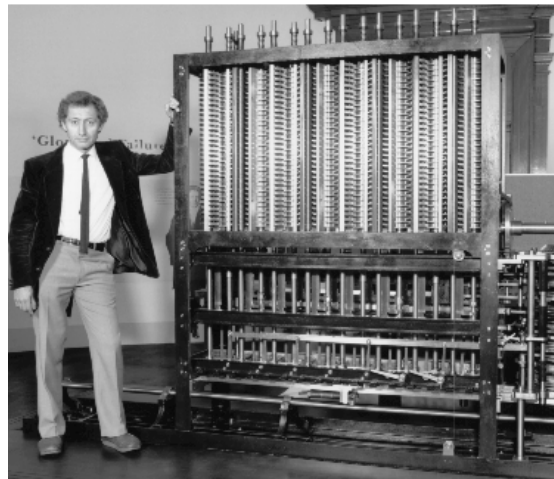


Figure 1.5 Charles Babbage and his computer
Source: <http://www.glendc.com/?p=118>

The genius invention of the Hollerith code by **Dr. Herman Hollerith**, gave leverage for the development of the first computer card. In 1911, the Tabulating Machine Company merged with other companies to form the International Business Machine Corporation (IBM).

Subsequent development gave rise to the first generation to the fourth generation. The fourth generation of computers uses large scale integrated circuits for increased storage capacity and speed; microprocessors and microcomputers. (1970 –till date) and fifth generation computers using artificial intelligence which is not readily available commercially (library.thinkquest.org/11309/data/history.htm) see table below

Table 1.1: The Generations of Computer Invention and their Technologies

| Generations of Computers Invention | | |
|---|-------------------------------------|----------------|
| First Generation of Computers | Silicon Chips | 1951-1958 |
| Second Generation of Computers | COBOL FORTRAN | 1959-1964 |
| Third Generation of Computers | Integrated Circuit with Programming | 1965-1970 |
| Fourth Generation of Computers | Microprocessor and Microcomputers | 1970-till date |

1.1.4 The Internet

The internet as the power nerve of Information and Communication Technology came to being as a response by the US military and the need for the military to establish communication with troops in the 1960s. The Department of Defense funded research on computer networking called the Advanced Research Projects Administration (ARPA) and the wide based area network (ARPANET) emerged.

But because network was fragile and a single computer being down could affect the whole computer on the network. But to solve this problem, the computers were decentralized and the transmission Control Protocol (TCP/IP) was created.

The connection was usually between computers and by the 1980s, the ARPANET became the idea of the internet, using 200 computers and the number of computers on the network continually increased from 562 in 1983 to 1024 in 1984. Through the years, the network system was continually improved and the population of computers connected increased.



Figure 1.6 Computer Systems

Source: http://en.wikipedia.org/wiki/Home_computer

Also, in 1992 a new network to expand the internet was built and internet II is a next generation Internet Protocol and optical network. In late 2007, Internet II began operating its newest dynamic circuit networks. This is an advanced network technology that allows user-based allocation of high-capacity data circuits over fiber-optic networks.

In 2009, Internet II members included 200 higher education institutions, over 40 members from industry, over 30 research and education network and connector organizations, and over 50 affiliate members (en.m.wikipedia.org/wiki/internet2).

The ideas, processes and impacts of a globalizing effort put together through ICT varies across regions and within regions. Computers have increasingly become private property and ICT indicates a ubiquity, increase and contagious nature of information. It has informed the expansion of media, the dimensions of education, broadening the human horizon of knowledge and communication.

- List two ways the internet has affected your life
- The internet has helped to increase exposure through social media and wider access to information.

The advent of information and communication technology has definitely marked a new epoch in human history. In this regard, the 21st Century is tagged the information era, which is characteristically an information society.

Notably, the journey towards the information society is still in progress. Manuel Castells identifies the characteristics of the information era, which distinguishes it from the industrial era, which are as follows;

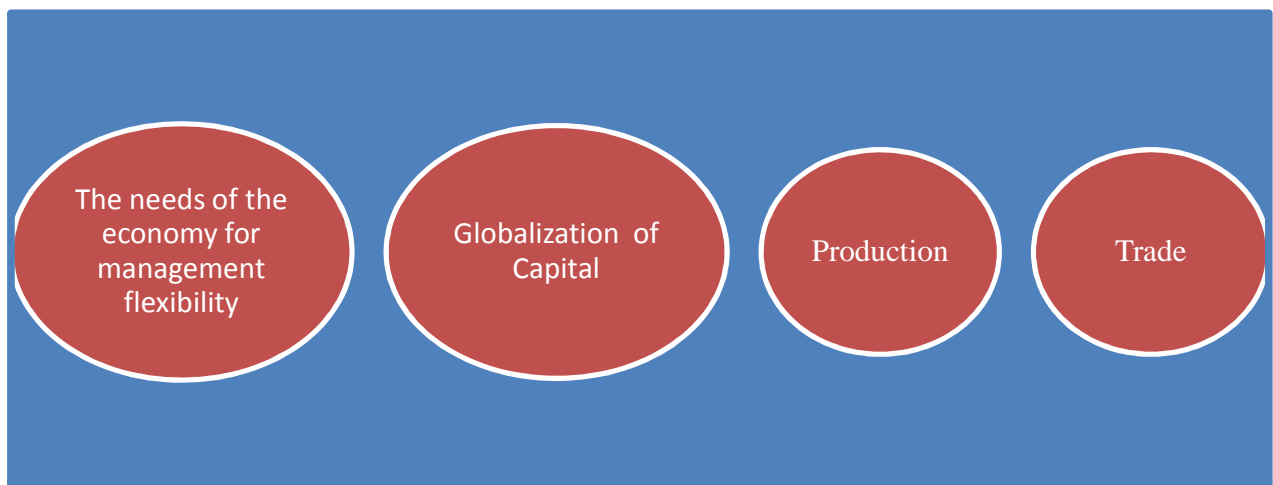


Figure 1.7: Characteristics of Information Era

The demands of society in which the values of individual freedom and open communication became paramount; and the extraordinary advances in computing and telecommunications made possible by the microelectronics revolution.” (Castells, 2001).

ICT is a product of technological expansion and the process of expansion includes the internet. The ICT era is different from the period in which fossil energy, fuels and steam defined human progress.

Box 1.2: Human History has Evolved

- The hunter/gatherer system,
- to the agrarian system
- then to the industrial system and
- Now to the epoch of information revolution (Ezema, 2010).

Its domains of influence are multifaceted; therefore it is imprecise on inspection. Information and Communication technology evolve around every facet of human life, every structure in society and every social institution.

1.2 Social Order

Social order is a central concern of sociology and it is the core of the science of society. Sociology seeks explanations about how and why societies cohere. Social order is the main idea of the functionalist theory and in fact of all sociology.

Functionalist theory assumes that the social system of society can only survive based on the extent of stability and degree of order that exists.

Box 1.3: Social order that functionalism seek to explain

- The origin of social order,
- the maintenance of social order and
- The stability in society.

Functionalists infer that social order is an outcome of a value consensus in society and attainment of common goals. Therefore, with regards to value consensus, members of society will cooperate to achieve the common goals of society.

To establish social order in society, Functionalist theories of Talcott Parsons (1937, 1964, 1965a), Bronislaw Malinowski (1954) and Emile Durkheim (1912), identified religion as a variable for social order. Also, Karl Marx conflict theory (in Bottonmore and Rubel, 1963), expressed religion as ‘the sigh of the oppressed...the opium of the people’.

He acknowledged that there cannot be an ideal society – society cannot be free from inequality, exploitation and alienation. He inferred that religion has both sedative and stimulating capacity because social order is tied to certain social structures or institutions.

Thomas Hobbes

Thomas Hobbes description of social order posits that human society is founded upon passion and reason. He paints the human being as a rational, calculative and self-interested. Passion guides human desires in society and reason is a predictor of the ways and means through which human beings attain satisfaction. Self-preservation reins wild-straying human desires.

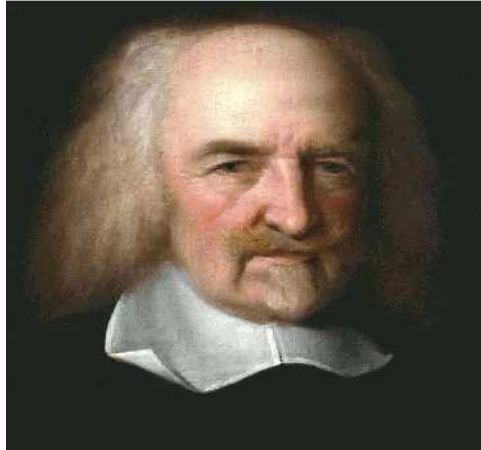


Figure 1.8: Thomas Hobbes

Source:

http://www.d.umn.edu/cla/faculty/jhamlin/4111/Hobbes/Thomas%20Hobbes_files/hobbes.jpg

Human passion is ordered and guided by fear and a need to preserve peace in society, since the outcome of disorder is usually grave. The idea of self-preservation thus makes human beings to agree to a social contract. The social contract is based upon submission to constituted authority, surrender of free-range passion and agreement to live within the ambits of socially determined standards of behavior/norms.

In 19th century thoughts of classical Greek and Chinese writings, human history can be defined in terms of successive stages. Although theoretical explanations have not separated the culture-centric evolution from historical sequences that are specific to particular areas (**E. b. Leacock** in **Engels**, 1973). This therefore formed the basis of the argument that there is order in society.

Classical Sociologists believed that the consequences of industrialization – a partial offshoot of the loss of authority by traditional institutions (American and French Revolutions of 1776 and 1789 respectively), urbanism, and break-down of filial/primary social ties, end of community, interdependence, and the age of co modification might have dire implications for the social change in the 19th century.

In-Text Question

Human passion is ordered and guided by fear and a need to preserve peace in society, since the outcome of disorder is usually grave. True or false

In-Text Answer

True

1.2.1 Explanations of Social Order

As societies evolve and human interaction become expanded, the implications of population explosion, technological and scientific expansion begin to have deep cutting influence upon the dimensions of social interaction and the core of social order within society.

Functionalist Debate

Emerging from a critique of the Hobbesian idea of social order (that human beings are essentially rational, self-motivated and calculative and their passions and reason under institutionalized control/restraints), Talcott Parson, in the light of Durkheim's view, believed that **Thomas Hobbes'** ideology did not fully explain the basis for social order.

Durkheim and **Parson** portend that social order is founded upon a 'commitment' to shared/common values, ideas and norms that are established in society by virtue of social relationships/interaction. **Talcott Parson** explained that the fear of the consequences that may be imposed by constituted authority (regulations or laws), may not be a sufficient deterrent to negative behaviours.



Figure 1.9 Talcott Parson

Source: <http://study.com/cimages/multimages/16/talcott-parsons.jpg>

He suggests that a moral commitment to common values is the key to maintaining order in society. Parson identifies that individual goals are developed and achieved within the context of the norms and values in society. He highlighted the taxonomical AGIL (Adaptation, Goal attainment, Integration and Latency/Pattern maintenance) schema, which explains the systems and subsystems that actively inform the general system of action – cultural, social, personality and biological.

In order for a society to survive, it must meet the four basic prerequisites, which functions within the general system of action. As society becomes complex, these prerequisites are developed and further strengthened by virtue of the complexity and amount of information available in developed societies.

Emile Durkheim's emphasis on the ideology that norms and values are prerequisites for social order was fundamentally a result of his critique of the utilitarian social thought of **Herbert Spencer** – a social Darwinist. From his view point of increasing and growing complexities of industrial societies at the time; Herbert Spencer believed that social order is an offshoot of a mutual and contractual agreement.

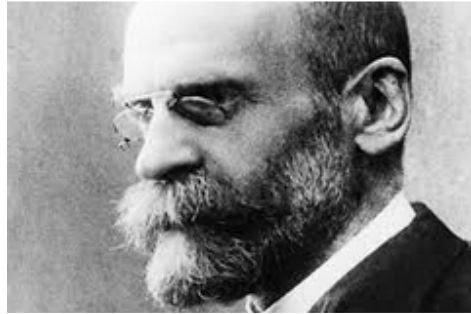


Figure 1.10 Emile Durkheim

Source: <http://www.socialsciencespace.com/wp-content/uploads/Emile-Durkheim.jpg>

He understood society from the perspective of continuous evolution. Society is viewed as a living organism, which as it grows, will 'self-consciously' develop its measure of controlling its own mechanisms of success (survival of the fittest – which emphasizes Darwinist idea of *natural selection*).

According to **Haralambos, Holborn and Heald** (2008), order in economic system is based upon a general agreement concerning business *morality*. Order is therefore a justification for moral commitment to societal values.

Marxian Debate

Substantively, values emerge from ideologies. Therefore, through a Marxian perspective and the analysis of power relations in society, **Karl Marx** and **Louis Althusser** – a neo-Marxist, opine that rules, which are carved as 'values' (which is usually the basis for domination) in society, are based upon the existing dominance of a social class.

Althusser suggested the existence of ideological state apparatus, which coheres and blends individuals into a social order and the justification of the ruling class.

He identifies Ideological State Apparatus (ISA), which is contrasted to the Repressive State Apparatus (RSA) – which enshrines the use of force, as is obtainable in developed capitalist economies. **Althusser** affirms that the church, school, family, mass media and the laws reflect the extent to which society is under the control of the state, which invariably reflect capitalist relations, in order to maintain social order.

Marxism is more a materialist than cultural argument of the basis of cohesion. The conflict theorists do not reason social order as a product of an essentially efficient

interdependence. Marxist ideology portrays society to be in constant conflict, which invariably suggests that moral consensus may not be achievable in society.

Therefore, social order is more assumed than existing. Social order is perceived as enforced and sustained, through the deployment of political, economic and legal compulsion by the dominant class. On this note, constant conflict will build tension, which will drive change, rather than total stability in society.

In-Text Question

Marxism is more a materialist than cultural argument of the basis of cohesion. True or false

In-Text Answer

True

Ethno methodological Debate

As a strand of the range of ideologies in the 1960s, that was a reaction to *macro-sociological* theories (Marxism, functionalism and systems theory). Ethno methodologist generally refutes the claims of social order from the Parsonian–Functionalist orientation of social order. Because ethno methodology studies the unguarded, commonsense practices and constructed aspects of society and human behavior, Thus the below Box explains ethno methodologist further:

Box 1.4 Ethno Methodologists

It is believed that ethno methodologists engage the way people construct, produce, and identify *mutually intelligible* objects, events and courses of action.

Ethno methodology focuses on the inter-subjective cultural meanings of actions rather than on *laws* (**Borgatta** and **Montgomery**, 2000). In **Haralamboset. al.**, 2008, **Alfred Schultz**, a Phenomenologist explains that social order is unreal. Order seemingly appears in society, because individuals actively endeavor to make a sense of social life.

Because there are regular patterns of behavior, which may be ordered within the society, human beings tend to perceive them in like terms.

In the light of ethno methodological understanding, social order is a *convenient fiction* – *an appearance of order constructed by members of society*. Case Study will be considered using the various debates in social order.

Activity 1.1 Various Debates in Social Order

Allow 5 minutes

| | Various Debates | Their views |
|---|---------------------|---|
| 1 | | Human beings are rational, self-motivated and calculative. |
| 2 | Ethno Methodologist | |
| 3 | | This view Suggests that moral consensus may not be achievable in society. Social order is enforced and sustained. |

Select the answers and fill in the spaces provided above.

1.2.2 The Relationship between ICT and Social Order

ICT is a product of scientific and technological changes which is a response to population changes and the problems that came with population growth.

The ICT has created;

- A new way of thinking,
- A new way of doing things and
- A new way of seeing the future

Therefore, the things that society used to believe have been challenged, because as knowledge grows people get to understand why some things need to change.

As society begins to move from simple to complex, through the effect of science and technology, people began to ask questions about the ideas that have been keeping society together, about the elements of social order. This has therefore made it impossible for society to grow and for the frontiers of knowledge to grow.

Through the incidence of ICT – starting from the telephone, to the fax and to other forms of computer, people began to see the possibilities of doing more things to make life comfortable and to make society a better place. Through the ICT, business has increased and the rate at which people share information remains unprecedented.

This means that as society is growing and mixing with other cultures, we take from those other cultures and add to our own. You should not also forget that our society is a product of our culture. Therefore, as we change elements of our technology and the way we do things, it affects our culture and this also has an effect on how our society will be. Culture improves and grows when it comes in contact with other cultures.

In-Text Question

ICT is a product of scientific and technological changes which is a response to population changes and the problems that came with population growth. True or false

In-Text Answer

True

The technology of the ICT is the product of Western culture, therefore, as we accept the product of Western culture, we need to create a blend of both cultures, so we can adequately utilize the benefits of the ICT as well as retain our culture. Our culture is the basis for developing out social structure. How social order is understood in every society is different, because of the kind of culture they have.

In Old communist society, social order emanates from the activities of the government. But in Capitalist societies, where ownership and control of the means of production is in the hands of a few rich people, the form of social order will also be different.

The factors of social order in traditional African society, is definitely different from traditional Chinese society. Therefore, to know the effects of the ICT on social order we must first see it from the point of view of the past as well as the present. We must engage in a comparison of what constituted social order in traditional societies and what constitutes social order in the present society.

Now in contemporary times, kings/monarchs do not have as much powers as they used to have. It means that the dimension and function of social order has changed. It suggests that the kings were powerful when the highest authority resided with the royal heads.

But now that we have various forms of government all over the world – basically democracy and military rule (in a few countries), the dimensions of social order has changed. Even in countries like the UK, Saudi Arabia, Libya among others, traditional/monarch do not have as much powers as they used to have in the 17th to 18th and 19th centuries, where the Kings and Queens used to be very powerful.

In many ways, the changes in technology has brought about a new way of thinking, a new way of getting knowledge and a new way of doing things. Through technology, we discovered some parts of our culture which we think is not good – like killing of twins, worship of idols and a lot of things. We have associated these changes to the effects of globalization in the next chapter.

Therefore, we must understand that the different conceptions of social order are not totally wrong. In fact, they are the product of how different people understand the social order in their peculiar societies.

- Can you tell yourself what social order means?
 - Social order can be defined as the way society is organized

In-Text Question

The factors of social order in traditional African society, is definitely different from traditional Chinese society. True or false

In-Text Answer

True

Summary for Study Session 1

In Study Session 1, you have learnt that:

1. ICT is a product of many processes and that ICT is what brings the world together into a small unit. ICT has evolved across a lot of processes. Coming through a range of processes, but summarized through the telegraph, the computer, the internet and the emergence of the more expanded internet connection that powers the ICT.
2. Social order relates to how society is organized. Social order is founded upon a 'commitment' to shared/common values, ideas and norms that are established in society by virtue of social relationships/interaction. Social order is perceived as enforced and sustained, through the deployment of political, economic and legal compulsion by the dominant class. Order seemingly appears in society, because individuals actively endeavor to make a sense of social life. Because there are regular patterns of behavior, which may be ordered within the society, human beings tend to perceive them in like terms. There are three sociological thoughts that explain social order in different ways

Self-Assessment Questions (SAQs) for Study Session 1

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

SAQ 1.1 (Tests Learning Outcome 1.1)

How does the ICT affect Social Order?

SAQ 1.2 (Tests Learning Outcome 1.2)

What are the basic arguments of the sociological thoughts about social order?

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Study Session 2: Expanded Discussion about ICT

Introduction

This study session expands on the dimensions of the ICT and it discusses the debates about the effectiveness of ICT. Also, it discusses the problems that ICT presently faces and it attempts to understand the two major perspectives that query the benefits or importance of ICT. Tracing through the historical emergence of the concept of globalization, ICT is a way of making the world a global place.

Some scholars think that the ICT, being a product of globalization or an attempt to further globalize the world, is an imperialist innovation. While some other scholars opine think that it can serve the purpose of better integration and progress for human societies.

This study session will identify the problems that the ICT faces all over the world (digital divide) and the problem of infrastructure in developing parts of the world. This explores the role of the ICT/New media in our modern society, while examining its impact on various aspects of society.

Learning Outcomes for Study Session 2

When you have studied this session, you should be able to:

- 2.1 Discuss the major debates around the ICT and the Society (SAQ 2.1)
- 2.2 Discuss the problems that ICT undermines the success of ICT in Nigeria (SAQ 2.2)
- 2.3 Identify a good number of ways that the ICT has affected modern society (SAQ 2.3)
- 2.4 Discuss the issues that surround the adoption of ICTs (SAQ 2.4)

2.1 ICT and the Society

The end of cold war and the collapse of Berlin wall in 1989 paved way for aggressive global integration in the recent years (Ezema, 2010). Man, through history has been a force of change. History in itself replicates changes. Hence, the cultural, political, economic and religious evolution of society: from the hunter gatherer, through agrarian, industrial to modern society and ultimately to the information era are symbolic of the force of history to replicate changes.

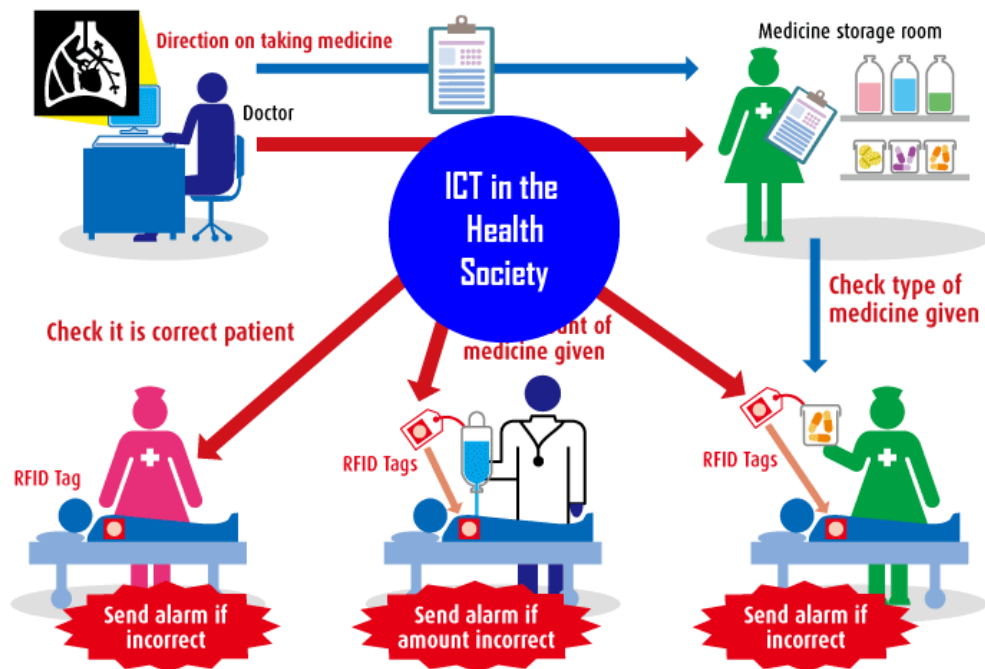


Figure 2.1: ICT in the Health Sector

The manifestation of ICT is diverse in the world today and the impact is felt in every part of human life. Taking education for instance in Europe, at the first entry of computers into schools in the 1970s, computers were just talked about.

Then other hardware accompanied it like – floppy disk drives, printers, scanners, and digital cameras. Then the term IT (Information Technology) began to spread across board and the internet which connected computers, the worldwide web, search engines and email services.

But in very recent times, information exchange and transmission has taken yet a new turn. Information is communicated and freely exchanged around the world today. Thus, information and communication technology has become ubiquitous, easy to learn, operate and to handle. The diversity in the picture below followed in its strides.

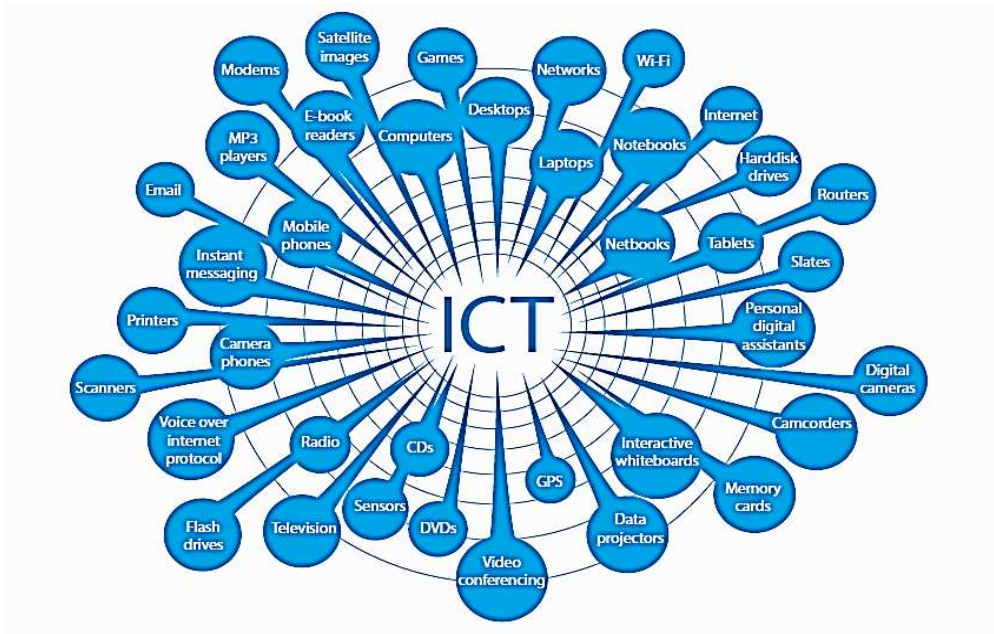


Figure 2.2: The Diversification of ICT in the Contemporary Society

Source: Jonathan Anderson, UNESCO, 2010

According to **Zuppo** (2012), ICT has varied meaning and standards in every sphere of society. In education, economic regulations and standards, various disciplines of information technology, governance and the development of society.

But irrespective of the technicality that trails the various definitions of ICT, its bottom-line, exclusively refers to the transference of information, through digital means by use of devices and infrastructures developed for such purposes.

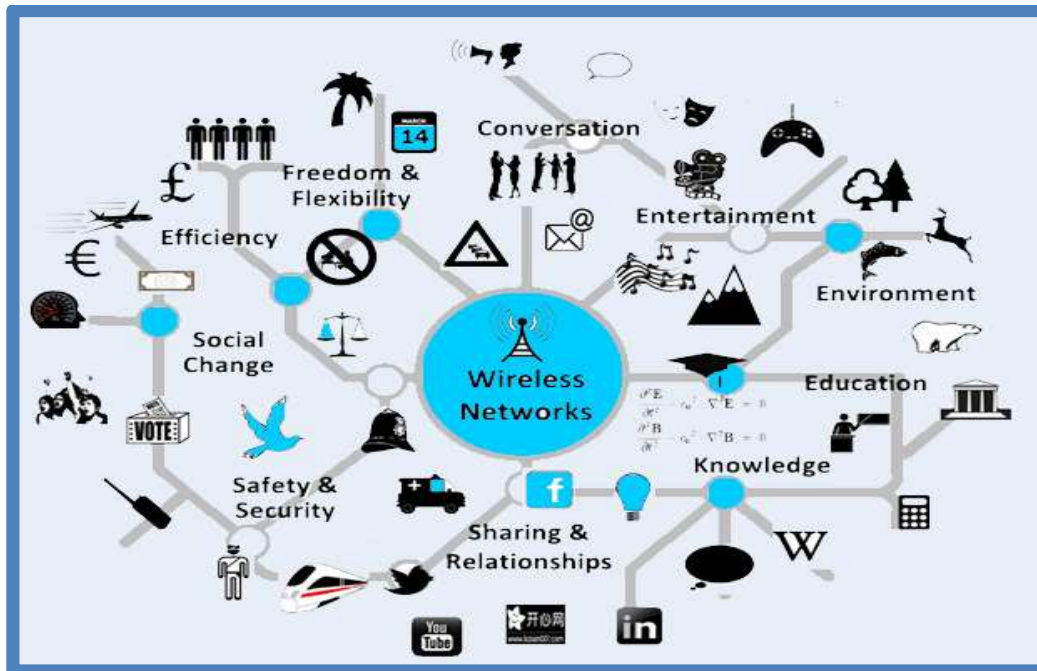


Figure 2.3: Wireless Network Connecting People

In fact, according to **Ampha et al.** (2009), in Africa, ICT is ongoing and is undergoing a revolution. This is targeted at bringing telecommunication services to hundreds of millions through a wireless technology.

This will introduce a technology different from what was obtainable in the developed countries. This technology is intended to surpass the fixed-line network technology on which the developed countries were developed.

Following **Bhatnagar** (2000), he outlines three categories of information and communication technology applications –

Box 2.1: The Categories of ICT

1. Decision support to public administrators

This helps public administrators to focus on improving and planning monitoring development programmes.

2. Improving services to citizens,

This focuses on a system of service automation, which ensures quality service delivery and as a matter of fact brings in transparency.

3. Empowering citizens to access information technology

This is definitely the point of education and enlightenment that comes through access to information which is made available through the ICT system in the society. Through the access to information, knowledge of citizens is broadened and the government can act in pre-determined and positive ways.

The ICT has been identified as a tool for increased productivity and communication, found effective in the operations of the world as a global system or village. Despite the hard hit of poverty and disease on the African continent which has affected the rate of development, ICT has brought forth an alternative path to development. This is due to the welcoming enthusiasm and urgency that ushered in the new dimension of social and economic change (Langmia, 2005).

To this extent, it is good to note that just as tools powered the agrarian economy, and as steam engines powered pre-industrialization, ICT is the predictor and driving force behind the economy and social changes of the 21st Century.

The advent of ICT has re-affirmed the concept called *globalization*, because by virtue of the ICT, the world has been further compressed into a global community, which makes sure that individual survival is dependent upon the extent of information one has at ones disposal. The concept of ICT has given rise to other matching ideas, built around globalization.

These include – modernization, internationalization, universalization, liberalization, among a large body of concepts. There are now more fluid human and national territories and identities. The sovereignty of nations has been put under threat. The institutional and ideological powers of the state have also been subject to the extent of information. As a matter of fact it has brewed the idea behind the chant “information is power”.

In sub-Saharan Africa and parts of Asia, reports show that in China, Nigeria and South Africa, the scarcity of indicators is present. It signifies that despite the fact that the region ascribes so much development to the influx of ICT-based interventions, the indicators, to measure the performance are not available.

This is because their statistical systems are believed to still be in its developmental stages (Partnership on Measuring ICT for Development, 2005).The nature, powers and influences of ICT has also brought forth a knowledge area in terms of the inequality that arises from the supply, access and utilization of ICT. Because inequality is characteristically a part of society, the concept of *digital divide* has been termed to mean the unequal access, use or availability of ICT to a group of people.

In-Text Question

The ICT has been identified as a tool for increased productivity and communication, found effective in the operations of the world as a global system or village. True or false

In-Text Answer

True

According to **Sonaike** (2004), the digital divide explains the “disparities in access to and usage of, the telephone, personal computers and the Internet across demographic groups, within the same country, or between countries”.

This social condition can in itself be a threat to social cohesion and can result into an Anomie situation, where individuals seek ways to short circuit or find a means of escape in order to meet prevailing social expectations (See **Robert K. Merton** – Anomie theory). In this light, unequal access is believed to emanate from strong social disparities in terms of level of income, education and access to basic social infrastructures.

As a matter of fact, disparities are both internal and international. Therefore, while addressing the internal forms of disparity which characterizes the digital divide, the international scene, also records such problems.

Box 2.2: International Telecommunications Union (ITU) description on Digital Divide

The International Telecommunications Union (ITU) describes the *digital divide* as a disparity of *real access to* and *effective utilization of* ICT between countries and within populations within a country.

In this case, the gaps between countries are involved and have been the basis of extensive debate in the global context (Housing, 2004).

2.1.1 Infrastructure and Technology Debate

In the bid to expand the *digital divide* discussion, the argument about which comes first, *infrastructure* or *technology* has been huge? The robust thought about the need to put in place an infrastructural development plan has received attention, especially in developing societies.

ICT is notably a *soft infrastructure*; thus, other infrastructures that will give support to the effectiveness of ICT have been advocated. In Avila (2009), the most important factors for the low access to internet in Africa are: affordability, lack of fixed line infrastructure and low level of ICT literacy. To address the problem of inequality, other forms of infrastructures, need to be settled.

For sub-Saharan Africa to overcome the problem of failed ICT, the amount of investment (private and public), level of employment, infrastructure and technology have been identified by **Avila** (2009), as ways in which some African countries can overcome the unfavourable trend of ICT development. In **Ojo** (2005), he identified that in Uganda, the establishment of telecentres and access points for people to make full utilization of ICT services will be a way of improving the standards and bridging the divide.

Avila notably points out that, it is counter-productive to have ICT set up and the right expertise and infrastructure is not available for its maximum utilization. Although ICT facilitates learning and capacity building, it cannot substitute the process of learning.

Learning needs to precede the use of ICT. Also, **Gurstein** (2003), opines that having ICT infrastructure is not as important as empowering the people through *knowledge* and *skills* to be able to fully utilize the infrastructure.

In **Toureet. al.**, (2008), it was pointed out that more emphasis has been put on the idea of institutionalizing ICT – with internet in focus, more than the needs of the users. Infrastructure is a key to the firm footing of the connectivity technology in Africa.

These explanations therefore suggest the fact that for ICT as a *soft infrastructure* to function effectively, other infrastructures (education, communication, power, etc.) need to be adequately established.

In-Text Question

Although ICT facilitates learning and capacity building, it cannot substitute the process of learning. True or false

In-Text Answer

True

2.1.2 ICT as a form of Globalization/Modernization – Developmental Integration or Imperialism debate

In the light of creating an understanding of our society, the lingering argument about the integrative or otherwise imperialist nature of globalization - and by extension, ICT has been critically discussed in this section. From the Marxian perspective, it is important you note that inequality in society is the basis for conflict and as a result, conflict is inevitable, insofar inequality is ‘unavoidably present’ in social relations.

Emanating from the problem of the digital divide, ICT been an offshoot of globalization, strengthens the ideals of globalization. It has therefore been conceived as an instrument of imperialism, flying on the wings of globalization– more related to inter-country relations.



Figure 2.4: Louis Althusser

Source: www.b.vimeocdn.com/ts/272/092/272092603_640.jpg

As a matter of fact, in internal situations, **Louis Althusser** has expressed the control of the Ideological State Apparatus (ISA) – press, media, communication networks etc. as consisting of the means of power relations and control in the state. Because we are in an information era, the amount of information that one controls will determine the amount of control that will be exerted on the world around.

Globalization, which has facilitated ICT spread and ubiquity, has been referred to by many African scholars, as an instrument of domination. This is because globalization as an agenda of **Renold Reagan** (former US President) and **Margret Thatcher** (former British Prime Minister), operates upon the principles of privatization and trade liberalization.

As a matter of fact, the functioning of the Bretton Woods organizations - International Monetary Fund (IMF), the World Bank, and World Trade Organization, has given support to the actualization of the trade globalization agenda. This is because through them, opportunities were created for Transnational and Multi-national companies (TNCs and MNCs) – having political, technological and economic wherewithal, to infiltrate the key sectors of weaker economies.

Hence, they took over the control and ownership of core social infrastructures like power, telecommunication, education and health care. In this wise, they installed their control on the economies of ‘under developed countries’, made them indebted to the Bretton Wood institutions and made them to become economically subservient to the West.

This was at the time, when economic power was the basis for domination. But in the information age, based on the existing hold on economic powers, they were able to harness the information power to their best advantage.

In-Text Question

Globalization, which has facilitated ICT spread and ubiquity, has been referred to by many African scholars, as an instrument of domination. True or false

In-Text Answer

True

Therefore, because information is the mode of transferring culture and this platform is one of the parts of society which ICT supports, the higher the information influx, the higher the culture transfer and the greater the extent of fluidity that come through information transfer. Their hold on education made it easy to infuse Western culture, which as a matter of fact, made education unaffordable and in accessible. The schools became the breeding ground for Western ideas and for religious indoctrination.

The rate of information is not balanced. Hence, some societies/groups or persons are on the high end, while some are on the low end of information exchange. Invariably, the

group with the higher information power rules. In this vein, less developed societies with lower power of information are usually on the receiving end. This is because information is the now the instrument of domination in the information era.

Box. 2.1: Ezema (2010) view on Cultural Imperialism

On a large scale, **Ezema** (2010) describes *cultural imperialism* as an off shoot of the imbalance in information exchange. “*Cultural imperialism may take a form of forceful imposition of a particular culture on a people or voluntary and gradual embracing of foreign culture by individual.*”

He further opined that there had been a system of *imposition* of culture by the Americans and Europeans upon the weaker continents and/or regions. This has given rise to *modernization* which is a manifestation of globalization.

Although, the basis for modernization and globalization has been grossly mixed up, it is not untrue to assume the similitude that both orientations share. They have both had resulting West dominated impacts upon the social, cultural, economic, political and religious dimensions of social life in developing societies. Modernization has made considerable impact on the way of life, causing culture modification and in most cases jettisoned existing African culture.

We have called our culture *traditional*; our medicine has been called *alternative* and our systems as *archaic*. Through the internet the lifestyle, culture and values of the West had been spread and become ubiquitous.

Box 2.2: Emmanuel Wallerstein described how the West emerged into Modernity

And as Emmanuel Wallerstein puts it – “*The West has emerged into modernity; the others had not. Inevitably, therefore, if one wanted to be “modern” one has in some way to be “Western” culturally. If not Western religions, one has to adopt Western languages, and if not Western languages, one has to at the very minimum accept Western technology, which was said to be based on the universal principles of science*” (Wallerstein in Chang, 2008).

Furthermore, **Toureet. al.**, (2008) opined that many popular writers have warned that the internet (which in actual fact is the basis for ICT) could be another form of cultural imperialism used by corporate-led Western force to feed Western values and world views to the rest of the world.

They emphasized the imperial take-over of education as a key sector of idea transfer and perpetuation by the Western form of education, which has hitherto washed away ‘third world’ (is another name that is symbolic of the cultural relegation that developing countries have suffered) traditional values.

If integration is actually what it is, according to **Berry et. al.** (1989), (In **Toureet. al.**, 2008), there is a competition between two cultures. Although it could be perceived as a

form of synthesis, there is a test of superiority between the two cultures and definitely one has to swallow up the other.

While there had been more emphasis on the cultural imperialism that is inherent in globalization, the dependency theory emerged as a reaction to the modernization theory. The dependency theory gives an economic view of what has come to be the dependence of the West upon the surplus production of the third world.

As a matter of fact, **Andre Gunder Frank**, points to the ‘development of underdevelopment’ which is a factor of an extreme belief that the underdeveloped countries *will* not develop, considering the *parasitic* relationship between the developed world – West and the underdeveloped – third world.

Box 2.3: Andre suggestion on avoiding Persisting Underdevelopment

In economic terms, **Andre** suggests that to avoid the persisting underdevelopment, there is a need to sever ties with the capitalistic ideologies and follow an auto-centric form of socialism (Scott and Marshall, 2009).

2.1.3 ICT as an instrument of Integration

According to **Torero and Braun** (2006), ICT only offers an opportunity for development, it is not a panacea. On this note, it is important to recognize that as a matter of sociological reality, no one social phenomenon has functions without dysfunctions.

Ceteris paribus, the positive consequences of hitherto negative social actions can also be manifested in social relationships. Although the views and positive ideas about the impacts of globalization is widely held by Western scholars, according to Ezema (2010), globalization as a healthy course of development, inherently has capacity for improving lives.

This is because political, cultural, economic and social barriers which otherwise have restrictive implications are removed. ICT has given a global *village* picture of the world. It can be seen as an idealization of the cosmos as a single and small whole through the impacts of ICT.

According to **Binsbergen** (2004), the ICT has the capacity to create and to support a historical cultural identity, to construct new identities (through communities, chat groups and friend zones) and to breach the identity divides that exist between and among cultures. It has the communicative and informative propensity which can serve the means of perpetuating rather than killing off cultures.

In-Text Question

According to **Torero and Braun** (2006), ICT only offers an opportunity for development, it is not a panacea. True or false

In-Text Answer

True

In addition, **Toureet. al.** (2008) is of the view that the internet may serve as a means of re-affirming the African culture. It is perceived that the internet can be used as a tool for facilitating a sense of *community* and to foster *interdependence* that has always been characteristic of the African culture.

To counter the Western idea of *consumerism* and *individualistic* existence, the internet can serve a purpose of strengthening the African mode of production, cultural belief system of *collectivity* and *solidarity*, which are critical to the existence of every African society.

Despite the metalocal nature inherent in electronic ICT, the computer in Africa cannot be justifiably called a North Atlantic cultural transplant...there are still subsisting enclaves of African culture which retains and sustains the elements of the belief system.

Despite the presence of globalized elements that are not originally African, they are not seen as strange or shocking, they have been knowingly and successfully distinguished to be local and indispensable, even when they are symbolic of high social status and prestige (**Binsbergen**, 2004).

Through ICT, the constraints and restrictions imposed by distance, space and time, has been collapsed and shriveled. By the instrumentation of globalization, through the ICT, there is a recession of social and cultural arrangements which the world is increasingly becoming aware of.

In-Text Question

Through ICT, the constraints and restrictions imposed by distance, space and time, has been collapsed and shriveled. True or false

In-Text Answer

True

Effects of the New/Social Media on Modern Society

New media is a fragment of a whole. It is the dimension of media that interacts with the ICT. New media is a range of media possibilities that are found in the realms of the ICT. When we talk about the new media, we refer to the hardware, software, institutions, persons and ideas that are operational through the ICT.

Generally, the whole of media is converging through the ICT, as it increasingly becomes and dominates a far reaching form of information and communication.

But the new media represents the *specialized, specific and narrow* form of communication among and between smaller audiences. This involves a two-way flow of messages and information, fostering a form of interaction through networks of communication.

Increased technological expansion of the ICT, and the creation of faster and mass storage technologies, has encouraged the extent at which information is transmitted through the Internet, satellite/cloud networks and virtual technology.

There is cheaper, faster and easier access to information and by this, the social media has expanded its reach and coverage across the globe. There is a synergy and convergence of media and technical capabilities, infrastructures and functions, which lead to a new range of media services and products.

From **McLuhan's** theoretical position of *media/technological determinism*, the changes in media technology, has given rise to the new media, which in consequence has brought forth a new body of knowledge and theory.

The effects of the social/new media are enormous in contemporary society and **McLuhan** (1964) explains that the increasing capacity of communication has informed the changes in society. Premised upon individual/group differences, and social contexts, the new media messages which are *polysemic* – postmodernist definition of media messages, build contradictory responses.

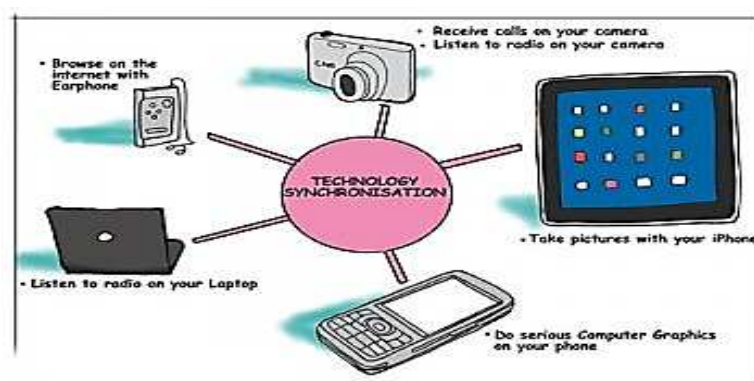


Figure 2:3: The ICT Connection between Hardware and Software

Source: <http://www.punchng.com/business/close-up-on-ictstakeholders-canvass-synchronisation-of-technology-devices>

Contact with media messages has influenced the way of life of people and this is built upon the personal interpretations that individuals may give to media information. In recent times, the social/new media has sparked political reactions across the globe. In landmark instances, the social media has birthed political revolutions in continents of the world, especially in geographical locations where they were properly harnessed.

The *Arab Spring* is a critical and historical example of how the new media has influenced the activity of young people and the ability to transmit explicit violence and warfare conditions to every part of the world.

One will always wonder if the definition of “news” will remain the same. Going by the increasing capacity of computers to store and retrieve and process data. This may inadvertently re-shape the functions of editors in media houses (Borgatta and Montgomery, 2000). There is an upsurge of blog sites and mobile news sites that put news and information on the palms and pockets of people on the go.

Blog sites are fast gaining more recognition, news channels are moving their operations into the ICT space and it will seem impossible for any business and individual effort to gain recognition and to succeed, if it is not found on the internet. Transnational and multinational organizations are gaining higher relevance through the use of the internet and they are gaining more influence across the globe. There is increasing *glocalization* which is a sort of imperialist agenda.



Figure 2:4: Cybercrime Starts at the Touch of a Button

On the negative, a high ranking social problem arising from the ICT trend and the social media is Internet theft, fraud and scams, which are pervasive. The rate of scam and the amount of money lost through the activities of internet fraudsters and hackers is unprecedented. The banking and financial sector has found more business solutions

through ICT, but it is unfortunate that unsuspecting individuals are constantly plagued by uncanny attempts by people to defraud them.

The financial sector also has pervasively lost tons of money to fraudsters. Unusual access to private information and the constant threat to private life has been a major concern, as a lot of people have moved their lives into public domains of social interaction. Ranging from birthdays to pregnancies, to miscarriages, to broken relationships and deaths are now announced on social networking sites.

People are tracked consciously and unconsciously. When people move in and out of their locations, they are being monitored and followed. In fact, social life has become more unprecedentedly open, which as a matter of fact is a social symbol and status. There are new found ways of internet fraud and privacy invasion – like phishing and other spywares.

A social problem that has remained increasingly evasive is the unrestricted and unbridled access of under-age children to pornography. This is already breeding overdependence on pornography even in adults and neighborhood prostitution has increased. This is due to the prevalence of more online dating sites. There are mobile sites that offer free access to pornography and this has been found to negatively affect even social and statutory relationships.

Rape, kidnap and elopement situations are on the increase, people are ceaselessly blackmailed and they are victims of direct and indirect extortion. Families, personal relationships and marriages are under intense pressure and strain. Because there is an over-reliance on the distant-online friends, there is alienation and estrangement in families.

In-Text Question

A social problem that has remained increasingly evasive is the unrestricted and unbridled access of under-age children to pornography. True or false

In-Text Answer

True

There is an increased access to online violence, cyber bullying and abuse. Children get unguided access to violence and violent acts on the internet and they practice as many violence they view in videogames, movies and online videos that are available on social networks.

There is an information overload! Anyone without the right kind of information is at the risk of losing valuable resources, ranging from material things (money and possession) to the immaterial things like time and other immeasurable resources.



Fig 3: A court proceeding through video conferencing.

Source: (<http://michaelmurungi.blogspot.com/2010/10/version1.html>)

The ICT has further influenced government and policy related decisions, opinion polls are run to determine the direction of government decisions. E-voting has helped many election processes and in developed countries, voting is done through the influence of the new media. People do not have to stay long hours on queues to cast their votes. E-governance has been advocated in developing economies to fast-track and to enable quicker government activities.

It will put an end to the bureaucracy that is characteristic of public service and will mitigate the rate of corrupt practices. There will be no need to give and to take bribes. Also, government money will be safely lodged without the threat of theft, mismanagement and misappropriation. The advent of E-governance makes it possible for individuals and governments to interact.

Bills and taxes are paid online, government budgets and expenditures are disbursed and monitored in the new media age. This has been found to forestall the increasing handling of cash. A cashless economy is in motion around the world and even developing countries are fast embracing the idea.

In service relations, people can now work from home, customer services have become easy and fast to access. Health institutions have used the ICT and social media to bring health solutions. Doctors and surgeons converge around the world through videoconferences, video-chats and voice calls to discuss and synergize on emergency health conditions.

Telemedicine and e-health have successively found ways for expanding their frontiers and to overcome initial failures. Medical records are now to be easily retrieved because of electronic channels that will give quick information from the blood banks, laboratories

and research facilities and the data of patients. The education and academic sector has witness expansive differences.

Knowledge is easily shared through the internet, students and people in the academics have higher access to academic resources. Mobile access to books and resources has generated advanced competition in the technology sector – from Amazon’s production of the Kindle, Apple came up with the iPod and further directions of competition have increased the potential of technological producers.

In-Text Question

Bills and taxes cannot be paid online, government budgets and expenditures cannot be disbursed and monitored in the new media age. True or false

In-Text Answer

False

The security, military and the police have been able to effectively deploy security interventions and criminal, terrorist and insurgent activities are being short-circuited through criminal intelligence, sophisticated equipment, weapons, machinery, maps, background checks and monitoring devices.

Kidnap victims have been more effectively located and rescued. Arial, land and water troops have found more effectiveness. Bomb scares and other security threats are easily disabled. Nuclear warfare has witnessed a turnaround as remote sensing devices can detonate and disable nuclear weapons even from the clouds.

Through the ICT, advanced business solutions have emerged and experts may not need to travel the distances across the globe to attend business meetings and conferences. They can actively participate in meetings and decisions are made without delay. Business ideas are going electronic. Transactions, purchases and sales are made through cloud technology and goods are delivered without hassles.

E-businesses are on the rise, there is no need for an office space to conduct businesses anymore, as solutions are offered at the click of the buttons. Through cloud computing, data is gathered for advanced policy and strategic decisions. The realm of weather forecasts has witness tremendous improvement, even when the predictions are not *accurate*, they are usually true and definite.

Through satellite technologies, climatic and weather conditions are judged – the GIS technology gives a routed map of virtually anywhere in the world. There are satellite cameras that give directions even to strangers in a place. Vehicles now use GPS in the developed countries. By punching in a destination, the vehicle takes the individual to the

destination without problems – in fact they are usually through the shortest routes and traffic-jam free areas.

In-Text Question

Through the ICT, advanced business solutions have emerged and experts may not need to travel the distances across the globe to attend business meetings and conferences. True or false

In-Text Answer

True

In every organization, **Giddens** (1984), believes that members of are expected to improvise, and develop the capacities to use their prior knowledge of the ICT. This therefore means that individuals are expected to come up with new ways of deploying existing technologies that will support new interactions, and/or even develop new ones within the boundaries of organizational and professional norms.

This has both constraining and enabling organizational interactions (**Lamb and Kling**, 2003).The ICT in the modern society has significant influence for both economic growth and for the development of ideas. This is notable, despite its rather slow transfer across the globe, the effect has been enormous.

Despite the fact that modern ICT is not evenly utilized all over the world, we cannot overemphasize the imbalances that exist between the positive and negative outcomes of the ICT. It requires time and commitment to have a full grasp on the use of ICT. This is due to the complex nature of the technology. The effects of the ICT are enormous. It brings on the three major dimensions of – production effect, investment effect and productivity effect.

From the Conference board (2011), the *production effect* ensures the increased effectiveness of the ICT-producing sector. This informs a growth and expansion of production capacity. Industries in the ICT sector are made more productive and creative. The *investment effect*, builds more investment opportunities in the ICT sector. More financing is committed to increase output of the technology producing and technology consuming sectors.

In-Text Question

Through satellite technologies, climatic and weather conditions are judged – the GIS technology gives a routed map of virtually anywhere in the world. True or false

In-Text Answer

True

This inevitably accounts for labour productivity on both ends of the relationship – producer and consumers of technology. The *productivity effect* highlights more productivity for both capital and inputs.

Therefore, there is a need for government to invest in training and re-training people to fulfill the standards of knowledge. It is held that the advent of the ICT has eroded culturally and socially established value systems. There is a '*creative destruction*' of the market place. The government is a key role player in the positive and otherwise negative utilization of the ICT for the progress of mankind and society (Conference board, 2011).

It is on this basis that we discuss the next topic, which evaluates the diverse impacts of ICT development in specific social institutions and structures.

Activity 2.1

After going through the note above, reflect on what you have read so far. You will discover that there is another set of debates here, what do you think they are talking about? What is the role of ICT as an instrument of globalization/modernization - Imperialism? Describe the role of ICT as a means of integration. Do you understand the roles of ICT in the modern society?

Activity 2.1 Feedback

Box 2.1: The expanded discussion about ICT, theoretical orientations about the role of ICT and the effect of ICT/New media on modern society.

ICT affects our world in a variety of ways and that has brought about many arguments about the benefits of the ICT. Also the context of ICT's ability to function well has been discussed, while we examine the role of ICT in modern times.

You now understand that people have varied ideas about the role of ICT.

You now understand that the growth of ICT is dependent on some issues.

You now know that the ICT in modern society cuts across all spheres of human life and society.

Summary of Study Session 2

1. In Study Session 2, you have learnt that:
2. The ICT affects us and can be used in many ways. Also that some issue need to be addressed for us to fully maximize the use of ICT
3. That people hold different views about the role of ICT
4. ICT functions in every area of human life
5. ICT is significant in modern society

Self-Assessment Questions (SAQs) for Study Session 2

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

SAQ 2.1 (Tests Learning Outcome 2.1)

What is your understanding of the ICT in our society?

SAQ 2.2 (Tests Learning Outcome 2.2)

What two perspectives argue about the role of ICT?

SAQ 2.3 (Tests Learning Outcome 2.3)

What are the main issues that surround the use of ICT in our society?

SAQ 2.4 (Tests Learning Outcome 2.4)

Mention as many areas as you can pick out, where the ICT influences modern society

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Study Session 3: The Influences of ICT on Six Identified Structures/Institutions of Society.

Introduction

In this study session, the explicit effect of ICT on major structures/institutions of the society shall be discussed. As you already understand, that social order revolves around social structures, because structures are made for interaction and interactions as a matter of fact predict the effectiveness of structures.

The focus shall be on *six* structures of our society and the influences of ICT on the effectiveness of these entities to be able to perpetuate social order. The changes that are presently experience will also be examined and how the ICT has been instrumental to these new dimensions of relationships.

Learning Outcomes for study session 3

When you have studied this session, you should be able to:

- 3.1 Discuss influences of ICT in our contemporary society (SAQ 3.1)
- 3.1 Discuss the problems that ICT experiences in the development of family relationships as the primary agent of socialization (SAQ 3.2)
- 3.3Examine the dimensions in which ICT have influenced policies, politics and governance (SAQ 3.3)
- 3.4 Give an overview of how the ICT has touched on the *Six* areas (SAQ 3.4)

3.1: The ICT (Information and Communication Technology)

The ICT has in many ways spurred changes that can be classified as dramatic, drastic and unpredictable. The impact of ICT across the globe has varied overtime and its increasing capacity to change various social structures is deep.

The ICT has influenced the dimensions of social, cultural and interpersonal relationships. In the last 40 years, the ICT has grown to have established itself as a multifaceted technology, which impacts almost every area of human life and existence. It has guided solutions and has motivated increasing demand for higher technologies to suit the mental picture of an *ideal* world or society.



Figure 3.1: ICT

It is pervasive of and essentially characteristic of modern life. It fundamentally replaces the steam power and electricity that accounted for economic, social, and cultural development of preceding years. It is unarguably the force of global change in contemporary times. Since the ICT has come to be recognized as a force of change in the world around, it has been found to influence various social and human institutions.

3.1.1: ICT and Family

The family is the most fundamental form of child socialization. Socialization comes through a process of integration and inculcation of cultural norms, values and the belief system of every society into an individual. Other forms of socialization may take over, shape, reinforce or adjust the set of practices.

Human behavior is basically pre-informed by the family. It remains imperative to know that every individual exists within a nexus of educational, work, and family relationships. These relationships as a matter of fact carry symbolic culturally defined rules.

The rules are codified as well as existing within the context of social routines. These cultural and social components thus expand in everyday social interaction. The individual modifies, improves upon and introduces new interpretations which inevitably will guide everyday activity.



Figure 3.2: Family and ICT

Source: wdelivery.superstock.com/WI/223/1566/200710/PreviewComp/SuperStock_1566-386127.jpg

The ICT has been identified as a major cause of conflict within the family (Mulder, 2008). Through the activities of children or family members through the ICT, there is a mix of culture, belief system, norms and values.

Knowing that the conflict and subversion that comes with development challenges the hegemony existing within human society, the power structure that essentially subsists in society, especially in the African context of the family has been questioned.

The ICT being a new technology has challenged “secrecy”, which is a norm of the family. Children in the new media age now can discuss family issues and ‘family secrets’ with friends on social networking platforms. This in turn gives a child access to diverse opinions and directions of thought, especially when there is a cultural, value and norm imbalance between the ‘giver(s)’ and ‘taker(s)’ of advice.

Family members who are thus users of social networking sites, may share their problems with their friends ‘online’ and not with family members. Hence, they get wrong advice. This sometimes leads to intellectual conflict (**Bateman** in Mulder, 2008).

In-Text Question

The family is the most fundamental form of child socialization. True or false

In-Text Answer

True

In an analysis of the extent to which the ICT is an integrated facet of the African culture, it is imperative to note that the relationship between culture and technology is ‘perpendicular’, if such technology is not a direct offshoot of the culture in question. It is this perpendicularity that therefore predicts the tension that exists between what the families seeks to teach and what the ICT seeks to establish.

The culture of freedom, openness and sharing are the tenets of social relationships that emanate from the ICT, which therefore negates certain fundamental values of the family. Within the family circle, Culture is essentially transmitted through face-to-face communication. The ICT in itself emerged from the tenet of face-to-face communication (language and sight), which is the basis of information and communication technology.

But the constant tension between cultures (which is what the family essentially validates) and the family structure is the amount of assault that emanates when cultures meet. Culture is consistently localized, bounded and identity. Hence, cultures may not freely mix without tensions. By communication ICT, other cultures are a threat to the values of yet a form of culture, since they are dissimilar and unrelated (**Binsbergen, 2004**).

In-Text Question

The ICT in itself emerged from the tenet of face-to-face communication (language and sight), which is the basis of information and communication technology. True or false

In-Text Answer

True

In traditional African societies, marriage is defined by parental choice and not by emotional decisions. The right and freedom to choose came in the reins of globalization. Women freely announce conception of their babies; some announce the death of their babies and/or miscarriage, they announce divorces/breakups/separations.

Celebrities now display their 'bumps' stages of pregnancy on the pages of fashion and celebrity magazines. It is now a bump competition, who remains sexier even when pregnant? Family TV reality shows are increasing across satellite networks and people are increasingly opening up their family, marital and private lives to public glare by virtue of ICT.

Cameras are all-over the place and Big-Brother is now watching the private lives of young people in secluded houses. Private life has become the basis for judging acceptability and for winning large sums of money in Box office shows.

These are motivation for abandoning the secrecy, interdependence, respect and social bond that the family usually shares this accounts for individualization. Young people find every reason to model their 'own' families (the ideal family) after the fashion of celebrity families like Ice loves Coco, Kim Kardeshian among others.

These are usually found strange in most African families, but by the influence of the ICT, people have access to information which now influences their thinking about marriage, family and kinship systems.

Marriages are now contracted through the internet and a whole lot of romantic relationships have been established through the internet. A clash of cultures is increasingly changing the perception of feminine beauty and reinforcing more masculine

beauty. The ideal woman on TV is a slim, tall, brunet /blond, with blue eyes, perfect dentition and curvy ends.

This is a move from the chubby, rounded, absolutely dark or absolutely fair complexioned traditional African woman, graced with beads (not chains) round her waist, with natural hair (not synthetic hair). Among the Ibibio, Efik, Ogoni and Ikwerre people of South East and South South Nigeria, the *fattening ceremony* for women, takes them through the preparatory stages for marriage and the process of pampering, which is designed to make them appealing in conduct and in character within the marriage and family institution.

In-Text Question

Marriages are now contracted through the internet and a whole lot of romantic relationships have been established through the internet. True or false

In-Text Answer

True

They are taught basic skills of home making, withdrawn from stress and given adequate lessons about childbearing and other family related trainings (Effiong, 2013, *BBC News/Africa*. 19 Jul. 2007). The ICT, through the TV and other forms of new age media has informed the 'African queen' beauty.

In this new ideology, women shave their hair, whereas in largely African cultures it is culturally held that a woman with a shaved hair is either mourning or in distress – there is now a distortion of facts among cultures. In traditional African societies, tattooing is a practice of beautifying women, rather than of seduction.

Therefore, women are conscious about the parts of the body on which they make such marks - mostly hands and shoulders; feet and palms (in Northern Nigeria), but in modern times, women now have tattoos around their cleavages and back-sides.

There is an increasing materialism and commodification of the woman's physiology and that is why pornography has been on the rise and made available through the ICT (Conferenceboard, 2011). These do not only happen in elite families, the urban middle class, urban slums and rural are also actively and increasingly involved in this new age culture of family life.

In-Text Question

In traditional African societies, tattooing is a practice of beautifying women, rather than of seduction. True or false

In-Text Answer

True

The ICT has further strengthened the ability to locate long forgotten family members. A search through databases can give a hit on kinsmen, friends and family members and where they are located. Through the ICT as well, families – especially parents have been able to monitor and secure their homes against intruders. Children have mobile phones to contact their parents when in difficult circumstances and people do not need to travel long distances to communicate with or even see their loved ones.

According to Helsper (2011), in the UK, one of the most important reasons for using phones was 24-hour safety and family communication. According to Lindsay et. al. (2007), the ICT has varied influences on social life, family interaction and validly on the social relationships. Because there is a generational gap, elderly people that do not know how to use the computer as a form of ICT invention, may get upset about how it is possible that *little kids* know what they do not know.

As many adults want to learn, they may get frustrated, since they cannot clearly make anything out of what is being taught. As a way of addressing the problems of boredom and solitude, the ICT through the computer has been able to rid certain individuals of such tendencies.

Among married couples, when a man begins to spend so much time on the computer, there is tension in the home, as the attention needed is not available anymore and suspicions about marital misconduct may set in.

The ICT provides the platform for easy and less expensive communication. Through video-calls and conferences, family members may communicate effectively. The control over ICT can as well be initiated by the family. Being a primary socialization agent, a family can socialize a child into the proper use of the ICT for personal development.

- Mention 2 ways in which ICT has affected the family?
- The ICT being has challenged “secrecy”, which is a norm of the family.

The ICT is a major cause of conflict within the family

3.2: ICT and Education

Promoting the development of a knowledge society through open and distance education is one of the tactics increasingly adopted in recent times by governments around the world who want to encourage economic development at the local, state and national levels (**Ololube et. al.**, 2007). Education is the backbone of every society. A society that does not educate her people definitely cannot stand the test of time.

Through the ICT, education capabilities have been strengthened and diversified. Education for all is a priority for international, national and local governments and organizations. Education has been favourably disposed to filling the gaps in communication, which could be as a result of time and distance.



Figure 3.3: ICT and Education

Source: <http://focus.rw/wp/wp-content/uploads/2013/04/Girls-in-ICT.jpg>

Where time and distance have been major barriers to receiving education, virtual/cloud technology, and a process of knowledge management through the ICT, conferencing – video or audio and distance education, have been found most useful.

Everyone is encouraged to have access to basic education. It is in actual fact a target of the Millennium Development Goals. Education has evolved and is not just restricted to formal or informal education, but also to semi-formal and non-conventional education. This is all in the bid to empower citizens through education.

Education is not only confined to the walls of the school, education has been made available to people on the platform of the ICT. Educational materials exist through the ICT and they can be accessed, owned, transferred, written or reproduced through ICT facilities.

On-line degrees and trainings are now available and an individual can access education via online classrooms, interactive videos and audios.



Figure 3.4: Online Education

People are trained in various specialties through the internet, without having to physically be with the instructors. There are virtual libraries on the internet and materials can be accessed with little or no restrictions.

Talking about the problems in the ICT and education affair, according to Torero and Braun (2006), access to information technology is not just a factor of connectivity, but is centrally built upon the capability to access the tools of connectivity through basic ICT education and the provision of the right content.

These three ‘Cs’ are quite important, going by the fast paced transfer of technology without restriction across the globe.

Box 1: Problems of ICT in Education

Connectivity

Capability

Content

This means that to record adequate success, emphasis must be put on developing the three dimensions. Beyond giving formal education, the semi-formal education or non-conventional education must be the focus of governments of developing countries to foster development, while making connectivity and content equally available.

The digital divide is substantively argued to emanate from limited education, language barriers – the computer is largely domiciled on the world lingua franca – English language, so there is a language problem, inequality of income/wealth distribution and infrastructure – which could be a challenge for the rural areas.

The unequal infrastructure development may in fact be added to the discussion on urban-rural digital divide. These elements further deepen the chasm arising from unequal access to information and this can also essentially be trans-global.

Still talking about the clog, apart from the problem of the ever expanding digital divide, the gatekeepers (education managers) are not familiar with the ICT and information management tools, they are largely illiterates (Carnoy, 2004). Therefore, no serious information is being used to improve the performance of students. New technologies cannot be put to full use, fundamentally because of the aforementioned.

There are two dimensions to this discussion

1. ICT Education: This emphasizes the need for individuals to be ICT literate
2. Education through ICT: This emphasizes revolutionizing the education system, to use ICT systems for teaching and knowledge impartation process.

ICT functions in three dimensions in education as expressed in the figure below:

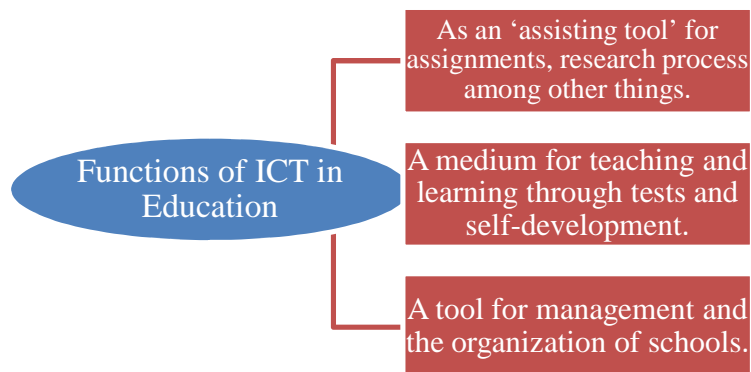


Figure 3.5: Functions of ICT in Education

On the one hand, because the ICT requires the sharpening of old skills, discarding a few specialties and the enacting of new capacities, more jobs are being created. These jobs therefore require the capacity to function effectively through new job descriptions and occupations.

By reason of this, there is a need for a new kind of education to suit the status-quo. There is a need for basic analytic and process based knowledge of the ICT, programmers, network/system administrators, network engineers, system auditors among others. Thus, the ICT improves the process of education, creates a more creative and productive working environment for knowledge workers.

More people need to be educated to take up creative jobs. According to Manole and Weiss (2011), beginning from the 1970s, there is an upsurge in the demand for workers with college education, due to increased specialization. Individuals have found more reason to be schooled and to be literate, especially with the management of information systems and the process of ICT development, which is related to their own fields.

Organizations and industries are further increasing their productive capacity to meet up with demands. Therefore there is an increased need to strengthen their propensity to deliver. Companies are constantly training and retraining their human resources to meet the challenges of the competitive business environment.

Organizations are outsourcing their responsibilities to specialized companies and annexes of their organizations. Thus, special skills, deliberately requiring competency in ICT education and use has led to increasing fragmentation, geographical distribution of competencies, declustering of roles and diffusion of demand for labour.

For instance, telephone service providers in Nigeria, now have specialized companies in charge of their call centers – customer services.

In the manufacturing industry, British American Tobacco Company have a Tobacco cultivation and processing plant in Oke-Ogun – Northern part of Oyo State and the manufacturing plant is along Lagos-Ibadan Express way. They have situated specialized needs in specialized skill areas and so are able to effectively do business.

In-Text Question

A society that does not educate her people definitely can stand the test of time. True or false

In-Text Answer

False

The developing world has been believed to be the destination of cheap labour (qualified but cheap), because the governments of developing economies have not been able to effectively utilize the available manpower. Hence, foreign companies find it easy to situate processing/manufacturing plants in such locations, since specialized ICT/physical skills are available to increase productivity.

On the other hand, it is important to note that governments around the world are investing heavily in education through the ICT. In fact, the African Virtual University is an offshoot of ICT based educational development (Torero and Braun, 2006). There abound great promises about the enormous impact that the ICT will make when the school introduces and uses it. We cannot underestimate the impacts of ICT based learning in the classroom.

According to **Mikre** (2011), the impacts of the ICT on the pedagogical approach to teaching are significant. The ICT has evolved more innovation, and community service as manifest function of education. Higher scores, innovation, improved teacher technology skills and exposure to new approaches to teaching have been identified as positive outcomes of ICT in education.

The evolution of improved adult literacy/education has also been emphasized as a significant outcome of ICT in education. The increased access to information and academically relevant portals is significant. On-line libraries, publishers and bookstores like jstore, Sage, Blackwell, among other platforms, have improved the academic standards in education.

In a different perspective, emerging from Europe, the effects are not evident, because there are no definite parameters for measuring the impacts – impacts assessment (**Jager, Bos and Velde**, 2011). On this note, **Jageret. al.** (2011) opines that the inability to concretely determine the impact of ICT on education is either that the impacts are not yet seen – in incubation *or* there is an ineffective use of ICT in education.

In-Text Question

The evolution of improved adult literacy/education has also been emphasized as a significant outcome of ICT in education. True or false

In-Text Answer

True

Or better still, that we should look at the change in attitude, which is found to be positive. For attitude to become manifest, organizations need to evolve into ICT-centered communities, where the attitude can be freely exercised. In Spain, Netherlands and the US, despite the enormous investment in education through ICT, it did not result in improved learning/academic performance, except in children that have academically/learning enabling family-environments.

The ICT equipment in the home is usually used by children for entertainment, as a time out from the constraining environment of school activities. It does not improve the reading performance of students, but it is a motivation for increased level of use despite the fact that the impact is still limited by the unchanging organizational structure, which can accommodate such attitudinal change (Jager et. al., 2011).

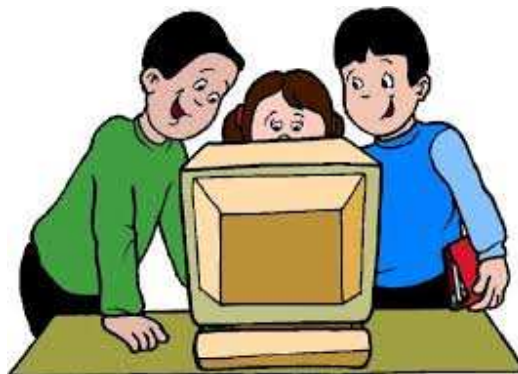


Figure 3.6: Kids playing games on the computer

Source: http://4.bp.blogspot.com/_1R0tsjrz-KQ/TFRVY3wG-uI/AAAAAAAAAGQ/bYqx6ynyRBE/s1600/computer+games.jpg

It is appropriate to say at this point, that it is possible to highlight the potential outcomes of a technology, and based on the existing ideology about the expected outcome, certain conclusions are made, without a careful analysis of the reported outcome. The parameters for judging impact of policies or technological intervention should be developed, so that we can easily assess the success, failure, latent or manifest outcomes of strategies, especially in education.

It is not impossible that both schools of thought about the substantive result of ICT in education are right. They are both right, based on the parameters of judging effect of ICT

on education. Overall, the ICT is significant to the development of education across the world.

It has the capacity for knowledge sharing, technological transfer and a perception sharpening process when ideas mix. It is important to note that the ICT has capacity to increase students' performance, whether in terms of attitude towards ICT and/or the propensity to affect classroom/academic performance.

The Future

In a speech by **Carnoy** (2004), he pictured the future of ICT based education. He opined that the ICT will be core to education, substantively university education. Wherein, the traditional classroom will evolve into a hybrid of virtual and non-virtual teaching. People from all walks of life will have access to decent and virtual University education, without necessarily affecting their occupational engagements.

Although the stereotype or particularism about the teaching-learning context may pose a big challenge, there will be a time in which the boundaries will be blurred. In this situation, the traditional university in itself will have a mix of virtual and actual teaching-learning, which will eventually not be any different from having totally virtual universities.

There will definitely be a time where virtual university education will be unchallenged. The traditional university scenario cannot be phased out, because such learning conditions are important for younger students' socialization – social contacts, career and personality development – bonding which may last a lifetime. Unarguably, the cost of virtual education may be more expensive than the traditional education. It will be worth the quality that will be gotten in return.

In-Text Question

On-line libraries, publishers and bookstores like jstore, Sage, Blackwell, among other platforms, have improved the academic standards in education. True or false

In-Text Answer

True

In the light of this, childhood education, should integrate the teaching of ICT skills that will enable such individuals to fit into the future. The learning environment should emphasize and develop the ICT capabilities of children. This is because the present and future of the children in this generation will subsist within the reins of the ICT.

3.3: ICT and Governance/Politics

According to the African Partnership Forum – APF (2008), African leaders believe that the ICT is important for building a global entity that is knowledge-based and which is inclusive. Emerging from the basis of the success of mobile telephony, access and affordability of ICT has been spread across the various strata of society.

In Africa, infrastructure has still been identified as a major milestone that impedes the expansion of ICT. In terms of development, ICT has increased the efficiency of organizations and even individuals, granted more access to new markets and new opportunities to increase income and give visibility to the predicament of the poor.

The capacity of the ICT to deliver considerable positive outcomes in policy making has come to be regarded as an imperative paradigm, especially among policy makers. It creates greater efficiency in public administration, guiding measureable, applicable and effective decision making. In Adamaliet. al. (2006), ICT is a strong tool for sustainable development and improving governance, widening democratic space, increasing productivity, administrative effectiveness and cost savings.

In-Text Question

In Africa, infrastructure has still been identified as a major milestone that impedes the expansion of ICT. True or false

In-Text Answer

True

The most prominent manifestation of the ICT in governance is in terms of *e-government*. In the UN e-government survey (2004, 2005, 2008), it refers to the use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses and other arms of government.

The dimensions of its applicability in administrative tasks, data gathering roles, the functions of the legislative arm of government, the processes of judicial/criminal and civil investigations and other spheres of governance is near impeccable through the functions of e-governance. In democratic systems of government, the IC T through the internet is important for the process of governance.



Figure 3.7: E-Governance

It makes room for the integration and synchronization of government activities, such that the arms of government, agencies and institutions of the state can interact, share

information and develop a process of seamless service delivery that aids the speed of policy implementation and government related actions. It eliminates the bottlenecks and bureaucracies that may have the impact of slowing down the activities of the government.

According to Adeyemo (2011), he identified the primary delivery models of e-governance. The primary delivery models are:

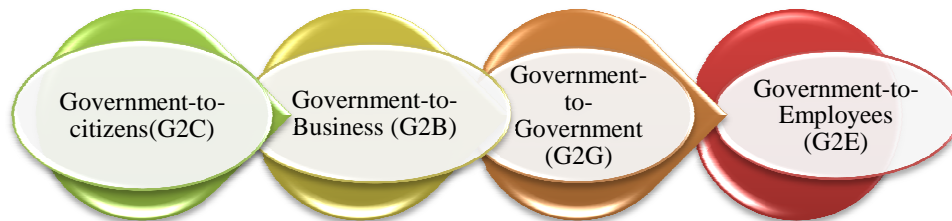


Figure 3.8: The primary delivery models of e-governance

He posits that the interaction within these core areas denotes different strands of activities that make up the government. Through these portals of relationships, the government is able to transmit information through the internet, by informing the public about holidays, statutory days, judicial processes and other processes of development within the polity.

Through the medium of interaction as highlighted above, the government is able to engage in a two-way communication, which is between and among agencies and structures of government. The citizens can dialogue and express their opinions (through voting, polls and referendum) about the processes and activities of government.

They can interact with government services, make payments (taxes, levies, bills and utilities), report cases and lodge complaints. This is believed to have an impact of improving and upgrading the effectiveness of governments (especially in developing countries and in maturing democracies). The government is able to interact more directly with citizens, the pulse is easily felt, less is spent on administrative tasks and roles and there is greater efficiency with regards to government processes.

When government goes electronic, even the poorest citizens are challenged to seek ICT education, so they can react to government issues on their individual platforms, there is equality in terms of access to the government – the restrictions are removed and opinions are freely aired.

The exchange of information between and among government departments, agencies, structures and institutions will engender greater effectiveness. Security and criminal situations are further subjected to more control, because information is freely shared.

There is reduced requirement of human intervention, time and manpower is reduced and government can effectively save of recurring expenditure.

The e-government process has capacity for reducing or bridging the *digital divide* which had been at the front burner of debates. E-governance arouses the interest to develop ICT skills and capacity building, in order to meet with the needs of the individual.

According to the UN e-government Survey (2004, 2005, 2008), there are certain stages of e-government services evolution in a country, this is given in the table below

Table 3.1: Stages of e-government services evolution in a country

| | | |
|----------------|---|---|
| Stage 1 | Emerging presence | In this stage a country commits to becoming an E-Government player. A formal but limited web presence is established through a few independent government websites which provide users with static organizational or political information |
| Stage 2 | Enhanced presence | In this stage, a country's online presence begins to expand as the number of official websites increase, with more dynamic and specialized information content that is frequently updated. The interaction is still primarily unidirectional with information flowing essentially from government to the citizen |
| Stage 3 | Interactive presence | In this stage a country's presence on the internet expands dramatically by entering the interactive mode with access to a wide range of government institutions and services |
| Stage 4 | Transactional presence | In this stage two-way interactions between the citizen and the government is included |
| Stage 5 | Networked (or fully integrated) presence | This stage represents the most sophisticated level in the online e-government initiatives. It is characterized by an integration of G2G, G2C and C2G (and reverse) interactions. The government encourages participatory deliberative decision making and is willing and able to involve the society in a two-way open dialogue |

- What are the primary delivery models of e-governance?
 - They are:
 - Government-to-Citizens (G2C)
 - Government-to-Employees (G2E)
 - Government-to-Government (G2G)
 - Government-to-Business (G2B)

There are three basic elements of e-governance these are given in the figure below:

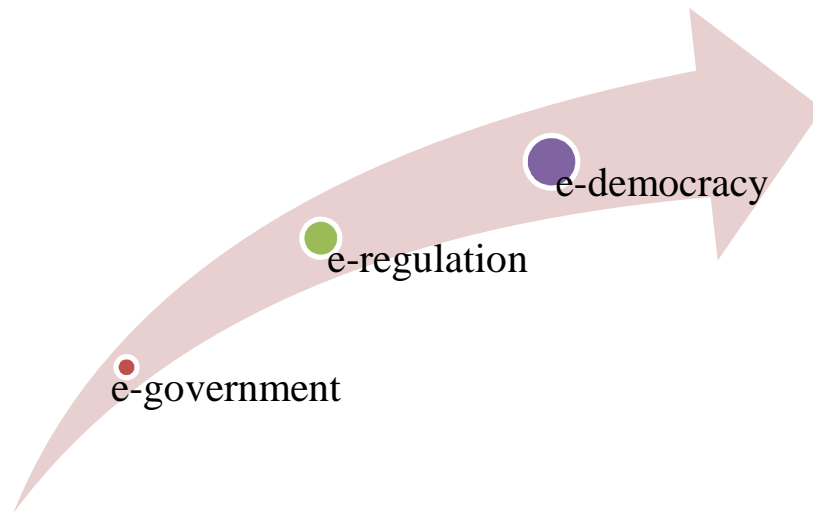


Figure 3.9: The three basic elements of e-governance

The element of **E-government** addresses the ICT needs of the government, as it relates to the people. This is the process in which the government provides quality services through the ICT platform. This could be done in form of partnership (Public-Private-Partnership, Concessionaries, Build-Operate-and-Transfer etc.) with individuals and privately owned business concerns, which can provide the services of government on more easy, convenient and accessible terms.

The e-governance process in Nigeria made the government to establish the National Information Technology Development Agency, (NITDA) under the Ministry of Science and Technology (MoST) to champion development of Information Technology (IT) in Nigeria and midwife implementation of the national IT policy.

NITDA is also charged with the responsibility of implementing e-governance initiatives using National e-governance Strategy Limited, (NeGSt), a Public-Private-Partnership (PPP) as a special purpose vehicle (NITDA, 2001). In terms of

E-regulation, it is the process of regulation and provision of public services. This platform influences the control and regulation of such activities. Feedback process and evaluation systems, helps the government to monitor and assess the performance of social services.

The process of **E-democracy** is intended to build and develop the democratic process, which improves the processes that influence the activities of the arms of government and other regulatory agencies of government. Through public opinions, polls, and other inputs by the public sector, the rule-making process of governance is addressed (Matthias and Gaëlle, 2003).

According to Clift (2003)[In Adesola, 2012], the process of e-democracy interacts with core actors – democratic actors, which include governments, public officials, the media (concrete and online), political parties, civil and liberty groups and the citizens who are usually the voting public.

In-Text Question

The element of **E-government** addresses the ICT needs of the government, as it relates to the people. True or false

In-Text Answer

True

3.4: ICT and Politics

While focusing on the role of ICT in politics, it is important to address two major orientations as regards the use of ICT in political participation and citizenship. Substantively found in Western democracies and in the world over, the influences of the ICT on politics has been delineated into two ideologies.

The first ideology postulates ICT as *administrative*, while the second argument posits that ICT is a form of actionism – they engage the administrative and actionist discourses. According to **Haytio and Rinne** (2008), the first one aims to create and rationalize the practices of participation from above (e.g. the planning of land use and urban construction, good governance practices).

The second discourse strives for bringing alternative meanings and practices from below (e.g. the criticism of ‘official’ influence opportunities, the inhabitants’ own initiatives and plans, citizens’ public action). In Nigeria for example, through the ICT, a form of electioneering and voting patterns has been found. Through social media portals, elections were campaigned and even monitored.



Figure 3.10 President Goodluck Jonathan

Source: <http://dailymail.com.ng/wp-content/uploads/2015/02/GoodLuck-Jonathan2.jpg>

In the 2011 General election campaigns, **President Goodluck Jonathan** had 246,000 followers (and still increasing), which is more than the combination of followers of the

British Prime Minister - David Cameron, German Chancellor - Angela Merkel and South African President - Jacob Zuma (CNN News/Tech. October 1 2010).

Also, in the 2011 General elections in Nigeria for example, most results that were counted and recorded at the polling station were made available to the world through the social media (twitter, facebook, 2go etc), this made for the possibility of predicting the winner of an election and it helped to reduce the tendency for polling result manipulation. In an election tribunal case, video evidences were brought forth in court to show the process of election malpractices in certain places.

In the 2007 Gubernatorial Election tribunal between Messers. Rauf Aregbesola V. Olagunsoye Oyinlola in Osun State, Nigeria, video evidence were brought in, although discarded by the court at first, it still came to be the point of reference at the delivery of judgment about the true winner of the election.

The process of investigation was extended to the presiding judge in the case, who was indicted through a call log and record of calls exchanged between the judge in question and significant others in the case.

The social media, being a function of ICT, is also a tool which sustains social revolutions. The Arab Spring/ Occupy Movements and our localized Fuel Subsidy Crises in January 2011 are clear examples of how ICT has influenced governance and especially political activities. The calling off of the nationwide strike action of January 2011 was first found on the social media (Twitter).

The Nigeria Labour Congress (NLC) first put the news on the social media, before it was even transmitted on the news media. The information was broadcast on Twitter at the same instance the negotiating group rose from the negotiating table. The first forms of reactions too came straight from the social media, castigating and condemning or praising the actions of government and labour leaders. The ICT in politics and in governance is important to foster transparency, decentralization and participation.

In-Text Question

The social media, being a function of ICT, is also a tool which sustains social revolutions. True or false

In-Text Answer

True

3.5: ICT and Religion

With the increased influx of the ICT in contemporary society, there has been great interest in how this development has affected communication and coordination, which did not exempt the domains of religion (**Grinter et. al.**, 2011). Religion is a global force. Religion had always been predicted to fade from modern life, but it has instead taken up new forms and increased dominance even in the world.

The power and control of religion has remained unabated. This was made possible through two major world events. First, through the neo-evangelical rise that took its hold in American politics, which saw an evangelical ‘born-again’ become President and the Islamic revolution in Iran, in 1979 which gained popularity both for its anti-American foreign policy and the re-emergence of the Muslim identity within Iran (Shi’ism) and beyond (**Hoover**, 2008).

Religion is the opium of the people and **Karl Marx** was right to have said that the action of a group of people (whether towards social order or disorder) will be dependent upon religious teachings and doctrine.

Key influences to the use or non-use of ICT in religious sects are the religious leaders. They decide what technology is appropriate and not appropriate for use within the group. The overall effect of ICT use within religious organizations is primarily to increase inclusion and growth of the sect/group.

In-Text Question

Religion is the opium of the people. True or false

In-Text Answer

True

Although the impact of ICT in almost every sphere of life is most recognizable and impressive, existing body of knowledge reveals that the integration of ICT into religious practice has not been smooth. The television and radio as means of propagating religious leanings, was perceived to have a way of turning religion into a form of entertainment (Bruce, 1990; Schultze, 2002).

The social media, through ICT is believed to have a natural opposition with religion. This is because, while the ICT media is new, sensational and innovative, religion is immersed in eternal truths. Therefore, religion in its bid to be acceptable is either ignored/loses acceptability or sensationalized – which are extremes that distort its reality (Biernatzki, 2003).

Talking about **sensationalization**, especially in the Christian faith, the idea of mega churches (a protestant church with 2000 or more members) has been raised as a concern. Wondering how these denominations have been able to cope with the challenges and demands of the population, the answer lies with the expanding capacities of ICT of such groups.

The mega churches have transformed the mode of Christian worship through the ICT. Hence, they are able to attract more people that are willing to shift from the traditional form of church worship. In modern times, mega churches employ large multimedia screens – during sermons, websites, online payment portals, live streaming of church services, synchronized and assembled contemporary music.

Although the use of ICT in church has attracted untold criticisms, claiming that the use of ICT interferes with the experience that comes with religious worship and as a result, diminishes the outcome. Churches and seminaries have adopted the e-education platforms that come from the ICT, hence training and teachings in church and outside of the church now take the form of distance learning and the mediation of ICT platforms even in the traditional class teachings.

In-Text Question

The mega churches have transformed the mode of Christian worship through the ICT. True or false

In-Text Answer

True

As the ICT has affected and modified the pedagogical mode of teaching in schools, so also has it been transferred to the mode of instruction in the church. Substantively, the Christian faith's emphasis on a physical community, which requires adherents to gather and worship has consistently questioned the appropriateness of the ICT as a means of spiritual learning and group formation.

While still identifying the negativities that accustom ICT in religion, it has also been said that online religious communities, which is an off shoot of the ICT development, have flattening effect on organizational hierarchies, especially in sects where the hierarchies are of greater symbolism (**Kong, 2001**). There is an emergence of the term 'spirituality' which arises from a sense of individualism and personal autonomy.

In this scenario, there is a decline of institutional authority and this was a product of secularization, which as a matter of fact is a youth culture. There is less loyalty to clerics, doctrines and teachings. People become increasingly uncomfortable with the word 'religion', they preferred to be described as 'spiritual' – which for them represents pure meaning and practice (**Hoover, 2008**).

Online platforms have been able to facilitate the creation of new faiths, practice of alternative faiths (i.e., Wiccans and New Age) and practice of faiths or worship (internet church) that are difficult or impossible to practice in the person's current physical setting – whether by reason of legal sanctions/ban or distance (Campbell, 2005 ; Helland, 2007).

In the same light, the ICT through religion has helped certain adherents with relationship building beyond the local church setting (Grinter et. al., 2007). There is now an array of ICT devices that support religious activities and practices among the clergy and the laity, through prayers and meditations examples are

- Prayer Companion - a device for secluded Nuns
- Sun Dial - an imaged based mobile prayer-time reminder system (Gaver et. al., 2011; Wyche et. al., 2008).

From the Islamic religion, according to **Lubiset. al.** (2011), ICT is encouraged in Islam, because it is believed that the introduction of ICT based learning strategies to teaching will bring forth a positive development through positive thinking, innovation and self-development. It is also shared, that the use of ICT in the religious sect, and as the fundamental teaching strategy, will produced balanced individuals, who are spiritually, academically and secularly sound. They are more aware about their environment and making Muslims better Muslims, while non-Muslims are transformed into better citizens.

According to **Kundishora** (2010), the ICT has diluted traditional community religions and have helped to drive new and foreign religions which in some cases do not incorporate the local human values and ethics. Pentecostalism has motivated quicker spread of ICT and religious teachings, which are learned through the ICT has brought in foreign beliefs which are in constant contradiction against existing traditional beliefs.

The unrestrained access to satellite television has increased the knowledge about religion and an individualistic practice of religion. The ICT has demystified religion and religion has been brought to the open domain, wherein the identities, beliefs, past and future are being challenged.

There has been a mix of religious fanaticism, political lines and the ownership/control of the new media. The media, while engaging the religious dissensions of the day, has further bred the untoward religious dispassion that has lingered between the two major religions of the world (Christianity and Islam).

In *Watching al-Jazeera*, **Lynch** (2005) discussed the displeasure against the al-Jazeera TV media, which has been unduly noted for its extremist and Islamic-Arab political and religious culture. It was christened the ‘the most powerful ally of terrorism in the world’, following its nuanced connection with anti-Americanism, anti-Semitism and religious fundamentalism.

Although on the contrary and as a functional part of the discussion, both the former US Secretary of States – Condoleezza Rice and former Interim Iraqi prime minister – IyadAllawi did recognize the reporting and coverage of the then Iraqi election and February 2005 Lebanese protests against the murder of Rafik Hariri – former prime minister as having advanced the cause of reform in the middle-East region.

More recently, regarding the interplay of religion, the new media and politics, the incidence of Al Gore’s sale of Current TV to Aljazeera Television Network – January 2013, has also generated heated debates along religious, rather than political lines in America (CNN News/Tech. January 7 2013).

The Glasgow Airport bombing in 2007 and September 11 terrorists' attacks on the United States in 2001 had propelled a deeper sense of religiosity and it has informed a reflection into geopolitical, post-colonial, economic or strategic aspects of the situation.

It is believed that the social class and status of the major suspects in the bombings portend that they acted on rational ends, but religion came to be identified and argued as a defining characteristic of motivation (Hoover, 2008). This has by extension motivated and dominated arguments in International politics up till the present moment.

In-Text Question

As the ICT has affected and modified the pedagogical mode of teaching in schools, so also has it been transferred to the mode of instruction in the church. True or false

In-Text Answer

True

3.6: ICT and Economy

The ICT has been described as having great potentials for enhancing development. The advent of the ICT in the paths of globalization had raised controversies about its tendency for neo-imperialism. Although globalization was a prelude to the growth of ICT, the instruments of ICT has condensed the world into a global community.



Figure 3.10: ICT and Economy

It has significantly benefitted access, knowledge and other areas of human life in global dimensions. It has influenced the perception of organizational and institutional boundaries – they have been made more fluid and easy to understand and interact with (Dhameja and Medury, 2004). ICT is the buffer of business activities, human and capital productivity, newer dimensions of trade and social-economic development.

It is therefore regarded as a precondition for the emergence of a strong market economy, which affects the growth of industries and sustained social activities. In Nigeria, research

concerns have established that there is a correlation between the implementation of ICT policy and economic growth – described in terms of the GDP (Gross Domestic Product).

This assertion is held notwithstanding that certain other research outcomes have revealed that the extent of Nigeria's adoption of ICT is low (Annie, 2011). According to Vu, 2004 (In Adesola 2012), ICT capital is superior to non-ICT capital in enhancing economic growth. The extent, to which the stock per capita of ICT investment grows, will be commensurate with the growth of labour and capital input.

The impact of the ICT on the national index of growth is highly significant and economically rewarding. Because it engages the labour and capital sides of production and brings them both to the point of high returns and productivity. This is because both elements of industry are driven into core expertise and product development, which will be able to serve the purpose of growth and meet the needs of members of society.

It improves and develops the skills of labour (makes them to be conversant with and aspire to meet world standards of competence) and it impacts upon increased investment, which in turn yields strong overall economic returns for the country. But for these results to be realized, the business environment and the matching infrastructures need to be put in place. Else, we may have a situation wherein the technology is available, the labour is skillfully equipped and the environment is structurally and strategically averse to the imminent growth.

Economic growth is best measured by the extent to which a country is able to increase production – beyond domestic consumption and is able to engage human capital. This dimension of growth thus impact on the best-outcome and maximal use of the factors of production (land, labour, capital and business ownership – technical and managerial), which thus results in increased productivity.

In-Text Question

Economic growth is best measured by the extent to which a country is able to increase production – beyond domestic consumption and is able to engage human capital. True or false

In-Text Answer

True

In Nigeria for instance, the advent and influx of mobile telecommunication service between 2001 and 2003 has given rise to other form of technological development – which has engaged more labour with skill capacity. This is a result of the fact that mobile telephony has increased access to internet services, existing and emerging forms of online business concerns.

The banking/financial sector is increasingly churning out viable banking and transactional platforms, which has made the movement of money to become easy. The advent of automated machines (ATMs and POSs) has made Nigeria to adopt the cashless society policy recently, which is due to be spread across the country in a short while.

Although the ICT in the financial sector, which is the nerve of other economic activities, is being plagued with high risk information and identity theft, the positives still outweigh the negatives. E-banking is a major way in which business transactions have been done across the globe. Distances that should be physically covered in all industries have been closely connected by the ICT and this has increased the speed of delivery, productivity and time management. E-Commerce has increased the access to products on a wider range.

Business transactions are done more widely and in a larger *virtual market*, because various products are available and prices are available to be compared, without crossing physical boundaries. More employment has been created in this way, through mobile telephony and online trade zones, individuals are able to buy and sell *values* and *services*, which brings in money.



Figure 3.11: E commerce

In Nigeria, mobile phones, call cards, bulk SMS and phone/computer accessories are businesses that people engage in to make a living. Online businesses and ICT related transactions are now easily carried out both on large or retail scales – the problem of huge capital has been surmounted, because these businesses give the room for expansion, based on the propensity to save. Industries and business institutions have gone more into knowledge sharing and the transfer of ideas without necessarily crossing geographical borders.

Hence, businesses have increased their capacity to produce and to meet with global expectations which can facilitate their business growth, productivity and competitiveness.

In government, previously human-enabled payment systems have metamorphosed into e-transactions. Bills, taxes and utilities payment are now funded through ICT enabled

portals, which makes for increased transparency, accountability and financial integrity in the use and dispensing of public funds and facilities.

In-Text Question

In Nigeria, mobile phones, call cards, bulk SMS and phone/computer accessories are not businesses that people engage in to make a living. True or false

In-Text Answer

False

3.7: ICT and Health

Health is wealth as the saying goes and it is a significant social capital, which is necessary for the development of the society. Health is a sensitive structure of society and it thus requires proper guidance, especially with regards to the adoption of technologies. It must be carefully designed to deeply consider the wide ranging social, economic, political and religious disparities within a society.

The influences of ICT on health has been significant in the past decades and it is imperative that the ICT has been instrumental to the growing and expanding knowledge, innovations, advances and solutions in the health care system. Through the ICT and enhanced social learning, the structures, process and practice of health care has veritably improved. It has provided means for synergy and sharing of experiences across the various knowledge areas and frontiers in the research, practice of medical science, administration and policies.

These technological developments are to enhance two major things –

- The quality of care
- Access to care

As you would see in this study the ways ICT has affected health you would realize that various platforms have emerged, ranging from

Telemedicine which includes tele-radiology, telepathology, and the provision of surgery advice and instructions, all of which involve the transmission of images among different sites, tele-consulting to eHealth, mHealth among others (Wootton, 2001).It is important to identify the fact that these initiatives are all built around the effectiveness of the ICT to foster positive health outcomes.

In World Information Technology and Services Alliance - WITSA (2006), categories of advanced technological solutions in the health sector, administrative and practice, include:

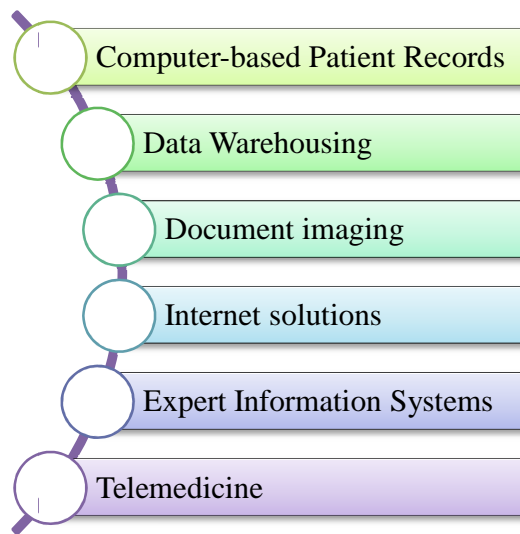


Figure 3.12: Categories of advanced technological solutions in the health sector/administrative

The Influence of Mobile Telephony

By the end of 2010, the population of phone subscribers moved from 430 million to over 5 billion subscribers, with the developing world constituting a larger portion of the increase. In Africa, there are more mobile phones in use than Europe, or in the United States.

The mobile phone has been able to evolve a new culture of patient care and or first time reporting of illness conditions. It has come up with easier ways of consulting with doctors, sending snapshots of infections – related to visible bodily changes.

Health alerts and first aid care can be accessed through mobile telephone technology.. It has a capacity to lower the cost of accessing healthcare as well as improving the quality that can be found, because it has an influence on preventive care. This creates interconnectivity among consumers, health care workers and administrators, as well as producers/suppliers of consumables.

Conversely, mobile or ICT based technologies cannot replace the one-on-one contact between the sick and practitioners in the health sector. But it is useful to attend to avoidable circumstances and helping patients to manage their health conditions when it is expensive, distant, unavailable and/or difficult to assess.



Figure 3.13: Mobile Phones

The use of ICT in health care and health institutions is instrumental to facilitating a more efficient system of human resource management as well as a data management. Through real-time technologies, monitoring endemic diseases/public health challenges and disaster management is better positioned. In anticipation of improved services in the health sector, the ICT provides the platform for receiving feedback from patients which points out the areas for capacity building.

- Mention 4 categories of advanced technological solutions in the health sector/administrative practice?

- These are:

Telemedicine

Expert Information Systems

Document imaging

Internet solutions

Reliable information and effective communication are crucial elements in public health practices. The use of appropriate technologies can increase the quality and the reach of both information and communication. On one hand, the knowledge base is about information, which enables people to produce their own health.

On the other hand, social organizations help people to achieve health through health care systems and public health processes. The ability of impoverished communities to access services and engage with and demand a health sector that responds to their priorities and needs, is importantly influenced by wider information and communication processes, mediated by ICTs (World Bank, 2006).

Population health is more enhanced through increasing awareness made available via ICT based platforms. Individuals are better educated about prevailing health challenges and how best they can be addressed.

In less developed societies and largely rural communities, ICT serves the basis for training local health care workers, to increase and improve their skills. They can also be engaged in tele-consulting, such that when local health facilities are faced with situational challenges, they can consult with highly specialized and professional counterparts through a dedicated call center and image-data transferring device. This will prevent critical and time-constrained health issues from escalating or leading to death

ICT will help as well to develop a strong public awareness network, which will influence the health choices of the local people. The ICT will also help with the process of procuring drugs and other health consumables that may not be available locally. Inventories of unavailable drugs or consumables are easy to take and are also easy to procure through government channels, so that the local people are not burned by the cost if they get it on their own – health subsidy, especially when they are not produced in that environment.

Activity 3.1

After going through the note above, reflect on what you have read so far. You will discover that society moves through the interaction of certain structures of the society. These structures interact to maintain order within society as well as to filter the negatives, while modifying the effects of the ICT on our society. We discovered that society responds to change and such changes emanate from the dynamics of cultural and social progress.

Activity 3.1 Feedback

The influences of ICT on certain strategic areas of society is core

Now you are aware that the society is influenced in many ways, but interest in the six areas is central to our discussion.

You now understand that the ICT is present every aspect of human activity and we need to understand how they influence and affect us.

Summary of study session 3

1. The ICT influences our society in many positive and negative dimensions.
2. The family, being a primary agent of socialization needs to fully understand and harness in relationships, for the best possible outcome.
3. Policies, politics and governance, being at the helm of social contract needs to significantly interact with the ICT for the progress of society.
4. The ICT is a key to the improved capacity of the *six* core areas of society to achieve the best outcomes.

Self-Assessment Questions (SAQs) for Unit 3

SAQ 3.1 (tests learning outcome 3.1)

In what area has contemporary society been influenced by the effects of ICT growth and expansion

SAQ 3.2 (tests learning outcome 3.2)

How does the ICT influence the development of family relationships?

SAQ 3.3 (tests learning outcome 3.3)

How does the society interact with ICT through her structures – situational examples?

SAQ 3.4 (tests learning outcome 3.4)

Discuss the role of ICT in shaping policies, politics and governance

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Study Session 4: ICT and the Future

Introduction

This Study Session has engaged a discussion about what the future holds for the development of ICT. Since it is a purely western idea, it will be examined from predictive statements and research interests that are focused on improving and increasing the functionality of the ICT in the nearest future. Children born in the new millennium may not be able to understand or even imagine a world where there is no digital platform.

Therefore this Study Session projects into the future while engaging the probable challenges that the ICT of the future might face. These prepare the ground for action areas if those ideas will actually be true and are able to keep its hold on human progress.

Learning Outcomes for Study Session 4

At the end of the Study Session, you should be able to:

- 4.1. Highlight the possible scenarios of the future that the ICT will bring to our world (SAQ 4.1)
- 4.2. Enumerate probable challenges that future ICTs may face (SAQ 4.2)

4.1: ICT And The Future

Through this course, you have increased your knowledge about the roles of the ICT in the development of your immediate environment and society. In a few years from now, you expect a wider society, with different value system from what you have now, which will be subsistent upon the expansive and invasive nature of the ICT. You bring into remembrance, the statement made by AmartyaSen, while referring to the developmental scenarios and interaction between and among the developed and less developed states.

AmartyaSen posits that ‘their past is our today, their today is our tomorrow and their tomorrow is our future’. This signifies that the unprecedented expansion of the ICT, in policy and other spheres of life, which has influenced the changes that you see and hear about in the developed societies, will unfailingly be transmitted to our present society. One definite way, is through the *scapes* as identified by ArjunAppandurai, in his work on diaspora.



Figure 4.1: Example of ICT-driven impact in banking

These changes will deeply challenge the world you have in our hands *today* and hand to us a *profoundly different* society – as tomorrow. In the overall, technological advances, moving at its present-day force will definitely have implications for the future of developed, developing and underdeveloped societies.

Starting from the *economy and structure of society*, the changes that society has been recorded in terms of improved public and private financial responsibility is remarkable. This is facilitated by the increased ICT based technologies that brings financial activities to the open domain, such that well informed organizational structures, accountability and transparency are enforced in business and in governance. There is increased corporate responsibility, which is a result of ICT based technologies that have facilitated increased awareness, mobilization and participation of citizens.

4.1.1: A more desirable future – an era of freedom

The future is highly probable to be more engaging and participatory. In the financial and economic sectors, there is positive likelihood of greater policy responsibility, probity and financial transparency. This is going to be enabled through increased intelligence and monitoring processes and technologies. They will place almost everyone at an advantage, to be able to engage in cross-sectoral collaborations, so as to evaluate and appraise performance as at when due.

In *Politics and Governance*, you should anticipate a stronger degree of public participation in politics. Essentially, the future of the ICT and its impact upon governance will be *highly participatory*. The increased engagement of civil societies, social movements and private actors, will pave the way for a clearly defined *social contract* – values and principles, which will be shared by the government and the people.



Figure 4.2: Public Service in banking sector taking over by ICT

The discharge of Public service duties and responsibilities will be decentralized and will engage in more Public-Private partnerships. There will be better service delivery and in regional terms, language-barrier issues will be adequately addressed through ICT enabled solutions. So that higher international integration is fostered. For *industry and technological spheres*, innovation will increase and strong collaboration among stakeholders (schools/universities, non-governmental organizations, civil groups, and end-users of technologies) will bolster favorable innovations.

- In what sector has ICT made positive influence in Nigeria?
 - Health, Banking, Communication, Education among others.

These innovations will be *value* based, evolving around ethical, moral and utilitarian standards. The world will get *smarter* – that is, having access to the worldwide web and ICT based facilities on-the-go. You will have expanded reality applications, which will make our society into ‘*mobile society without mobiles*’, through virtual technology and augmented reality. These will definitely impact on the quality of services, lives and businesses.

The *privacy and identity* of individuals will be highly accessible and you will have the idea of ‘*portability*’, extended across every sphere of life. In the light of these, the perception of *privacy* will be more assured and securely guarded. It will be veritably easy to keep track on everyone, thus crimes like identity theft, and other social crimes – ICT or non-ICT, are better managed and tracked through ICT based solutions.

In terms of *health and education*, it is anticipated that education will be a more open system, exposed to ICT based learning. Learning is made more flexible – engaging lifelong-learning processes, creating ICT enabled learning space, without recourse to time, place, and access. This is markedly a departure from the pre-existing formal and structured system of learning.

Going by the advancements in health care delivery and as the world is heading towards the possibility of an aging population by 2050, ICT will come up with increasingly new

ways of facilitating health care delivery. This will take into consideration, the interaction between the individual and health structures as well as between professionals and patients.

- Through ICT enabled translations, medical practitioners across the globe will be able to positively interact with health challenges, rare diseases and illness conditions that are genetically defined.
- Through advanced genome research and expansive studies in the effect of drugs, alternative treatment options will be quickly discovered through direct genetic testing, to determine the efficacy of drugs. The dimensions of first aid in emergency conditions and early treatment of life threatening conditions are facilitated through ICT based instruction guides. This explores the possibility of an automated system of self-care in relations to emergency situations.
- The world anticipates a drastic reduction in the statistics of mortality – with special interest in infant mortality. New preventive and curative regimens are expected to cater for hitherto evasive viral diseases.
- Through ICT enabled platforms, the healthcare system will evolve new ways to organize and position health care delivery to reduce cost while increasing the quality of care, with overall impact on quality of life/life expectancy.
- To facilitate greater *social cohesion* and *integration*, although the erosion of cultures can be associated with the modern era, a category of people have been found to have capacity to retain elements of their culture.
- Through the ICT, strong diaspora and minority networks, among migrants will focus on a process of integrating them into host giving their cultural values a voice, which will diminish the cultural divides which they may experience at the destination.

In **Floridi** (2006), the ICT for the next generation, follows two sets of neologism – *infosphere* and re-ontologizing the world. On the one hand, the *infosphere* is comparable with the *biosphere*. He pursued a claim for an *infosphere*, wherein the entirety of the informational sphere (properties, interactional, processes and mutual relations) is collapsed into a single whole – although differentiating it from the *cyberspace* which is only a part of the *infosphere*.

On the other hand, he refers to *re-ontologizing* as a very radical form of re-engineering, which transforms the intrinsic nature of current developments as well as reconstructing new ones. In these cases, he submits that digital ICTs are *re-ontologizing* the *infosphere*,

such that our society will experience profound and deep-cutting transformations in the closer future.

This suggests the transformations and challenges that the information society is bound to face *generation-next*.

To someone born in the new millennium (2000 and beyond), they can only perceive the world to be wireless, virtual and internet powered.

They cannot understand the pre-digital stages through which society has gone through. This suggests that as society revolves around the development of the ICT, wider dimensions of change are expected to invade and to create a new order of society. The *infosphere*, being empowered through a process of *re-ontologizing*, is increasingly overtaking every other space in society. You picture a scenario where – *anything to anything* is connected (a2a), *anywhere for anytime* (a4a).

These transformations suggest that you shall be living in a world that is *synchronized, delocalized* and *correlated*, cutting through *space, time and interactions*. This will inevitably widen the existing digital divide, between those with deep knowledge about the dynamics of the infosphere and those who cannot. This will create a new form of discrimination between individuals that live in the infosphere, distinguishing between the insiders and outsiders, between those that are information rich and information poor.

Pointedly, by the reason of the radical transformation in the society through the effects of de-ontologizing on the infosphere, there will markedly be an emergence of hybrids and artificial agents. They are going to be partly human and partly artificial. These new agents share a similarity with the present environment; they have the freedom and knowledge to operate within the human space. There will definitely be ethical and technical debates that will query the real necessity of human beings or the possibility of transforming human beings into agents as well. This means that the functions that man is able to carry out, artificial agents also will be able to carry such function out. It therefore presupposes a conflict of roles between ‘man’ as a social agent and technologically created – artificial agents.

Artificial agents can begin to wash dishes and do house chores as soon as they are wired and configured to operate within such environment. Definitely, these things will be safely achievable and ethically/morally acceptable in the future. These artificial constructions within the social construction of roles will rather be blurred by the effects of the ICT. Assuring, it will definitely raise challenging issues, which society will resolve (G. Misuraca et. al., 2010).

In-Text Question

ICT has made learning to be more flexible – engaging lifelong-learning processes, creating ICT enabled learning space, without recourse to time, place, and access. True or false

In-Text Answer

True

4.2: Four Possible Scenarios of the Future

Although, these aforementioned conditions may not be directly obtainable in all circumstances, the view, only presents a positive dimension to the possible outcomes of the future of the ICT as it relates to social order in our society. As a matter of fact the *open governance approach* is co-joined with three other extreme conditions that may be favorable, fairly favorable or unfavorable. In the overall, these conditions are resolved to likely interact with the possibilities of the future and to give a picture of our society in the nearest possible time.

In the three other approaches,

Box 4.1: Open Governance Approach

open governance emphasizes higher participation, which is a product of the availability of information in the public domain, whereby people can access information and put them to the best use for the development of society – solving social problems, it faces a difficulty which will be an offshoot of a digital divide.

The second approach, which is the

Box 4.2: Leviathan Scenario

leviathan scenario, will lead to a probable exclusion of the public. There is no public participation. It means that information will not be left in the open, but restricted in the hands of a ‘ruling few’ - oligarchy that are versatile, using high-tech tools and systems and can be said to be in control of information.

Decisions are more factual, analytical and calculated. This will therefore mean that government is in control of the key aspects of the society. Hence, the idea of social contract in this situation is based on a *mutual trust* between the government and the people. The trust that the government will deliver the best social conditions that are clinically, factually and strategically produced, while eliminating threats that may arise from pandemic, and terrorist situations. A shortcoming is that the people whom are constrained may become apathetic, because the human will is restricted.

Box 4.3: Privatized Scenario

In a privatized scenario, decisions of society remain in the hands of private business men and multinationals. Thus, governance lies in the hands of corporations and not the government. In this case, the citizens do not matter much and a process of democracy will not be obtainable. The quality of decisions in this scenario is dependent on the capacity of the ICT systems that are employed in the decision making process.

A major challenge with this system is that it will be expensive and social inequality will set in, because ordinary citizens may find services and products unaffordable. Therefore, tension and conflict becomes imminent in such conditions. This condition is synonymous with a dominant capitalist ideology – more like a monopoly.

In the last possible scenario, this approach focuses on *self-service governance*. This approach brings the ordinary citizen into focus, as a player in policies and the decisions in the society. The emphasis is a do-it-yourself situation, which is a self-organized society. At this point, they may emerge with favorable outcomes, in terms of a wide array of solutions to problems, which could ultimately build a resilient society.

But on the contrary, a risk of widening the digital divide exists. This is because persons without *e-skill* may be awkwardly placed in society – especially among minority or migrant groups, thereby generating yet a form of tension. Because of a range of differing systems and integration processes that may emerge from this system, civic values may not be uniform and thus begin to compete – one-against-the-other (G. Misuraca et. al., 2010).

4.2: Challenges for the future

The enormous impacts of the ICT on the various spheres of society have been noted, with interest in the future of ICT based developments. But very important to the future of the technology are the following ideas, which are to be noted and built upon.

4.2.1: Policy and Government

If ICT will thrive in the next generation(s), there must be enough bases for a conviction that future ICT tools, devices and applications will be relevant to human progress as well as to the expansion of success in every sphere of human life. Government and policy building process will need to rally round the possibilities, acceptability and progress of the future, based on the ethical, moral and utilitarian benefits of adopting technologies. The privacy of data and the security of people need to be guaranteed, such that individuals are comfortable to adopt the processes and outcomes of technological changes.

Cultures are constantly threatened by the ravaging tendencies of the ICT. Therefore, if national governments are not able to modify technologies to respect the cultural and social basis of its existence as a *state*, it will be a barrier to the hitherto effectiveness of the technologies in the adopting societies.

4.2.2: Digital Divide

Identifiable is the fact that the digital divide will continue to expand if individuals and government will not come into a collaborative effort to allow the spread of ICT. If the infrastructure problems of developing nations are not resolved, the ICT will continue to be a basis for undue exploitation. As much as we know that development cannot be equal, a major setback that ICT has in the future is the tendency for certain people to feel left behind, they are made vulnerable and advantage is taken of them.

It is agreeable that inequality is the bane of human society, but the chasm of inequality must be consciously worked upon so that they do not extend beyond reach. From the examination of the future of ICT, presently developing societies must stand up to prevent the pervasive nature of technological transfer, which might have adverse effect on developing nations' growth and development.

Going by the standards of possible ICT based outcomes, poverty in some parts of society will be a nerve breaking point for the expansion of ICTs. Until ICTs are made available and relatively cheap, it may turn out to be an elitist *fashion*, which will invariably hamper the spread of technologies. Notably, certain technologies at the present time remain unaffordable and un-useable because they are cost-intensive and the large population of people in less developed economies cannot afford it.

You must not also forget that a large population of the world is made up of the poor. Hence the first goal of the MDGs is to reduce world poverty. If the cost of technologies is not regulated, the population of the world that will use it will be a *few* and it is not good for the success of ICT in the world. The ubiquitous nature of technology is what makes it functional and to be able to solve the variety of human challenges.

Activity 4.1

After going through the note above, reflect on what you have read so far. You will understand that the future of the ICT is so large that it may not be quantifiable. As new vista for research is opening, more and more possibilities are envisaged in the light of the development of ICT. Although some of these discoveries may query your ethical and moral basis for allowing inventions. They will still be definitely resolved by the forces of society.

Activity 4.1 Feedback

Box 4.1: The future of ICT and the challenges

The ICT is very important to the future of society, if you expect more technological possibilities.

These changes will occur within the reins of indeterminable challenges that the governments, policies, the level of poverty and the problem that is associated with the digital divide. Even the scholars that wrote have envisaged a period of wide digital chasm based on a range of factors.

Summary of Study Session 4

In Study Session 4, you have learned that:

- 1.1 The ICT will change our world in a number of ways that you will need to adopt, even when they challenge your morality.
- 1.2 Your society is not built without its own imbalances. Therefore, those imbalances will be milestones for the advancement of ICT.

Self-Assessment Questions (SAQs) for Study Session 4

Now that you have completed this, you can assess how well you have achieved its Learning Outcomes by answering these questions. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

SAQ 4.1 (tests learning outcome 4.1)

Highlight the possible scenarios of the future

SAQ 4.2 (tests learning outcome 4.2)

Identify the challenges that the ICT may face in the future

SAQ 4.3 (tests learning outcome 4.3)

Discuss how society will cope with these challenges.

References

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Notes on the Self-Assessment Questions (SAQs) for Unit 1

SAQ 1.1: ICT is a product of scientific and technological changes which is a response to population changes and the problems that came with population growth. The ICT has created a new way of thinking, a new way of doing things and a new way of seeing the future. As society begins to move from simple to complex, through the effect of science and technology, people began to ask questions about the ideas that have been keeping society together, about the elements of social order. Through the ICT, business has increased and the rate at which people share information remains unprecedented. This means that as society is growing and mixing with other cultures, we take from those other cultures and add to our own. You should not also forget that our society is a product of our culture. Therefore, as we change elements of our technology and the way we do things, it affects our culture and this also has an effect on our society will be.

SAQ 1.3: There are three basic discussions/debates around what Social Order really means – the Functionalist Debate (Talcott Parsons), the Marxian Debate (Karl Marx) and the Ethnomethodological Debate (Alfred Schutz).

Notes on the Self-Assessment Questions (SAQs) for Unit 3

SAQ 3.1: The various facets of society are under the influences of technological development. These have increased the functions of social structures. They are now faced with the task of developing ways of proper absorption, coping with innovations and mitigating the extent of negativities that may come through the ICT. Weighing the pros against the cons of the outcome of technological development is the way in which these institutions maintain the sanity of society. These make them more functional, regulatory and predictive of social changes.

SAQ 3.2: The family, being the primary agent of socialization is a structure on which other parts of society rests upon. The family takes care to positively integrate the child or person into the norms of the society. In the raging wave of ICT influx, society, through the family is able to work around the issues of isolation, individualization, acceptance and social interactions. The family takes care to ensure that the individual conforms to the standards and norms of the society. Although the influx of the new media is breed a mass of popular culture – that are essentially westernized, the family serves the responsibility of regulating and mitigating negative outcomes.

SAQ 3.3: The family, education, politics/governance. Economy, religion and health are the areas discussed in this unit and we weigh the high and low ends of the influences of the ICT on all of them, such that these structures are able to function properly. You may need to pick an example each from the discussion of the structures.

SAQ 3.4: Because of the rate of exposure to information, governance has taken a new turn. This is essential for the sake of transparency, accountability, measurability of performance, appraisal and precision in terms of policies. Through the ICT, hitherto grey areas of the judicial system – criminal and electoral justice system have been increasingly engaged. Cite examples.

Notes on the Self-Assessment Questions (SAQs) for Study Session 4

SAQ 4.1:

In the overall, the future of ICT proposes a mix of roles between man and machines. It proposes a level of freedom and the ability for human beings to be fully involved in decisions and actions that will affect the possibility of a solution oriented future. The advancements will be over whelming as many inventions and re-inventions will take the stage.

You expect a cyborg situation, where machines can actually take up significant role that man can take. It will question man's morality. Man and machine will work in the same space- machine will be made adaptable to human environment.

There will be lots of information at everyone's disposal and that will predict the extent of success that man will make in all areas of life. As a matter of fact, depending on how best these conditions are managed, they could lead to – an open governance, privatized scenario, leviathan scenario and self-service. These conditions are built, based on the choice that human beings make through society. You expect an advanced society that will be a product of a process of re-ontologizing the infosphere.

SAQ 4.2:

Major challenges that the future of ICT will face are – ethical and morality judgment about certain inventions, the resistance of culture, attitude of government, efficacy of policies, the role of poverty and affordability of technologies, which will be most analogous to less developed societies. Also, the digital divide may widen, while creating a lot more criteria for digital inequalities.

SAQ 4.3:

This is dependent on the students' ability to come up with self-created ideas about solving the problems that you anticipated. It is to test the ability of students and know how well they have been able to study these notes. Probable solutions have been mentioned in Study Sessions 1, 2 and 4, while you discuss the effects of ICT on modern society, the argument for and against the imperialist tendency or otherwise of ICT and in the discussions about how society can address the impending challenges of the ICT.

Notes on the Self-Assessment Questions (SAQs) for Unit 2

SAQ 2.1: The ICT in our society is symbolic of change and development. It exposes us to information, which we regard as the power of the modern generation. Through the ICT, our society has revolved the possibility of a global village through knowledge sharing and increased productivity. ICT is the power base of the modern era, just like steam engine is the power base of the Industrial era. We understand that in most African countries we can feel the impact of ICT, but we have not been able to fully utilize it.

SAQ 2.2: The two major perspectives hold that ICT is (1) A means of imperialism (2) A means of integration. Also we acknowledge the problem of infrastructure and access, which causes the problem of the digital divide all over the world.

SAQ 2.3: The ICT impacts so much on our culture, access, availability and utilization, which surrounds the cost of the technology and the influences it has on our daily interaction and the society as a whole.

SAQ 2.4: ICT affects a lot of areas in our society, ranging from politics, to health, family structure/family interaction, security, data management, the financial sector, government, fashion, education, productivity and many more