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AUGUST 2010

Title Page

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BY

**NWAFOR, KENNETH ADIBE
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**A Research Project Submitted to the Department of Mass Communication,
University of Nigeria, Nsukka, in Partial Fulfillment of the Requirements for the
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Certification

This research project is an original work of Nwafor, Kenneth Adibe with registration number PG/MA/Ph.D/08/49040. It satisfies the requirements for presentation of research report in the Department of Mass Communication, University of Nigeria, Nsukka.

Name of supervisor	date	Name of head of department	date
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Name of external examiner	date
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Dedication

This work is dedicated to God Almighty, my all-sufficiency. Then, to my parents Mr and Mrs Nwafor Nwonu, whose prayers, patience, encouragements and understanding contributed immensely in the success of this work.

I wish to equally dedicate it to my nice siblings for their moral and material support. They include, Mr. Godfrey Nwafor, Mr. Henry, Ebere Nwafor, Chikaodili Nwafor, and Chiwendu Nwafor. I am proud to have you.

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Nwafor, Kenneth Adibe,
Department of Mass Communication,
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August, 2010

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ABSTRACT

This study was on “The Application of ICTs in the Nigerian Mass Media: A Study of NTA and The Guardian Newspapers”. The researcher sought to find out the current level of ICTs use in the Nigerian mass media, using the NTA and The Guardian newspapers as a case study. The work made attempt to identify the factors responsible, the likely implications, as well as some measures for an improved adoption and enhanced application of ICTs in the two media. The survey research method was used. The questionnaire and semi-structured interviews served as instrument of data collection. A total of 400 respondents were selected from the population; 200 from the head offices of the NTA and The Guardian Newspapers on equal proportion, (i.,e. 100 apiece), and another 200 from those members of the public who have access to the two media under review; 100 from the North [Gwagwalada area of Abuja (50) and Bida L.G.A. in Niger state (50)]; another 100 from the South [Surulere area of Lagos state (50) and Enugu North L.G.A. of Enugu state (50)]. The stratified and simple random sampling techniques were used. The data generated were analyzed using simple descriptive and statistical tools such as simple percentages, tabular presentations and frequency distributions. The study was anchored on the Diffusion of Innovation theory. At the end of the study, the findings revealed that, although the Nigerian mass media (NTA and The Guardian newspapers) have adopted the new ICTs to an extent, yet, the level of adoption and application still falls far below expectations, especially when compared with what is obtainable in the western world. The findings attributed the under utilization of ICTs in the two media to lack of infrastructure e.g. electricity, few trained or skilled ICTs personnel, poor knowledge of ICTs at all levels, from suppliers to users, financial constraints, corruption, poor planning and lack of political/ideological will. The study further revealed that the under utilization of ICTs in NTA and The Guardian newspapers has greatly hampered the quality and quantity of their programmes and contents respectively. Based on these findings, recommendations were made. One, government should intervene by providing enabling environment and basic social amenities e.g. electricity, that would assist in the smooth operation of the new technologies and discourage the re-occurring brain drain in the country. On their part, the media organizations should invest in ICTs development and acquisition, and maintain a regular training and retraining of their staff in computer literacy and on the use of the latest ICTs in the media world, among others.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The advent of Information and Communication Technologies (ICTs) has brought tremendous innovations in all spheres of human endeavours. The media of mass communication - radio, television, newspapers, magazines, etc, have definitely not been spared from the great revolution. The satellite in particular has made news most instantaneous and simultaneous, especially for the broadcast media. The new technologies have therefore made the job of media practitioners very effective, interesting, easy, cheaper, faster, more reliable and perhaps most profitable.

Writing about this development in the media industry, Maida (1996), cited in Idemili and Sambe (2007:181) states that:

The invention of some electromagnetic technologies such as micro-circuiting, micro-graphics, holographic memory, micro-electronics, optic-fibre-satellites, video discs, telex, view data, digital broadcast systems, facsimiles, videophones, computers and micro processors, etc., has no doubt revolutionized information gathering, processing, storage, retrieval and transmission; making information available ever more widely, rapidly and less expensive.

Today, television broadcasting for instance has undergone a lot of transformations, from the era of monochrome to colour television broadcasting; from low quality VHS cameras to Dvcam, Videophones, Electronic News Gathering (ENG) and Satellite News Gathering (SNG) gadgets, among others.

The new Information and Communication Technologies (ICTs) have improved TV productions and presentations. Gone were the days of linear editing. Editing is now done digitally with the aid of the computer. This is known as non-linear editing. This ensures effective editing and high quality post-productions.

Also, there are modern sophisticated studio facilities such as Digital Lights, Special Effect Machines, Character Generators, Teleprompters, Digital Studio Cameras of various sizes, Digital Playback Machines, etc.

The radio too, is not left out in the revolution. The radio industry is introducing High Definition radios. The HD radio in the words of Akpan (2009) is “a digital service that greatly improves signals/sounds quality of terrestrial local stations. With HD radio, an FM station now sounds as good as a compact disc, while an AM station sounds as good as a current FM station, aesthetic free and without atmospheric interference”.

In the print industry, the production and distribution of newspapers today is greatly facilitated by the new technologies that offer efficiency, speed, quality and reliability. Many big newspapers in the advanced world now engage in satellite publications - a situation whereby a newspaper edition is published simultaneously in different cities across the country and beyond. Dominick (1993) cited in Ufuohu (2007:240) gave examples of such newspapers to include – *The International Herald Tribune, The Washington Post, USA Today, The Financial Times of London, The Economist, the Wallstreet Journal*, among others.

In Nigeria however, satellite publication is still relatively new in the country and yet to be popularized in the nation’s print media. According to Okorie (2008:170), “*Thisday* is the only Nigerian newspaper that produces simultaneously in Nigeria and South Africa at the moment, and still not consistent”. Thus, we still have early editions and late editions as Ufuohu (2007:2007) rightly explains:

If one buys a newspaper with national circulation in the West, Edo, or even Delta state and one buys another copy of the same newspaper same day, as soon as one crosses the Niger Bridge into the East, one would discover differences in the contents, one is early edition, the other is late edition.

Writing further on the problem of distribution and circulation of journalism products in Nigeria, Ende (2003:42) reveals that:

Many of our so-called national dailies are read in arrears, as some others (prominently Vanguard and The Punch) repackage old news and send it up north in current dates under the euphemism of northern edition, while in fact, the news is read a day or two in southern editions of the tabloids... Presently, editions of Thisday and The Guardian reach Markurdi, a day late – a town of just 820 kilometres from Lagos and 323 kilometres from Abuja.

With the satellite technology, such problem in newspaper production and distribution is completely erased.

Also, many Nigerian television stations are yet to adopt the non-linear editing which is digital. They still rely on linear editing which is very clumsy.

Again, many electronic media in the country are yet to adopt the use of Electronic News Gathering (ENG) gadgets, which enable the crew to broadcast, live from the scene of an event directly to the station. In the same vein, they have not adopted the use of Satellite News Gathering (SNG) gadgets. The SNG with its specially equipped technologies uplinks the signals live from the venue of an event to a communication satellite and back to the mother station which makes it possible for those with the receivers to receive the signals live across the world. The only similar thing many TV stations in the country have is the outside Broadcasting Van (OB.Van).

Similarly, many FM and TV station in the country are yet to be fully equipped with the state-of-the-art facilities. The few available studios are stocked with obsolete equipment resulting in constant breakdown.

Again, the modern lithographic machines and printing machines have gone digital, thereby, eliminating time waste. The machines print faster, collate, count and do other necessary findings. Colour separation is also done on digital equipment as against the previous analogue ones. Thus, making print journalism less clumsy and more interesting.

With the ICTs, photography has ascended to heights that were not previously imagined. In the past, the darkroom was used in developing pictures for news stories or broadcast journalism; today, photo-cropping is done electronically with the use of computers. Also, there are now digital cameras in various sizes, which replace the analogue ones. There are inbuilt digital cameras in mobile phones in today's society.

The Nigerian mass media are catching up gradually with these explosive information and communication technologies. For instance, the NTA, MBI, AIT Channels, Silverbird and a few other TV stations in the country have gone satellite. Some of them have adopted a system similar to CNN and BBC World in their news broadcast. With the aid of the new equipment, two newscasters from two different locations far apart could be brought on screen simultaneously (split screen) and discuss with each other briefly before one is faded out. Though the method is not as perfect as that of the advanced media organizations, but it is commendable.

However, apart from the NTA, AIT, MBI, Channels, Silverbird, and a few others, many TV stations in Nigeria still operate with low quality equipment; thus, the quality of their broadcast is still very poor.

Also, there are still some television stations in the country that use only one camera, and most times, VHS camera to record programmes such as discussions and interviews. This is evident in the rapid turning of the camera from one discussant to another or from the interviewer to the interlocutor. Enahoro (2002:66) describes it this way:

at present, if one visits a television studio in Nigeria, he will only see a Panasonic camera Mounted on a Philip tripod with a Beltec microphone on an Aiwa amplifier link with Thompson cable and a Sony headphone.

Again, most TV stations in the country still rely on physical delivery of stories from their correspondents in distant places instead of sending them through the Internet, the cell phone or the satellite. This makes many stories to be stale. For instance, during the January 27, 2002 Ikeja bomb blast, it was reported that most of the television stations in Lagos were still running dry commentaries of the mishap three hours after the event as Egbuchalam (2005) in Terngu and Ende Ternenge (2007:281) recounts:

On the night of the Lagos bomb blast, a viewer in Lagos while contributing to a phone-in programme on a private TV station queried the anchorman why his station was telecasting the bomb blast of three hours ago without any actuality pictures. The reply was that their cameramen were already at the Ikeja cantonment scene and would bring back the film later.

A comparison of the above statement with the BBC World live reports on the September 11, terrorists' attacks on the World Trade Centre in New York, and the burial of Pope John Paul II in Rome, Italy, leaves much to be desired.

Preliminary investigations reveal that many radio stations in the country especially the state-owned stations are yet to be equipped with the state-of-the-art facilities. Many of them do not have computers fitted with MP3 software and CD writes. Many still operate studio equipment manually instead of using the console. Again, many of their transmitters are obsolete thereby resulting in constant breakdown. Unlike the FRCN and the big private FM stations such as Ray Power 100.5, Cool FM, Rhythm FM and Radio Continental, many state-owned radio stations do not broadcast correspondents' reports directly from the venue of an event. They do not broadcast for 24 hours. The reason perhaps is that they do not possess the technology to do so.

There are still some state radio stations stuffed with cartridge machines, reel-to-reel machines, turntables and cassette players. While in the real digital modern studio, one expects to see CDs, VCDs, DVDs, computers fitted with MP3 software and CD writes.

Preliminary investigations also revealed that in the print media, many Nigerian newspapers have introduced online news services courtesy of the web technology. The online services make it possible to access the newspapers worldwide. Newspapers like *The Sun*, *Thisday*, *The Vanguard*, *The Guardian*, *The Daily Independent*, *The Newswatch* and *Tell magazines* are all connected to the internet. They make available to subscribers summaries of full text versions of their contents. However, the absence of satellite technologies that enable simultaneous publication of newspapers in different cities still poses a great problem to newspaper distribution and circulation in the country.

The above observations show that despite the relative growth in the use of some of the new ICTs in the Nigerian mass media, most of the available technologies are still grossly under utilized.

Consequently, the researcher intends to critically evaluate the level of adoption and application of the new technologies in Nigerian mass media with special focus on *NTA* and *The Guardian newspaper*. The two giant media in the country were consciously selected to ensure equal representation of the print and electronic media, as well as private and public ownership.

1.2 **Statement of Problem**

The emergence of Information and Communication Technologies (ICTs) has brought a tremendous change in the media industry all over the world. The media in various countries especially in the Western World are seriously adopting and utilizing the numerous opportunities provided by the new ICTs for greater efficiency, better quality, faster production, and delivery of more reliable and cost effective service.

However, preliminary investigations show that most print and electronic media in Nigeria and Africa are yet to fully catch up with the trend. According to the Economic Commission for Africa (ECA), only “very few countries in Africa have embarked on the ICT policy formulation process, while in many, the mechanism still falls short of the required standard” (ECA, May,1999).

The mass media in Nigeria are also faced with the problem of adopting foreign technologies to suit local needs. Again, there are still serious lapses in infrastructure especially in the areas of electricity and telecommunications, as well as in the training

of media personnel to handle some of these new sophisticated operational tools. Thus, Mbachu (2003) cited in Ogah (2007:197) observes that:

The newly emerging trends regarding Technology and the mass media globally indicates that the mass media in Nigerian will increasingly be left behind unless the country breaks the chain of economic stagnations and achieves a higher level of development that will guarantee its citizens a higher standard of living that will be a strong stimulus for production and consumption of the new technologies.

Meanwhile, it suffices to state categorically at this juncture, that the problem of this study is not to ascertain the relevance of ICTs in the modern mass media. Of course, it is a known fact that the new ICTs are very relevant in the media. Rather, the issue of serious concern is to empirically determine the extent to which these relevant technologies are utilized in the two media under investigation (*NTA and The Guardian Newspapers*). This is particularly important as prior investigations show that there is already a dichotomy in information diffusion, resulting into a digital divide between the “information haves” or “digital highway users” who can afford to acquire and use multiple sophisticated media technologies, and the “information have-nots”, who may not be able to afford and operate the computer or pay the bill for internet service connection and subscription. Hence, a study of this nature became imperative, because if the subject is ignored or overlooked, the existing knowledge gap resulting from absence/use of the new media technologies would continue to widen, leading to a widespread ignorance, illiteracy, poverty, wars, hunger, diseases and wants.

1.3 Objectives of the Study

The overall objective of this study was to appraise the application of ICTs in the Nigerian mass media. However, the specific objectives include:

1. To ascertain the level of application of ICTs in *NTA* and *The Guardian newspapers*.
2. To identify the factors responsible for that level of ICTs application in *NTA* and *The Guardian newspapers*.
3. To assess the implication of the present level of ICTs application in *NTA* and *The Guardian newspapers*.
4. To recommend ways of improving the adoption and enhanced application of ICTs in *NTA* and *The Guardian newspapers*.

1.4 Significance of the Study

The following are the contributions of this study in terms of knowledge and benefits to the readers.

1. The study reveals the actual level of application of ICTs in *NTA* and *The Guardian newspapers*.
2. It highlights the problems and prospects of ICTs use in the Nigerian mass media, especially the *NTA* and *The Guardian newspapers*.
3. It will be instrumental to prospective researchers who may wish to go into this or similar areas of study.
4. It will have far-reaching significance to media organizations, media practitioners, media educators, media students, policy makers and indeed, the general public.
5. Finally, the study serves as a dream come true, as the researcher had always desired to add to the existing literatures on ICTs and effective media practice in Nigeria.

1.5 Research Questions

In the course of the study, attempts were made to provide answers to the following questions which served as a guide in the entire process.

1. What is the level of application of ICTs in *NTA* and *The Guardian newspapers*?
2. Why is *NTA* and *The Guardian newspapers* still operating at that level of ICTs application?
3. What implication does the present level of ICTs application have on *NTA* and *The Guardian newspapers*?
4. What practical measures could be taken to enhance the application of ICTs in *NTA* and *The Guardian newspapers*?

1.6 Theoretical Framework

For the purpose of verifiable, testable and generalizable views, research works are usually based on already existing theories. In every discipline, there exists a body of theories that provides explanations and enhances a better understanding of a given phenomenon in the field. This is because knowledge does not exist in a vacuum and the adoption of theories “invariably facilitates the understanding of issues in the field” (Ohaja, 2003). In acknowledgement of the above remarks, this study will be based on the Diffusion of Innovation theory.

1.6.1 The Diffusion of Innovation Theory

The Diffusion of Innovation Theory according to Anaeto, Onabajo and Osifeso (2008, P. 116), is associated with Ryan and Cross (1943) and Everett Rogers (1960). The concept, innovation, as later defined by Rogers and Shoemaker (1971:19) is “an idea, practice or object perceived as new by an individual”. The newness here, the

scholars argue does not presuppose that such “idea, practice or object” is entirely novel to members of a social group. It rather means that though members of the target group may be aware of such idea, practice or object, they have no particular disposition towards the idea, practice or object prior to the launching of the campaign for social change.

On the other hand, diffusion according to Katz (1963:77) means “The process of spread of a given new idea or practice over time, via specifiable channels or through social structures.

Simply put, diffusion means internalization, adoption, practice and application of new ideas by man either as an individual or member of a social group. Innovation diffusion therefore involves conscious exposure to adoption, application and utilization of new ideas, practices or objects. Thus, the main thrust of the Diffusion of Innovation theory lies on how new ideas, discoveries, practices or technologies spread to members of a social system.

Ogboho (2008:352) puts it this way “the Innovation Diffusion Theory refers to how media technological products and facilities are introduced and adopted by the international community, comprising external broadcasting service stations, using technological products to reach out the world and the international audience who are the beneficiary of the new media contents and products”. This submission rightly buttresses the suitability of the theory to the objective of the study, which aims at evaluating the adoption and application of ICTs in the Nigerian mass media. However, Bittner (2003) believes that in the innovation diffusion process, the media present information that makes us aware of the existence of an item. From there, the person

gets interested, constantly evaluates the item, takes a trial of the item and finally acquires it.

In the same view, Katz, et al (1966) in Ojobor (2002:21) maintains that for a new idea or innovation to diffuse, there must be the awareness stage, trial stage and adoption stage.

Innovation campaign is therefore hardly hypodermic in effect. This means that it is difficult to achieve instant change of attitude and behaviour through innovation diffusion. Hence, Rogers (1965) cited in Wogu (2008:164) explains that when new technological innovation is introduced, they will move across a series of stages before they are generally adopted. Firstly, majority of people will know of the innovations; secondly, the innovation will be adopted by a very small group of innovators or early adopters; thirdly, opinion leaders take a cue from the early adopters and try out the innovation themselves; fourthly, if opinion leaders find the innovation helpful, they persuade their friends, the opinion followers. Finally, after the majority has adopted the innovation, a group of laggards or late adopters join.

Early experiments on Roger's Diffusion of Innovation theory in the U.S. show that the theory aids the taking up of new innovations that were hitherto not preferred by adopters. It was discovered that this process applied to nearly all American agricultural innovations. Today, many agricultural practices like the use of fertilizers have been promoted even here in Nigeria.

However, diffusion of innovation has been criticized of taking longer time than we believe. The time between the actual development of innovation and its widespread adoption is known as the Innovation Diffusion Gap (IDG). For instance,

the IDG of the invention of the Laser and the Mouse took about 20 years to their widespread application (see Szabo.<http://www.quasar.ualberta.ca/DRMIKE>).

From the above remarks, it suffices to opine that Innovation Diffusion Gap (IDG) may be responsible for the current level of ICTs application in the Nigerian mass media. The study however, aims at contributing towards closing the gap.

In all, the following constitute the basic assumptions of the Diffusion of Innovation Theory. According to <http://www.utwente.theoriesnovezicht/Theory%20clusters/communication%20>:

1. Diffusion research centres on the conditions, which increase or decrease the likelihood that members of a given culture will adopt a new idea, product, or practice.
2. The information flows through networks; the nature of networks and the roles opinion leaders play in them determine the likelihood the innovation will be adopted.
3. Opinion leaders exert influence on audience behaviour via their personal contact, but additional intermediaries (called change agents and gatekeepers) are also included in the process of diffusion.
4. Diffusion of Innovation Theory predicts that media as well as interpersonal contacts provide information and influence opinion and judgment.

Daramola (2003) wraps it up by saying that “diffusion of innovation theory is a theory that seeks to disseminate information about new discoveries to the masses of a social set up”.

In this research, which aims at appraising the level of application of ICTs in the Nigerian mass media, it is believed that the Diffusion of Innovation Theory will form a good theoretical base and will help in achieving the set objectives.

1.7 Scope of the Study

The general concern of this study is to evaluate the application of ICTs in the entire Nigerian mass media. However, as a result of insufficient time, money and materials and in order to remain realistic and avoid ambiguity, the researcher decided to limit the scope to a two carefully selected Nigerian media - *NTA* and *The Guardian* newspaper.

It is however believed that the findings and recommendations of the work would be beneficial to both those within and outside the scope of the study.

1.8 Definition of Terms

In a study of this nature, the researcher may run the risk of having the operational terms in the work interpreted variously and in different perspectives by the readers. Such non-uniformity in conceptualization affects the readers' validity and reliability of the study. It is in view of this probability that this section is devoted to conceptual clarifications. Hence, in the conceptual and operational views, we look at the meaning of the following words:

1. Appraisal

In the context of this work, "appraisal" means an assessment or evaluation to determine the extent of adoption and application of ICTs in Nigerian mass media, with a special focus on *NTA* and *The Guardian* newspapers.

2. **ICTs**

“ICTs” stands for Information and Communication Technologies. ICTs according to Tiamiyu (2003:35) cited in Salawu (2007:18), “are those electronic gadgets, equipment or technologies for creating, acquiring, storing, processing, communicating and using information”. This study is concerned with those used in the media – print and electronic.

3. **Application**

The word ‘application’ literally means the practical use of something, especially a discovery or innovation, theory, etc, or an act of putting something on to something else. In this work, it simply means the practical use of ICTs in the Nigerian mass media such as *NTA* and *The Guardian newspapers*.

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CHAPTER TWO: LITERATURE/EMPIRICAL REVIEW

2.1 Introductory Overview

According to Benjamin Mays, cited in Okafor (2005:1), “he who starts behind in the great race of life must run faster than those in front or forever remains behind”. The advent of Information and Communication Technologies (ICTs) has set the world on a fast track. The ICTs have been widely acknowledged as having strong effects on the changes taking place in all spheres of life. This is because the technologies especially the newer ones have demonstrated an unprecedented magical power of speed, quality, efficiency, reliability and cost effectiveness in every aspect of human endeavours.

More so, the rate of advancement in technological innovations in recent time is such that yesterday’s technologies have become obsolete today, while today’s discoveries will inevitably become antiquities tomorrow. It is therefore no gainsaying the fact that technology is growing at an astronomical pace and scientific fictions are being translated to realities on daily basis.

According to Agba (2002:108), “one area where these technologies have made tremendous impact is in the area of communication, and mass communication in particular”. The mass media being a product of science and technology, are taking seriously the numerous opportunities afforded by the ICTs revolution for improved programme contents, greater speed, greater reach, clearer sound and vision, better quality output and better reception.

In recent time, so much has been said and written on ICTs. Many empirical works/studies have been done on its relevance, development, adoption, utilization and

even on its policy implementation issues in Nigeria and sub-Saharan Africa. While some believe that the mass media in Nigeria are catching up rapidly with these explosive technologies, others seriously contend that the media in the country have remained in an abysmal performance, and have steadily watched the rest of the world grow with the trend. To this end, this chapter reviews existing experts' views, related works and empirical studies to find out what they say on the subject-matter, and how it agrees or disagrees with the findings of this work.

2.2 Historical Development of ICTs

Rijsenbrij (2005:3) cited in Adamu (2007:222) explains that the internet is currently the most important driving force behind the revolution in ICTs. Baran (2007:69), however records that, there are conflicting reports on the historical development of ICTs. According to him, one school of thought believe that as early as 1956, a Psychologist, Joseph C.R. Licklider, a devotee of Marshall McLuhan's thinking on the power of communication technology foresaw linked computers, consoles and television sets connecting people in a nationwide network. Baran (2002, P. 69) further writes that scores of computer experts enthused by Licklider's vision joined the rush towards the development of what we know today as the Internet.

The second school of thought which is perhaps the common one has it that the Internet is a product of the cold war. According to this school, the U.S Air Force in 1962, in her quest to maintain the military ability to transfer information around the country even if a given area was destroyed in an enemy's attack, commissioned leading computer scientists to develop the means to do so. Baran (2002:69) recorded that it was shortly after the launch of the *Sputnik* in 1957 by the Soviet Union that the

United States felt that her undisputed supremacy was being challenged. This led to the immediate establishment of the Advanced Research Project Agency (ARPA), to sponsor and coordinate sophisticated defense related research. ARPA commissioned Paul Baran in 1962 to produce a plan that would enable the United States military to maintain command over its missiles sites and planes if a nuclear attack knocks out their conventional means of communication. The U.S Military thought that a decentralized communication network was necessary. In that way, no matter where the bombings occurred, other locations would be available to launch a counter attack.

As part of this plan, Paul Baran introduced what he called *Packet Switched Network*. Using Honeywell computers at Stanford University, the University of Santa Barbara and the University of Utah, Paul Baran's *Packet Switch Network* went online in 1969 and was fully operational and reliable by 1970.

In 1972, an engineer called Ray Tomlinson created the first e-mail programme, he introduced the @ character. The word "Internet" was however coined by Vinton Cerf of Stanford University and Robert Karn, a U.S. military man in 1974.

In 1979, a graduate student at the University of North Carolina, Steve Bellovin, created the USENET. In 1992, the Internet society was chartered and the same year, the World Wide Web was released. Ticker (1990) cited in Adamu (2008:223) indicates that, today, there are more than 37 million users of the internet worldwide, serving a seemingly limitless number of persons.

Again, there is yet another line of story which links the history of advancement in ICTs back to as early as 11 May 868 when a Chinese, Wang Chieh printed a book with the moveable type in memory of his parents. Quoting Wainwright (1978, P. 105),

Ufuohu (2008, P. 235) credits the Chinese to have invented the first moveable type, by using small blocks, each carved independently with one character to make them interchangeable.

However, John Gutenberg expanded ICTs when he introduced the moveable type to Europe in 1454, by setting up his press in Mainz, Germany, to print *the papal indulgences*, a document authorized by the pope to grant forgiveness to sinners. Wainwright wrote that, Gutenberg and his assistants printed 300 copies of the Bible in 1456 and were sent to Paris for sale, and few years later, the skill spread to other parts of Europe, America and the world. Other technologies such as the telegraph, telephone, photography, film, radio, television, computer and the internet were later introduced; and today, the world is still witnessing unending sophisticated advancement in ICTs.

Meanwhile, Uche, (1989:191) in Orhewere (2007:290) argues that “the new ICTs revolution did not start in the 1970s with the emergence of the information superhighway as some writers claim”. He contends that since the telegraph is an aspect of telecommunications, then, the revolution in ICTs started as far back as 1832 with the invention of telegraph by Samuel Morse. In his words “the term “new” is therefore confusing because it misleads people to think that early technological inventions relating to telecommunications like radio, television, film, etc, are not new. It is probably as a result of this that Dunu and Oraka (2004:96) observe that:

the new communication technology could be explained as meaning that the nature of the media of communication is changing to encompass more specialized media. In the past, we could think of newspapers, magazines and books, we could as well think of radio and television broadcasting, but today we have electronic edition of newspapers, journals and other written materials. This gives the new technology its distinct advantages.

Dunu and Oraka and other writers with this view, see only the computer aspect of the technologies as new, and ignore the telecommunication aspect. Thus, their meaning of the new information and communication technologies (NICTs) revolves round the internet and what it does to the media industry.

Be that as it may, Agba (2001:91) presents what appears a superior argument to clarify the term “new” as it concerns information and communication technologies in these words:

The term “new” in NICTs simply denotes that even though man has been communicating and receiving information from time immemorial, the present period makes him do what he has been doing in a manner unequalled by any period in all his history.

The present period Agba talks about is the one marking the revolution of telecommunication technology.

In line with the foregoing, therefore, the NICTs could be said to include all the modern forms of mass media and the technologies associated with them. They include telecommunication facilities (analogue and digital), computers, the Internet, telephone, communication satellite, cable system, radio, television, film, newspapers, magazines, microwaves, videotext and teletext, teleprompter, console, broadband, OBvan, among others.

2.3 Appraising ICTs Application in the Nigerian Mass Media: The Experts’ Views

Information and Communication Technologies (ICTs) have become powerful weapons not only in the economic, industrial and academic spheres of life, but have also pervaded and virtually transformed the world from what we know barely few years ago.

The media of mass communication – radio, television, newspapers, etc, all over the world, have definitely not been spared from the great revolution. The industry in the last few years had begun to take and appreciate seriously, the economic and productive values of adopting and applying the new technologies in their operations.

Before the ICTs revolution, media operation was very cumbersome, slow and expensive. However, ICTs have changed the situation positively in various aspects. For instance, before the launch of the first communication satellite in 1962, news took long time to travel within a country let alone across countries and continents. With the launching of communication satellites into the orbits, news has become almost instant. With satellite TV stations such as the CNN, the BBC World, the Sky News, etc, events are now reported almost simultaneously and instantly (Adamu, 2007:113).

The subsequent invention of digital cameras such as Electronic News Gathering (ENG), and the effective use of the communication satellites have also made news become very instant and more accurate.

In the print media, print operations were very cumbersome before the advent of the ICTs. However, the ICTs revolution has simplified and changed the hitherto cumbersome and complicated process. The journalist of today gathers and sends his news stories to his medium using the internet or the cell-phone. The editors recall the available news reports on their computers and do their editing and all the formatting on the computers. The graphic artists do their art works on the computers too.

The modern lithographic machines and printing machines are digital, thereby, eliminating time waste. The machines print faster, collate, count and do other necessary finishing.

Again, colour separation is now done on digital equipment as against the previous analogue ones, thus, making print journalism less clumsy and more interesting. This facilitates newspaper publication in colours.

Available still are digital sound photographs and videos. The new media channels have further transformed media practice by influencing the process of information gathering, processing and dissemination to a more globalized but selective audience.

Today, the new ICTs have fused radio, TV and print into on cyber space, making unique differences between the media to disappear on the web. (Igyor, 2004:7) cited in Idemili and Maama (2007:213) puts it this way:

on the web, newspapers and magazines are no longer primarily text medium, radio an aural medium, and television a visual medium. All media have the capacity of providing news using graphics, text, audio and video. News requiring visuals can adequately be illustrated on a radio web cast, and an important piece of audio can be played on a net paper. As a result of these new changes in media practice, new standards in the nature of doing journalism have emerged.

However, many scholars still argue, and strongly too, that while the developed countries of the world can be said to have fully embraced these technological innovations, and integrated them in their media, the less developed countries like Nigeria are still left far behind in their adoption and application. Reasoning along this line, Osuala (2005:118) observes that:

The diffusion of ICTs into Africa is at a snails speed, such that the gap between the information rich developed countries and African countries continue to increase everyday..... Africa has 13% of the world population but only 2% of the world telephone lines and 1% of Internet connectivity. Consequently, most African countries including Nigeria have not been able to reap the abundant benefits of the global information revolution in all areas of life.

In the same vein, Eze (2007:173) presents what appears a more worrisome development as it concerns ICTs diffusion and adoption in Africa. According to him, “even within the African continent, there is now a digital divide between Southern Africa, Eastern Africa, North Africa and West Africa”. He concludes that “as long as there remains a lukewarm attitude towards the adoption of ICTs by developing countries especially in Africa, they will continue to lag behind in both human and material development”.

In his own views, Aginam (2001, p. 26) observes that “Nigerians and indeed sub-Saharan Africans are still spectators in the ICTs world”. This is in agreement with the submissions of Uwaje, cited in Terngu and Ternenge (2007:276). According to him, “ICTs are still on low ebb in Nigeria, and there is a serious and fundamental need to refocus the nation’s information mindset from the current standard of who you know to what you know”.

Ndukwe (2005:23) chronicles the state of ICTs in Nigeria thus:

We live in a global village where ICTs have direct impact on a nation’s ability to compete globally; we must therefore ask ourselves how we have fared in comparison with other nations of the world in providing access to these vital infrastructures for our people..... While countries like Sweden boasts of about 100 percent access, Nigeria’s figure is at a level of less than six percent. Even in the African continent, we are still far behind countries like Egypt, South Africa, Botswana, etc..... Nigeria remains a “Lilliputian” in the international development index as far as ICTs penetration and usage is concerned.

The above scenario is equally applicable to our media. Although the mass media in the country are catching up gradually with the explosive information and communication technologies, yet, the extent of its adoption and application so far, still cannot be compared with what is obtainable in the advanced world; nevertheless, the

nation's media have moved appreciable steps ahead. To this end, Media (1996:181), maintains that:

With the development of telecommunications in Nigerian, the practice of mass communication has greatly improved. The mode of news collection has significantly changed. Reporters can now send their news from far places to their organizations with the cell-phone or with the aid of the briefcase computer; news is therefore simultaneously processed and disseminated with automatic devices.

However, although the rate of technological growth in Nigeria is still hampered by lack of institutional framework and absence of basic amenities, yet, in the last few years, the country has made significant progress especially in the telephone infrastructure and teledensity. The country has realized that the creation and diffusion of technological knowledge is at the heart of modern economic growth. This led to the liberalization and deregulation of the telecommunication and ICTs sectors in 2001 (Ibenta, 2004:53).

Again, the launching of e-government by the federal and state governments has showed that we are embracing ICTs even in governance. Infrastructural development through Foreign Direct investments in the telecommunication industry has hit about N1.47 million, no wonder Nigeria has been able to generate over \$2.6billion in licensing fees alone within the last seven years (*Tell* July 7, 2008).

Similarly, a *Vanguard* publication of July 2, 2009 records that telecommunication subscription between the years 2001 to 2008 shows a tremendous subscriber base. In addition to many licensed Internet service providers in the country, the country has risen from a total statistics of 866,782 (0.73 teledensity in 2001, to a high subscribers' rate of 88,471,789 in 2008, representing a teledensity of 32.29). This shows that Nigeria is has the fastest telecommunication growth in Africa.

In the same vein, the National Communication Commission has encouraged the rolling out of fibre optic transmission infrastructures across the country to assist in the broadband telephony and communication facilities. Moreover, some operators are already offering 39 broadband internet capabilities (Vanguard July 2, 2007). The projection is that with the roll-out of optic fibres which are better than The microwaves, the country will be “self-sufficient” in communication infrastructure by the year 2012 (Tell, July 10, 2008).

Again, the “computerize Nigeria” project is another step aimed at improving computer and broadcast facilities in the country. However, deploying the ICTs in the broadcast industry is still a challenge which must be tackled. This is because most broadcast stations in the country, including pay TV service providers are yet to fully migrate from analogue to digital broadcasting.

One factor that has affected the digitization in Nigeria is the cost in terms of finance. To this end, the National Broadcast Commission recently advocated for a government/private sector partnership to reduce the digitization cost (Bolarinwa in Vanguard July 2, 2008. p33).

Bolarinwa further observed that high level of digitization has been achieved in pay subscription, free-to-air, cable and satellite broadcasting, but same cannot be said of state radio and television stations in Nigeria. Apart from the NTA, AIT, MBI, Silverbird and a few FM radio stations, analogue broadcasting is still reigning supreme.

Ebo (1998, p. 10) however argues that though the mass media in the country have some lapses in their dissemination of information largely because of inadequate

technologies, they are not without their prospects. In her words, “cable television is fast gaining ground and is beginning to take a stronger hold, internet awareness is also beginning to gain ground in Nigeria.

Agreeing with Ebo, Maida (1990:119) cited in Idemili and Sambe contends that:

With the recent deregulation of the broadcast media, there is a growing movement towards employing modern media technologies. Some private stations like RayPower Lagos, Cool Fm are highly automatedif the current trend is sustained, there would emerge a competition within the media industry, and none would want to be caught napping.

Meanwhile, Tiyamiyu (2003, p. 121) believes that there are still serious lapses in infrastructures especially in the area of electricity supply, telecommunication and in the training of media personnel to handle the new sophisticated operational tools.

Commenting on the technological manpower in the Nigeria mass media, Ebo (1998:29) reveals that:

At present, all broadcast equipment in Nigeria including the spare parts are imported from the technologically advanced countries, The mass media in the country are also faced with the problem of adopting foreign technologies to suit local needs... These new available ICTs in the mass media in Nigeria are a few studios in broadcast media, which contain some operational tools like digital video camera, wireless microphone, instant replay memory machine, editing machine and computers that enable quality production. Outside these, you find obsolete equipment like sound mixer, output programme machine, audio console, etc.

Again, the nation’s radio network, the Federal Radio Corporation of Nigeria (FRCN) on its part has made some progress. Fatoyinbo in 2001 cited in Idemili and Sambe (2007:32) while speaking on “Radio Nigeria at 50” pointed out that:

in its drive towards greater broadcasting excellence, the corporation’s brand new FM/SW transmitters, outside broadcasting vans and digital studios... Radio House in Abuja that houses the eloquent testimony of a clear vision and focus of Nigeria, is Africa’s largest radio network...

In the print industry, some newspapers and magazines in the country have introduced online news services courtesy of the web technology. Newspapers such *The Guardian, The Sun, Thisday, Vanguard, Newswatch Magazine*, etc, have online versions of their publications.

However, the growth in the use of the new ICTs by the Nigerian mass media can still be improved upon. Affirming this, Aniebona (1980, p. 9) in Idemili, and Sambe (2007, P.185) observes that “many developing nations have the unenviable task of using and operating technologically sophisticated equipment in a technologically backward environment...”

This goes to show that with the technological improvement, notwithstanding, there are still gaps in the media world especially in developing societies like ours. This is perhaps why George Sandusky believes that:

The rapid expansion of the internet holds substantial promise for developing nations, which can benefit greatly from the Internet's communication and information delivery capabilities to help meet their needs. The accelerating transition of information to electronic media is making information resources of the world available to an increasingly global audience through the internet. Developing countries have much to gain from that revolution in communication and information access. In contrast to the situation in the developed world where transport and communication infrastructure for delivery of both physical goods and information services are well established, the alternatives available within developing countries are generally slow, expensive or in a state of nonexistence.

In the final analysis, it becomes obvious that though the Nigerian mass media have adopted and embraced the new ICTs to an appreciable level, evidences still abound to show that the media in the country is still lagging behind especially in the area of dissemination of information and cultural heritage across the globe (Ogah, 2007:193).

2.4 Review of Related Empirical Works

This section of the work critically reviews some existing empirical findings on ICTs adoption and application in the Nigerian mass media. It is no gainsaying the fact that several local and foreign studies have been done on this area. One of such is the one done by Salau, Adamu and Yakubu in 2008 on “*An Explanatory Survey of the Extent of Application of ICTs in Two Selected Newspapers: The Daily Trust and The New Nigerian*”. In the study, the scholars sought to find out the level of availability and use of ICT facilities such as the computers, internet, GSM, the satellite, etc, in each of the two media outfits. It also sought to establish the nature and extent of application of ICTs in these organizations.

The study further sought to find out the technical and professional problems associated with the application of ICTs and their functional values to each of the two organizations. The study yielded that ICTs have brought about significant improvements on journalism practice and are potential instrument for efficiency; however, the extent of their application in Nigerian Newspapers is “deplorably low”. According to them, “while both papers have sufficient access to ICTs, majority of the journalists in both media, suffer very limited computer literacy level, and this has been a very serious impediment on efficiency of local journalists, and has constituted serious barrier to their acquaintance with modern trends on journalism”.

In a similar study done by Onah in 2008, on “*The Level of Awareness of Globalization and ICTs Issues Among Selected Nigerians*”, the study had the objective of determining the computer literacy level of Nigerian people. The research findings revealed that many Nigerians (64%) hear about ICTs and globalization but do

not know much about them. The study further revealed the major problems confronting ICTs development in Nigeria and Africa to include:

- 1 Lack of infrastructure
- 2 Absence of ICTs policy/Implementation
- 3 Few trained or skilled personnel
- 4 Financial constraints
- 5 Corruption and political instability
- 6 Wars and fear of insecurity, etc.

The study through its findings therefore, authenticates the claims of those scholars who earnestly contend that the level of application of ICTs in the Nigerian mass media is still grossly inadequate.

Again, another empirical work on *“The Pattern of Utilization of the Internet and the World Wide Web by Nigerian Newspapers”* was done by Eserinune McCarty Mojaye in 2006. He undertook an exhaustive and a wide spectrum of empirical research to ascertain how Nigerian newspapers are adopting and using the new ICTs especially the Internet and the World Wide Web for improved service delivery. The general findings of the study show that:

1. All major Nigerian daily newspapers have Internet websites.
2. All major Nigerian daily newspapers post their editorial content on their websites, but less than half post advertisements. This shows that at present Nigerian newspapers do not utilize the internet for pecuniary gains.
3. An overwhelming majority of Internet connected computers in Nigerian daily newspapers are allocated to the editorial department.

4. All major Nigerian daily newspapers source stories from the Internet, and an overwhelming majority of them (75%) do so frequently.
5. Nigerian newspapers are yet to fully adopt and utilize other added advantages of the Internet technology in newsgathering, processing and dissemination.

The relevance of Mojaye's study to this research stems from its establishment of the fact that although all major Nigerian newspapers have access to some of the new ICTs like the computer and Internet, but many of them are yet to fully adopt and utilize the added advantage of the new technologies in newsgathering, processing and dissemination.

In another study carried out at the University of Ibadan, Nigeria, Balogun Oluwatosin in her Doctoral Thesis (2008) investigated "*The Impact of Information and Communication Technologies (ICTs) in Broadcasting: A Study of NTA 2 Channel 5, Lagos*". The study had the objective of ascertaining the rate of ICTs application in NTA 2 Channel 5, Lagos, and the extent to which the ICTs have impacted positively on the station. Her findings show that the new ICTs have tremendously impacted positively on the quality of the station's programmes, however, the extent of application is still grossly inadequate and needs to be improved upon.

In a similar study done at the Ebonyi State University, Abakaliki, Ezeoha (2008) researched on "*The Influence of ICTs on the Nigerian Broadcast Industry: A Study of ESBS and NTA, Enugu*". The result shows that the rate of technological growth in Nigeria is hampered by lack of institutional framework, inadequate infrastructure, high cost of operation and lack of trained personnel to handle most of the sophisticated tools.

On the foreign scene, available empirical works on internet and telephone connection shows that Africa, Latin America and many parts of Asia are not fully connected to the global information economy.

In his work on *“ICTs in Africa: A Status Report”*, Mike Jensen (2008:86), found out that ICTs in Africa are still at a very early stage of development compared to other regions of the world. The research showed that out of the approximately 816 million people in Africa in 2001, it is estimated that only:

- One in four has a radio (200 million)
- One in 13 has a television (62 million)
- One in 35 has a mobile telephone (24 million)
- One in 39 has a fixed line (21 million)
- One in 130 has a personal computer (9 million)
- One in 160 use the internet (5 million)
- One in 400 has pay-television (2 million)

The report however noted that the above figures do not take into consideration the widespread sharing of media that take place in African (often ten people may read the same newspaper or share an internet account, or a whole village may use a single telephone line or crowd around a television set at night). The study further showed that sub-Saharan Africa may be slipping behind when compared with south Asia (<http://www3.wnape.org>).

The findings of Mike Jensen’s research (2008) get a support from *“An Internet Usage Survey Around the World”*, done by the United Nation’s Development Programme (UNDP) as contained in the world Development Report 2006. The findings are hereby replicated in the table below:

Table 1: Internet usage as percentage of total population

Region	2000	2007
United States	54.3%	82%
United Kingdom	43.9%	68.7%
Latin America and the Caribbean	3.2%	6.6%
East Asia and the Pacific	2.3%	5.4%
Arab States	0.6%	1.5%
South Asia	0.4%	1.3%
Sub-Saharan Africa	0.4%	1.2%

Source: *United Nations Development Programme, World Development Report 2008.*

The findings of the UNDP internet usage surveys as depicted above, agrees with *The Punch newspaper* report of Monday, March 27, 2006, p.3 which says that “a team of researchers at the University of Washington has discovered that the hourly Internet fee of cyber café’s in Lagos, Nigeria is the highest in the world”. The findings also showed that fares in Lagos are thrice as high as that of Cairo, Egypt, which has 23 percent, in Beijing, it is 12 percent high, Mexico City, 10 percent, and Tokyo, Japan, 9 percent. Seoul, South Korea with 5 percent has the least price as a percentage of daily income, while New York and London (6 percent) tied to be the second least expensive places to browse in the world. The research report also highlighted the fact that people in the developing countries pay more to browse the Internet, yet, they get less value for their money.

In telecommunication Usage in Africa, the International communication Union (ITU) research report 2001 says that “there are approximately 850,000 public

telephones in the whole continent of Africa, 175,000 of which are in the sub-Saharan, or about one telephone for every 37 people, compared to a world average of one to 25 and a high income average of one to 5”.

Another study was done at the Boston University, U.S.A in 2007. The study was to ascertain the growth of telecommunications around the world. The research showed that only 15% of Africans use the telephone; in Europe, it is 63%; in America, 74%; in Asia Pacific, it is 6% (*ITU 2005 Report*).

The study however, did not fail to recognize that due to the diverse nature of the African region, it can be misleading to generalize the research findings. The study however shows that sub-Saharan Africa currently has one of the least developed communication networks in the world.

Similarly, an Economic Commission for Africa (ECA), report 2005, again says that the African region has almost 12 percent of the world’s population, but has 0.5 percent of all the telephone lines (with South Africa excluded). The same report attributes the chronic shortage of lines to high cost of the commodity in the region. This is in agreement with an ITU, 1996 report recorded in Eze (2007, P. 173) which puts the cost of a business phone in Africa at an average of 112 dollars to install, and over 200 dollars in Benin, Mauritania, Nigeria and Togo, and 6 dollars a month to rent. The above scenario has undoubtedly impinged on the use of these and other ICTs both in the media and other sectors in Nigeria and Africa.

From the foregoing, it is evident that existing empirical studies, local and foreign, agree that the level of adoption and application of ICTs in various sectors especially the media in Nigeria and indeed the African continent has not only

remained inadequate, but that that cannot be compared with what is obtainable in other parts of the world, especially in the developed countries of Europe, North America and some parts of Asia. This again, lends credence to the necessity / objectives of this study which among others is to ascertain the extent of ICTs use in Nigerian mass media and make suggestions on the way forward.

2.5 Summary of Literature / Empirical Review

This chapter has taken an in-depth review of both local and foreign existing literatures and empirical studies on ICTs adoption and utilization in the Nigerian mass media. Most of the works reviewed so far show that ICTs have become a powerful force in every facet of contemporary life. In the media industry, it is even a more serious matter, because the media is a product of science and technologic. However, our analysis so far has shown that despite the inevitability of these new technologies in all aspects of modern day life, Nigeria, Africa, and indeed the third world is still seriously lagging far behind, in their adoption and utilization. Notable among the impediments are lack of infrastructure, poor knowledge of ICTs at all levels, from suppliers to users, few trained or skilled personal, high cost of acquisition and maintenance, absence of ICT policy or its implementation, corruption and political instability, poverty, wars, hunger, diseases and fear of insecurity, among others.

However, regardless of these impediments, Nigeria has recorded considerable progress in the use of the new ICTs in different sectors. Many Nigerian media for instance, are now on the Internet. The NTA, AIT, MBI, Channels TV, RayPower FM, Cool FM, Rhythm FM and a few others are now embarking on satellite broadcasting. With this, Nigeria is now launched into the globalization scheme. The world can now

hear, see and read us through our own media perspectives. This is a good development.

The print has equally adopted ICTs to an appreciable extent. Many of them are now on the internet too, and can therefore be accessed worldwide. Many correspondents now send their reports to their organizations through e-mails; others send theirs as SMS through GSM phones. They also use fax machines instead of the old telex or land phones. This makes their reporting very fast and efficient. However, this improvement is particularly to the big media such as *The Guardian, Vanguard, Punch, Thisday, Independent, Tell, Newswatch, Insider Weekly* and a few others.

The big papers also have digital machines for accessing agencies reports and other big satellite based media. Despite these improvements, no newspaper in the country has perfected satellite printing, a situation whereby its editions could be printed simultaneously across selected cities in the country; hence, we still have southern editions and northern editions. It is however believed that if the current pace is sustained, the media in the country will in no distant time begin to catch up with their western counterpart.

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CHAPTER THREE: METHODOLOGY

3.1 Research Design

The research design adopted for any investigative is highly dependent on the nature of the problem that prompted the study. According to Sobowale (1983), “there are four basic research designs in mass communication and other behavioural sciences - experimentation, observation, content analysis and survey”. However, Ohaja (2003, p. 74) specifically points out that “topics concerning public perception or response to an issue, and many “impact” studies definitely require the survey design”.

Consequently, in this study which aims at examining and evaluating the application of ICTs in the Nigerian mass media, the most suitable and result-oriented research designs are survey and case study. The survey is suitable because the study intends to find out the public perception of the extent of ICTs application in the Nigerian mass media, with emphasis on *NTA* and *the Guardian newspapers*.

More so, the survey method has numerous advantages over other research techniques as captured by Sobowale (1983:25) in the following words:

It standardizes the researcher's questions, ensures that the researchers ask exactly the same questions in the same way, guarantees as much as possible uniformity of answers, facilitates data processing through easy coding and allows sampling procedures capable of getting responses needed in finding solution to the problems at stake.

The case study on the other hand is necessary because the study attempts at a holistic examination of the two media (*NTA* and *The Guardian newspapers*)

3.2 Description of the Research Population

The population of this study should have been all staff of the two media organizations, especially those in the engineering and technical departments, and those members of the public who read *The Guardian newspapers*, including those who surf it through the internet, and all who watch the *NTA*.

However, such a number, the researcher believes would have been unwholesome, unmanageable, and therefore, unrealistic. It became necessary that the study be narrowed due to inadequacy of the required resources, the expanse of Nigeria, and the need for focus and valid results.

Consequently, the population of the study became the staff of the two media houses and the members of the public selected from 4 local governments areas; 2 from the north (Gwagwalada area of Abuja and Bida L.G.A. of Niger state), while Surulere area of Lagos and Enugu north in Enugu state represented the South.

3.3 Sampling Techniques

Due to the nature of the study, the stratified and the simple random sampling techniques were used. First, Nigeria was drawn into strata of North and South. Two states were chosen from each of the strata, from which one local government was selected from each of the states. In the process of administration of the questionnaire, the simple random technique was applied, and this gave the samples equal opportunity of being selected.

3.4 Sample Size

Wimmer and Dominick (2005, P.96) writes that “the size of the sample required for a study depends on at least one or more of the following seven factors:

project type, project purpose, project complexity, amount of error tolerated, time constraints, financial constraints, and previous research in the area”.

In this study, the estimated population size is 4,000, out of which 400, representing 10% was purposefully taken as the sample size in this order:

North

Abuja (Gwagwalada L.G.A.)	50
Niger State (Bida L.G.A.)	50

South

Lagos State (Surulere L.G.A.)	50
Enugu State (Enugu North L.G.A.)	50

Staff

NTA Headquartres	100
The Guardian newspapers Head office	100
Total	400

[

The above arrangement ensured a perfect representation of the views of both the staff of the two media organizations - *NTA* and *The Guardian newspapers* as well as those that have access to their programmes and contents respectively.

3.5 Instrument for Data Collection

In choosing the instrument for data collection, cognizance of the nature, demographic and psychographic features of the variables were taken into consideration. This is to ensure that the data and information gathered provide honest and objective answers to the problems that prompted the study. Consequently, the

researcher used both the questionnaire and oral interviews for the collection of the needed data.

The two methods played complementary role in eliciting the most reliable and dependable data and information for the research.

3.6 Validation of Research Instrument

The questionnaire and oral interviews which served as instruments for data collection were validated by three experts in the field of mass communication. The first person was the supervisor of this work, then; the manager programmes *NTA* headquartres, Abuja, and the Head, Engineering department of *the Guardian newspapers*, Lagos.

3.7 Reliability of the Instrument

To measure the reliability of the instruments used in this study, a text questionnaire was administered randomly to a few carefully selected experts in the field, to ascertain if questionnaire and oral interviews would be good enough in measuring the topic of study. The result of the text questionnaire were however, not used in the final analysis of this work, but served as a proof of the suitability and reliability of the instruments chosen for the study.

3.8 Procedure for Data Collection

The research took place under a normal and natural atmosphere. A total of 400 copies of the questionnaire were personally administered to randomly selected samples. The respondents were briefed on how best to fill-in their responses. The first five questions of the questionnaire dealt with the demographic features of the respondents while the others dealt with their psychographics.

Again, the closed-ended questions enabled the researcher to elicit already framed, obvious and expected answers from the respondents, while the open-ended questions gave them the opportunity to bare their minds on the issue at stake. Also, the questions for the interview were written down to ensure uniformity. In all, the data were scientifically constructed, distributed, collected, collated and analyzed.

3.9 Method of Data Presentation and Analysis

According to Ohaja (2003:100), “data can be analyzed qualitatively or quantitatively. Qualitative analysis is largely descriptive ... Quantitative analysis on the other hand involves the presentation of statistics to confirm or refute the researcher’s thesis and answer whatever questions he has posed”

However, Aliede (2002:91) contends that, “for reliable and authentic research out-put, any chosen method of data analysis must aim at relating to the research problems and the nature of the study. It is only this that would bring about precision in the presentation of results”. In acknowledgement of the above remarks, this work adopted the quantitative method of data presentation and analysis. This is because the researcher believes that the applications of elaborate and ambiguous statistical and analytical tools are not necessary for a study of this nature. Hence, simple descriptive and statistical tools such as simple percentages, tabular presentations, frequency distributions, etc, were used.

Again, the statistical data were presented and analyzed in a simplified manner. They were broken down and each was related to a specific research question. This method contributed immensely in the realization of the study objectives.

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CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.1 Description of Data Relevant to each Research Question

This chapter focuses on the presentation and interpretation of the data and findings of this research. The study applied the survey research method. The questionnaire and oral interviews were used as instruments of data collection. The two instruments played complimentary role in generating the most reliable, dependable, and verifiable result.

A total of 400 copies of the questionnaire were personally administered. 200 copies constituting 50% were distributed at the head offices of *NTA* and *The Guardian newspapers* on equal proportion (I.e 100 copies each). The other 200 copies, which complete the remaining 50%, were randomly administered to a carefully selected sample from the population of all who watch *NTA* programmes and those who read *the Guardian newspapers*, including those who surf it in the net.

In all, 396 copies representing 99% of the entire questionnaire were returned, and a total of 4 copies, which represent 1%, got lost in the process. With this, the researcher believes that the 99% return rate is indeed fairly high enough to give a solid, credible and objective assessment of the issues that prompted the study.

Again, the responses to the questions are presented sequentially with explanatory notes and discussions after each table. This is for the purpose of proper understanding of the findings and the probable implications.

Also, the process of the questionnaire collation involved the use of coding guide and coding sheet, and then, the conversion of the data into percentages to facilitate statistical interpretations.

Eventually, 24 tables were presented which represent detailed questions posed in the questionnaire as well as the research questions. The vital statistics are shown in the tables below.

Table1: Respondents' Gender Distribution

S/N	Variables	Frequency	Percentages (%)
1	Males	215	54.29%
2	Females	176	44.44%
3	No Response	5	1.27%
Total		396	100%

Source: Field survey, 2010

From the table above, it can be deduced that out of the 396 respondents, 215, representing 54.29% were male while 176 constituting 44.44% were female, and 5 or 1.27% did not indicate their gender. This is a fair representation as prior investigations show that the female folks are often more reluctant to fill questionnaire, especially if it contains bulky questions, compared to the male, hence, the more number of male respondents recorded.

Table 2: Respondents' Age Distribution

S/N	Variables	Frequency	Percentages (%)
1	18-17	85	21.46
2	28-37	142	35.86
3	38-47	115	29.04
4	48 and above	48	12.12%

5	Neutral	6	1.52
Total		396	100.00%

Source: Field survey, 2010.

The data shows that out of the 396 respondents, 85, (21.46%) were within the age bracket of 18 – 27, 142 (35.86%) were between 28- 37, 115 (29.04) were between 38 – 47, 48 (12.12%) were 48 years and above, while 6 (1.52%) did not indicate their age categories.

This shows that all the sampled respondents were mature enough and emotionally stable to provide the needed responses. It also shows that majority of the respondents were in their active and productive age; as such, they are category of people who should be conversant with the issues raised and give knowledgeable and sufficiently informed answers on the issue under investigation.

Table 3: Respondents’ Educational Qualifications

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	FSLC	27	6.82
2	WASCE/SSCE/GCE	96	24.24
3	GCE A’ LEVEL/NCE/OND	87	21.97
4	HND/BA.BSc and above	170	42.93
5	Others	16	4.04
Total		396	100.00%

Source: Field survey, 2010.

Table 3 above shows that respondents with HND/B.Ed/BA/BSc and above top the list of the respondents. They are 170 in number representing 42.92. This was closely

followed by the WASCE/SSCE/GCE category which amounted to 96 or 24, 24%. The third was the GCE A' LEVEL/NCE/OND holders which constitute 87 or 21.97% of the respondents. Then, the FSLC which represents 27 or 6.82%, while respondents with other qualifications were 16 and amount 3.5% of the respondents.

This shows that majority of the respondents are educated and enlightened enough to give adequate information on the subject of inquiry.

Table 4: Occupation of Respondents

S/N	Variables	Frequency	Percentage (%)
1.	Farmers	13	3.28%
2	Civil servants	133	24.75%
3	Business persons	67	16.9%
4	Students	122	30.81%
5.	Others	30	7.57%
Total		196	100%

Source: Field survey, 2010

From table 4 above, it can be deduced that out of the 396 respondents, 133 representing 24.75% are civil servants, 67 or 16.9% were business persons, 122 or 30.81% were student, 13 or 3.28% were farmers and 30, representing 7.57% were engaged in other different occupations.

Table 5: To ascertain if respondents are staff of any of the two media organizations (*NTA* and *The Guardian newspapers*)

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	Yes	170	42.93%
2	No	215	54.29%
3	No Response	11	2.78%
Total		396	100.00%

Source: Field survey, 2010

The table shows that 170, representing 42.93% of the respondents are staff of *NTA* and *Guardian newspapers* while a greater number of 215 or 54.29% are members of the public who watch *NTA* programmes and those who read *the Guardian newspapers*, including those who surf it in the net. The remaining 11 or 2.78% constitute those that declined response to question four. This shows that the result of the findings is a true and perfect representation of the views of both the staff and the general public on the subject-matter, and that makes it objective, credible, verifiable and generalizable.

Table 6: To ascertain if respondents have knowledge of ICTs

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	Yes	389	98.23%
2	No	0	00.00%
3	No Response	7	1.77%
Total		396	100.00%

Source: Field survey, 2010

Out of the 396 respondents, an overwhelming 389, constituting 98.23% of the respondents said they know what ICTs are, none denied knowing any of them, however, 7 or 1.77% declined answer to question five. This again makes the findings of this research very credible as the persons sampled for the study were those who already had sound knowledge of the issue at stake and are therefore in the best condition to give a well informed response on the subject of enquiry.

Table 7: List of ICTs known to Respondents

S/N	Variables	Frequency	Percentages (%)
1	Computer	84	21.21%
2	Internet	92	23.23
3	Telephone (GSM)	97	24.49
4	Digital cameras	12	3.04
5	OB.Van	21	5.30
6	Broadband	4	1.01
7	Printers	15	3.79
8	Satellite	31	7.83
9	Others	21	5.30
Total		396	100.00%

Source: Field survey, 2010

The table above shows that telephone (GSM) is the most widely known ICT by the respondents. They were 97 in number, representing 24.49%. This was seconded by the internet, 92 or 23.23%. Then, the computer, 84 (21.21% and the satellite 31 or 7.83%. Others include digital camera, 12 (3.04); OB.Van, 21 (15.30); printers, 15

(3.79) and Broadband, 4 (1.01). Respondents that mentioned several other ICTs were 21 (5.30%), while 19 (4.80%) refused answer to question number six.

This shows that indeed, the respondents know the ICTs that facilitate media operations especially the GSM, Internet, computer, satellite among others.

Table 8: To ascertain if ICTs are relevant in modern mass media.

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	Yes	391	89.73%
2	No	0	00.00%
3	No Comment	5	1.27%
Total		396	100.00%

Source: Field survey, 2010.

Out of the 396 respondents, 391 constituting 98.73% agreed that ICTs are very useful in modern mass media, none denied it, 5 (1.27) however made no comment. The overwhelming affirmation is a clear confirmation of the indispensability of the ICTs in our modern mass media.

Table 9: Respondents' views on the Relevance of ICTs in modern mass media

<i>S/N</i>	Variables	Frequency	Percentages
1	They facilitate speed of operation accuracy, quality and quantity of contents and programmes	303	26.01%
2	They enhance effective, efficient, easy and interesting media operations	86	21.72%
3	They guarantee greater reliability and profitability	53	13.38%
4	All of the above	150	37.88%
5	No response	4	1.01%

Total	396	100.00%
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Source: Field survey, 2010.

Table 8 above shows that out of the 396 respondents, 303, equivalent to 26.01% believe that ICTs facilitate speed of operation, accuracy, quality and quantity of media content and programmes. Similarly, 86 respondents or 21.72% said they (ICTs) enhance effective, efficient, easy and interesting media operations, while 53 (13.38%), were of the opinion that ICTs guarantee greater reliability and profitability. Meanwhile, 150 or 37.88% majority believe that ICTs perform all of the above function but 4 (1.01%) declined comment.

This shows that respondents were in total agreement that ICTs are very relevant in modern mass media.

Table 10: To ascertain if respondents have access to Nigerian mass media

S/N	Variables	Frequency	Percentages (%)
1	Yes	394	99.50
2	No	0	00.00
3	No Response	2	00.50
Total		396	100.00%

Source: Field survey, 2010.

The above table shows that all who responded to the question agreed that they have access to Nigerian mass media. They were 394 in number, representing 99.50%, while 2 or 0.50% did not respond. The implication is that all information given by the respondents was out of experience since they have full access to them. This goes a long way to authenticate the major finding of this research.

Table 11: Media Respondents have access to

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	Television	56	14.14%
2	Radio	71	17.93
3	Newspapers	32	8.08
4	All of the above	217	54.80
5	Others	20	5.05
	Total	396	100.00%

Source: Field survey, 2010.

According to the table above, 56 respondents or 14.14% have access to television, 71 or 17.93% have access to radio, 32 or 8.08% have access to newspapers, and 217 or 54.80% have access to all of the above media, while 16 or 4.04% have access to others and 4 or 1.01% gave no response. This shows that the population used for the study is those conversant with the subject under investigation.

Table 12: To ascertain if respondents watch *NTA* programmes

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	Yes	382	96.46
2	No	11	2.78
3	No Response	3	0.76
	Total	396	100.00%

Source: Field survey, 2010.

The table shows that 382 respondents representing 96.46% of the population watch NTA programme while 11 or 2.78% do not, and 3 or 0.76% did not answer the question. This shows that our respondents watch *NTA* programmes.

Table 13: Number of hours respondents watch *NTA* programmes in day

S/N	Variables	Frequency	Percentages (%)
1	1 – 3 hours	188	47.47
2	4 – 6 hours	109	27.53
3	7 – 9 hours	66	16.67
4	10 hours and above	28	7.07
5	No response	5	1.26
Total		396	100.00%

Source: Field survey, 2010.

As shown in table 11 above, 188 respondents which stand for 47.47% of the population watch NTA for between 1 – 3 hours in a day, 109 or 27.53% watch it for 4 – 6 hour in a day, 66 (16.67%) watch it for 7 – 9 hours while 28 or 7.07% spend at least 10 hours before NTA screen on daily basis. 5 or 1.26% did not respond. This shown that our respondents indeed, watch NTA programmes and are therefore in the best position to give correct and credible information on the issue at stake.

Table 14: To ascertain if respondents read *the Guardian newspapers*

S/N	Variables	Frequency	Percentages (%)
1	Yes	371	93.68%
2	No	18	4.55%
3	No Comment	7	1.77%
Total		396	100.00%

Source: Field survey, 2010.

Going by table 13 above, 371 respondents representing 93.68% of the population read the *Guardian newspapers*, 18 persons constituting 4.55% said they don't, and 7 or 1.77% declined comment. This implies that respondents read *the Guardian newspapers*.

Table 15: To ascertain how often respondents read *the Guardian newspapers*

S/N	Variables	Frequency	Percentages (%)
1	Often	115	29.04%
2	Very often	102	25.76%
3	Sometimes	97	24.50%
4	Rarely	72	18.18%
5	Never	4	1.01%
6	No response	6	1.51%
Total		396	100.00%

Source: Field survey, 2010.

The table shows that 115 persons representing 29.04% of the respondents read *the Guardian newspapers* often, 102 or 25.76% read it very often, 97 or 24.50% read

it sometimes, 72 representing 18.18% read *the Guardian* rarely, 4 or 1.01% do not read *the Guardian* while 6 or 1.51% refused to answer the question. This again shows that respondents read *the Guardian* well enough to give the enough information on the subject under investigation.

Table 16: To ascertain if NTA and *the Guardian* newspapers are fully utilizing the new ICTs in their operations

S/N	Variables	Frequency	Percentages (%)
1	Yes	70	17.68
2	No	318	80.30
3	No response	8	2.02
Total		396	100.00%

Source: Field survey, 2010.

Out of the 396 respondents, 318, representing 80.30% majority believe that *NTA, the Guardian newspapers* and indeed the Nigerian mass media are not fully utilizing the new ICTs in their media operations. 70, representing 17.68% however, opined otherwise, while 8 persons constituting 2.02% gave no response.

4.1.1 Research Question 1

Table 17: Respondents' assessment of the level of ICTs application in NTA and the Guardian newspapers.

S/N	Variables	Frequency	Percentages (%)
1	Very much	85	21.72%
2	Moderately	102	25.76%
3	Not very much	197	49.75%
4	Not at all	0	00.00
5	No Comment	11	2.78%
Total		396	100.00%

Source: Field survey, 2010.

From the table, those who believe that the Nigerian mass media are not using the new ICTs very much top the list. They were 197 respondents, constituting 49.75% of the entire population. This was followed by those who believe Nigerian mass media use the ICTs moderately. They were 102 or 25.76%. On the contrary, 86 persons representing 21.72% of the respondents said that *NTA* and *the Guardian newspapers* use the new ICTs very much; no respondent denied total existence of ICTs in the Nigerian mass media, however, 11 persons representing 2.78% made no comment on the issue. This agrees with most of the past empirical studies reviewed earlier in chapter two.

Table 18: To ascertain if respondents are satisfied with the present level of ICTs application in the Nigerian mass media.

S/N	Variables	Frequency	Percentages (%)
1	Yes	04	16.16%
2	No	330	83.33%
3	Neutral	2	0.51%
Total		396	100.00%

Source: Field survey, 2010.

The above shows that 330 or 83.33% majority of the respondents are not satisfied with the current level of ICTs application in the Nigerian mass media, 64 or 16.16% said they were satisfied while 2 persons representing 0.51% did not answer the question. By this, it is evident that majority of the respondents are not yet satisfied with the level of ICTs application in the Nigerian mass media.

Table 19: To ascertain if respondents watch the BBC world

S/N	Variables	Frequency	Percentages (%)
1	Yes	330	83.33
2	No	60	15.15
3	No response	6	1.52
Total		396	100.00%

Source: Field survey, 2010.

As can be deduced from the table above, 330 respondents equivalent to 83.33% affirmed that they watch the BBC world, while 60 persons representing 15.15% do not watch the BBC world, while 6 or 1.52% gave no response. This shows that our

respondents are exposed to other media outside the country and are therefore capable of comparing what is obtainable in our local media to that of other countries.

Table 20: Respondents’ comparison of ICTs application in *NTA* and *the BBC World*

<i>S/N</i>	Variables	Frequency	Percentages (%)
1	BBC World applies ICTs much more than NTA	270	81.08
2	NTA applies ICTs more than the BBC World	10	3.00
3	Both NTA and the BBC World use ICTs on equal proportion	50	15.02
4	No Comment	3	0.90
Total		396	100.00%

Source: Field survey, 2010.

The above table shows that out of the 333 respondents who agreed that they watch both *NTA* and *the BBC World*, 270 of them which constitute 81.08% affirmed that the *BBC World* utilizes ICTs much more than the *NTA*. 10 persons who represent just 3.00% said *NTA* uses ICTs more than the *BBC* while 50 or 15.02% said both *NTA* and the *BBC World* use ICTs on equal proportion and 3 or 0.90 decline comments. This shows that the level of ICTs use in the *NTA* and indeed the Nigerian mass media is still far less with what is obtainable in the foreign media like the *BBC World*.

Table 21: ICTs are underutilized in Nigerian mass media

S/N	Variables	Frequency	Percentages (%)
1	Yes	372	93.94
2	No	22	5.56
3	No response	2	0.50
Total		396	100.00%

Source: Field survey, 2010.

The above data shows 372 constituting 93.94% of the respondents agreed that ICTs are under utilized in the Nigerian mass media, while 22 representing 5.56% disagreed, 2 or 0.50% declined comment. This means that ICTs are indeed underutilized in the nation's mass media.

4.1.2 Research question 2

Table 22: Respondents' views on the causes of under utilization of ICTs in NTA and the Guardian newspapers.

S/N	Variables	Frequency	Percentages (%)
1	Lack of infrastructure e.g electricity	140	35.35%
2	Few trained or skilled personnel	54	13.64
3	Illiteracy/poor knowledge of ICTs at all levels supplies users	86	21.72
4	Financial constraints	111	28.03
5	No response	5	1.26
Total		396	100.00%

Source: Field survey, 2010.

The table shows that 140 respondents equivalent to 35.35% of the population attributed the under utilization of ICTs in the nation's mass media to lack of infrastructural facilities such as electricity. Another set of 111 persons representing 28.03% said it is due to financial constraints. Also, 86 or 21.72% attributed it to illiteracy/poor knowledge of ICTs at all levels from suppliers to users, while 54 or 13.64% said it is due to the limited number of trained or skilled personnel, and 5 or 1.26% did not answer the question.

4.1.3 Research question 3

Table 23: To ascertain if the under utilization of ICTs in *NTA* and *The Guardian Newspapers* has in any way hampered their programmes and contents respectively.

S/N	Variables	Frequency	Percentages (%)
1	Agreed	151	38.13%
2	Strongly agree	188	47.47%
3	Disagree	25	6.31%
4	Strongly disagree	24	6.06%
5	No Comment	8	2.07%
Total		396	100.00%

Source: Field survey, 2010.

Again, the table above shows that the greatest number of respondents, 188 representing 47.47% strongly agreed that underutilization of ICTs has hampered the quality and quantity of work at *NTA* and *the Guardian newspapers*. Similarly, another set of 151 or 38.13% equally reasoned along the same line. However, 25 or 6.31% disagreed and 24 or 6.06 strongly disagreed, while 8 (2.07) made no comment.

4.1.4 Research Question 4

Table 24: Respondents' views on how to enhance ICTs application in the Nigerian mass media

S/N	Variables	Frequency	Percentages
1	Government should improve our infrastructure e.g. electricity	72	18.18%
2	Government should subsidize the cost of importation of such equipment	63	15.9%
3	Government should launch the nation's communication satellite as soon as possible	46	11.62%
4	Nigerian mass media organizations should invest in ICTs acquisition and development	86	21.72%
5	Regular training and retraining of staff in the use of latest ICTs in the media industry	70	17.68%
6	Others	53	13.38%
7	No Comment	6	1.51%
Total		396	100.00%

Source: Field survey, 2010.

As shown on the table above, 72 respondents (18.18%) suggested that the Nigerian mass media would utilize the new ICTs more if the government improves infrastructural facilities like electricity. 63 or 15.91% suggested that government should subsidize the cost of importation of such ICT facilities. another 86 representing 21.72% majority said Nigerian mass media organizations should invest more in ICTs acquisition and development. 46 respondents constituting 11.62% advised that

government should launch the nations communication satellite as soon as possible. Also, 70, representing 17.68% advocated for regular training and retraining of staff in the use of the latest ICTs in the media industry; another set of 53 respondents gave other different suggestions, while 6 or 1.51% declined comments. This shows that the respondents are not satisfied with the current level of ICTs application in the Nigerian mass media, hence, their suggestions on some practical ways to improve their ICTs use in the nations mass media.

4.2 Discussion and Interpretation of Results

The main objective of this study was to determine the level of ICTs application in the Nigerian mass media, especially *NTA* and *the Guardian Newspapers*. In eliciting the needed responses, four research questions were formulated, out of which the sub-questions that made the questionnaire were derived. The questionnaire was carefully constructed administered and collated. This was followed by the conversion of the data into percentages to facilitate statistical interpretations.

This section discusses the meaning of those findings in relation to the research questions and with a view to knowing whether the findings agree or disagree with what was done in the past.

To start with, the first three questions as presented in tables 1-3 dealt with respondents' gender distribution, age categories and educational qualifications. Recalling the generated data, the gender distribution shows that the male respondents slightly out-numbered their female counterpart. The male were 215 or 54.29% against the 176 or 44.44% of the female. This is in agreement with the common belief that

females are often more reluctant to respond to questionnaires, especially when they contain bulky questions, compared to the male.

Again, the age distribution of respondents clearly showed the maturity, the quality and the emotional stability of the respondents used in the investigation.

Also, their occupation and educational qualifications not only revealed the diversity and versatility of the people used, but also the differences in their social, economic and political cum educational classes. The result further shows that the study is a perfect representation of the views of both the staff of the two organizations and those members of the public who have access to them.

Table 6 and 7 shows that the persons used for the study were those with good knowledge of the subject under investigation. This is because when they were asked if they know the ICTs, 389 representing 98.2% gave positive affirmation and non denied total knowledge of them (ICTs), while 7 or 1.77% declined comment.

In demonstration of their knowledge of the ICTs, respondents were able to enumerate some of them to include GSM (24%), Internet (23%), computer (21%), satellite (7%), OBVan (5%), Digital cameras (3%), among others.

In addition to having good knowledge of ICTs, the respondents in table 9 and 10 affirmed that the new technologies are very relevant in modern mass media. This was the view of 391 respondents constituting 98.7%.

Again, the result of the analysis of question 11-15 shows that the respondents have full access to most of the Nigerian mass media especially *NTA* and *the Guardian newspapers*. The data shows that 96% of the respondents watch *NTA* programme for not less than 3 hours daily and 93% read *the Guardian newspapers* as often as

possible. This means that the respondents know the problem, and are most likely to proffer the most workable and creditable solution.

Based on the respondents' demonstration of good access and knowledge of the Nigerian mass media, questions 16-21 sought to find out their assessment of the level of ICTs application in the nation's mass media. Their responses show that the level of ICTs use in Nigerian mass media is still very low and cannot be compared with that of the foreign media such as *the BBC World*, *the CNN*, etc. This was the view of 318 or 80.3% of the respondents.

Meanwhile, this clearly answers our research question one (1) which sought to ascertain the actual level of ICTs application in the Nigerian mass media. It also agrees with most of the local and foreign empirical works reviewed earlier in chapter two.

In the same vein, research question two sought to find out the respondents' views on the causes of the underutilization of ICTs in the Nigerian mass media. Table 21 shows their responses to include lack of infrastructure e.g. electricity (35%), few trained or skilled personnel (13%), illiteracy/poor knowledge of ICTs at all levels from suppliers to users (21%), financial constraints (28%), among others.

Question 23 which was coined from research question 3 in table 23, sought to determine the consequences of the underutilization of ICTs in the nation's mass media. The result showed that the quality and quantity of programmes and contents of *NTA* and *the Guardian newspapers* respectively have been greatly hampered by inadequate use of ICTs.

The findings so far raise the question of the best, most reliable, suitable and practicable measures adoptable in the quest to enhance ICTs use in Nigerian mass media. This invariably formed our research question four which is found in table 24. This question sought the respondents' personal opinions/suggestions in an open-ended format. Several suggestions were put up by the respondents. One, government should improve our infrastructural facilities such as electricity. This was suggested by 72 persons representing 18.2%. Another is that government should subsidize the cost of importation of such equipment. It was the views of 63 persons representing 15.2%. Also, 86 or 21.7% of the respondents suggested that Nigerian media organizations should invest more in ICTs acquisition and development; 46 or 11.6% called for a speedy launch of the nation's communication satellite to boost ICTs use in the nation's media. 70, representing 17.7% suggested regular training and re-training of media practitioners in the use of latest ICTs in the media industry.

In summary, the major findings of this study have established the fact that ICTs are very relevant in modern mass media. However, despite the relevance, the new technologies have not been fully utilized in the Nigerian mass media, and this has indeed hampered the quality and quantity of programmes and contents of *NTA* and *the Guardian newspapers* respectively. Consequently, some worthy suggestions have been put forward by our respondents. Some include – Regular training and re-training of staff on the use of the latest ICTs in the media industry, more investment in ICTs acquisition and development by Nigerian media organizations, government subsidizing the cost of importation of such equipment, government improving our

infrastructure like electricity as well as speedy launch of the nation's communication satellites, among others.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study examined the application of ICTs in the Nigerian mass media, paying special attention to *NTA* and *The Guardian Newspapers*. To warrant this, prior investigations present conflicting reports on the actual level of adoption and application of ICTs in the Nigerian mass media. While some believe that the Nigerian mass media are rapidly catching up with those explosive technologies, others seriously contend that the media in the country have remained in an abysmal performance, and have steadily watched the rest of the world grow with the trend. Meanwhile, the issue had remained yet to be empirically established, authenticated or confirmed. However, until it is established through empirical evidence, every argument remains mere speculation, intuition, hunches, or simply an insinuation.

Curiously, a study became imperative, to critically appraise all sides of the view and ascertain the true level of ICTs use in the nation's mass media, using *NTA* and *The Guardian newspapers* as a point of focus.

To do this, the problem that the study sought to investigate was stated in clear terms. This was accompanied by the objectives of the study, towards filling the existing knowledge gap or vacuum on the level of ICTs use in the Nigerian mass media. Again, the research questions were raised, and a theory considered most suitable (Diffusion of Innovation) was chosen to anchor the study. Then, the

significance of the study was specified and relevant terms were defined operationally and conceptually. This formed the first chapter of the work.

In chapter two, existing literatures and empirical works/studies were extensively reviewed with a view to finding the relationship between studies done by other scholars on the use of ICTs in the Nigerian mass media and the present study. This was particularly important as it added more impetus to the understanding of the topic of discussion.

In furtherance of actualizing the set objectives, the survey research method was adopted in the exploration of the necessary data for the investigation. The population of the study was decided and the sample size determined. The questionnaire and oral interviews were used as instruments for data collection. A total of 400 copies of the questionnaire were administered, 200 copies at the head offices of the *NTA* and *the Guardian newspapers*, on equal proportion (i.e 100 copies apiece), the other 200 were randomly administered to the members of the public who have access to the two media under assessment, 100 from the North (Abuja and Niger State), and another 100 from the South (Lagos and Eungu states).

By and large, the statistical outputs of the inquiry were exhaustive enough to give sufficient illumination on all aspects of the study as shown on the numerous tables in chapter four.

The data generated were further analyzed using simple descriptive and statistical tools such as simple percentages, tabular presentations and frequency distribution.

Findings arising from the interpretation and analysis of data collected provided the following conclusions:

1. That the new ICTs are very relevant in the day-to-day operations of the modern mass media
2. That despite the importance, the ICTs are still underutilized in *NTA* and *The Guardian Newspapers*.
3. That the underutilization of the new ICTs in *NTA* and *the Guardian newspapers* are caused by:
 - i. Lack of infrastructure e.g. electricity
 - ii. Few trained or skilled IT personnel
 - iii. Poor knowledge of ICTs at all levels, from suppliers to users
 - iv. Financial constraints
 - v. Poor planning
 - vi. Lack of political/ideological will, etc.
4. That the underutilization of ICTs in *NTA* and *the Guardian newspapers* has greatly hampered the quality and quantity of their programmes and contents respectively.
5. That to enhance ICTs use in the Nigerian mass media,
 - i. the government must improve our basic amenities, such as electricity.
 - ii. government should subsidize the cost of importation of such equipments.
 - iii. government should assist the media to go global by completing and launching the nation's communication satellite as soon as possible.

- iv. mass media organizations in the country should invest in ICTs development and acquisition, where the local development is difficult, they should follow the global trend and always acquire the latest and standard equipment, as this will enhance efficiency and effective performance.
- v. the media organizations should also, as a matter of importance, engage their staff in a regular training and retraining in order to keep abreast of the latest trends in the media and ICTs world.

5.2 Conclusion

In this study, our attempts had been to systematically and empirically show the true situation of ICTs use in *NTA* and the *Guardian newspapers*; if low, the causes, the consequences and the curative measures.

In the process, we generated enough data to attempt answering those pertinent questions. Our statistics, for one, were sufficient enough to prove that indeed, ICTs are underutilized in *NTA* and *The Guardian newspapers*. The responses from the respondents to the questionnaire and the oral interviews abundantly overwhelmingly conformed this. It was the view of 85.6% of the respondents; hence, the issue is not a speculation.

Secondly, our respondents in their candid responses were able to identify the wide range of factors responsible for the situation to include- Lack of basic amenities such as electricity, poor knowledge of ICTs at all levels, from suppliers to users, few trained or skilled personnel, financial constraints, and poor planning, among others.

Again, the respondents unanimously agreed that the problems enumerated above have greatly hampered the use of ICTs in *NTA*, the *Guardian newspapers*, and indeed the Nigerian mass media.

Meanwhile, substantial percentage of these findings reflects the perspectives of both the study's theoretical framework as well as the reviewed empirical works. Such empirical results and evidences include ones gathered from these sources. Onah (2007), Ezeoha (2009), Ude (2009), Balogun(2008), Jensen (2006), ITU report (2001), Eserinune (2006) and UNDP World Development Report on Internet use (2006).

On solutions to be problems, our heterogeneous respondents, massively and logically agreed that there is need for the government to work on our basic amenities like electricity, subsidize the cost of importation of sophisticated technologies used by the media, as well as put more efforts to ensure speedy completion and launching of the nation's communication satellites as soon as possible.

Our findings also point to the need for our media houses to employ qualified and competent computer literate personnel and maintain a regular training and re-training of the personnel in the use of the latest ICTs in the media world.

Our findings are indeed numerous and therefore indicative of the level of versatility of inputs into the study. Although human imperfections could also have been at play, coupled with the prevalence of inadequacy of some needed resources and other limitations, however, sufficient conscious efforts were made to ensure the reliability and validity of the outcome of the study. This is expected to enhance its credibility and acceptability, which will translate into its probably making some meaningful contribution to the field of research, communication and academics.

5.3 Recommendations

The findings of this study have shown in clear terms that ICTs are underutilized in *NTA* and *The Guardian newspapers*. The study has again, confirmed that the underutilization of ICTs in *NTA* and *the Guardian newspapers* has hampered the quality and quantity of their operation. It is against this backdrop that the following suggestions/ recommendations are made to consolidate the study and proffer solution to the problems raised.

1. In order to encourage the growth of ICTs in the country, government should intervene by providing enabling environment that would attract both local and foreign investments in the area of technological acquisition and development.
2. Basic social amenities such as electricity should be provided to minimize the cost of running the few available ICTs on generators.
3. The media organizations should make efforts to invest in ICTs development and acquisition, where the local development is difficult, they should follow the global trend and ensure that only the standard and latest equipment are procured.
4. The government should assist the media to go global by completing and launching the nation's communication satellites as soon as possible, as this would go a long way in boosting the quality and quantity of media outputs.
5. In the interim, government should improve the health of the naira so that the media can import the ICTs less costly.
6. The government can also subsidize the cost of importation by removing the import tariffs in the importation of ICTs into the country.

7. Again, the use of local or indigenous technologies should be encouraged as this will enable the media to acquire them easier and cheaper.
8. The government and the private sector should embark on planned and sustained research activities towards technological improvement. These activities should involve considerable investments in both material and human resources; this is because, without efficient human resources, technological resources will continuously elude us.
9. It is also very necessary for all media practitioners to be computer literate; this is because the work of the media in recent time has become fully computerized, be it in the print or electronic.
10. It is also our humble submission, that most of the factors militating against effective use and growth of ICTs in Nigeria can be eliminated or minimized with good governance, proper planning and good ICTs policies.
11. Government should ensure the liberalization of GSM and landline tariffs to enable a more affordable acquisition and maintenance of personalized ICTs. Similarly, exploitative charges being complained of PHCN, GSM, NITEL and internet providers remains an important issue in our meaningful ICTs development. The need for the operators to consider subsidies is very necessary.
12. There is need for regular training and re-training of media practitioners on the use of the latest ICTs, this is important as the findings of this research show that the mere availability of these facilities cannot help matters unless the people they are meant for can effectively utilize them.

13. Again, we strongly recommend that efforts should be made to tackle the problem of brain-drain in the country; a situation where the nation is in serious lack of experts to handle and maintain most of the sophisticated technologies, and the few available ones are constantly enticed to abandon the country and seek greener pastures overseas is not good enough.
14. The recent ultimatum given to all broadcast organizations in the country by the Broadcasting Organization of Nigeria (BON) to change from analogue to digital broadcasting is indeed a welcome development.

5.3.1 Suggestions for Further Studies

We suggest that this study be further carried out in a broader scale. This will provide the platform for the possible verification of the validity and reliability of the results and their possible replication. It will equally afford an opportunity for an in-depth study of other related dimensions of the topic. This is because, although the central theme of this study is the extent of ICTs use in the Nigerian mass media, however, there are other aspects requiring some attention.

It is therefore necessary to further extend the study since no particular research can claim to be sufficiently exhaustive. Consequently, as every research undertaking will always benefit from broadened attempt to replicate its outcome, we strongly recommend that more studies in the area will add to its enrichment.

Such studies should be empirically done to provide enough bases for the validation and generalization or otherwise of the research findings. Such subsequent studies could be conducted using methods other than the survey to see if the same result could be arrived at.

Further studies could equally be done to replicate the current one, using the same research method and approach with a view to ascertaining the authenticity of our findings.

This recommendation is more so, relevant in view of the number of impeding circumstances encountered in the course of the exercise, among which include inadequacy of available data, insufficiency of required resources, the challenge of deadline and the need for valid results.

5.3.2 The Study's Contribution to Knowledge

Undertaken at a time when the country is witnessing a proliferation in the media industry - print and electronic, the study no doubt provides a roadmap for an enhanced ICTs use in the land, to boost the quality and quantity of media contents and programmes, especially in news gathering, processing and dissemination.

For one, the study provides empirically based verifiable first hand information on the extent of ICTs application in Nigerian mass media at the moment. It is therefore a major contribution to knowledge in the field of mass communication and specifically in the area of ICTs.

Again, the work affords sufficient exposition into such crucial areas like the confirmation of underutilization of the new ICTs in the nation's mass media at present, the factors responsible, the effects they (underutilization of ICTs) have had on the nation's media, and the effective measures to remedy the situation.

In the final analysis, it suffices to state categorically that the study has ideas of the past, and the realities of the present, for the sake of the future. To intending

researchers, it is a guide. To the Nigerian mass media, it presents them with the realities on ground for a better-informed decision taking.

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Appendix 1

PROFILE OF *NTA* AND THE *GUARDIAN* NEWSPAPERS

(A) The Nigerian Television Authority (NTA)

(i) **Location:** Television House, Area 11, P.M.B. 113,
Garki, Abuja, Nigeria.
Tel 1: +23492345902
Tel 2: +23492345915
Fax: 23492345914
<http://www.nta.com.ng>

(ii) Mission

- to inform, entertain and enlighten the Nigerian television audience, while maintaining its (NTA) leadership position in television broadcasting.
- to enrich the life of the Nigerian by influencing positively his social, cultural, economic, political and technological thinking through a wide choice of programmes.
- to operate for the benefit of all Nigerians, recognizing and reflecting diversities in cultures, values, interests, and needs.
- Contribute to the development of a shared national consciousness, cohesion and identity;
- provide high quality programmes which are

commercially viable, employing new technologies and up-to-date techniques available in the industry; and remain competitive, in profit oriented manner.

(iii) Brief History

The history of the Nigerian Television Authority (NTA) can be traced back to 31st October, 1959, when the Western Nigerian Television (WNTV) beamed out the first television signal in Nigeria. Barely a year later in 1960, the Eastern Nigerian Television (ENTV) came alive. This was followed by the Radio Television Kaduna (RTK) in 1962.

Still in 1962, the development was given an added boost by the federal government with the establishment of the Nigerian Television Service (NTS), Lagos.

Midwest Television (MWTV) came on stream in 1973, while Benue/Plateau Television (BPTV) Jos, made history by commencing transmission in colour from inception in 1974.

The entire television landscape was transformed with the promulgation of Decree 24 by the then federal military government in May 1977, giving birth to the NTA as we now have it. By that decree, the NTA became the only body empowered to undertake television broadcasting in Nigeria.

All existing state television stations were thereby taken over and incorporated in NTA. The authority was organized in six zones structure such that each zone consists of 3 stations except for one which is made of four stations. The production centres exist in each state to contribute programmes to the zonal output, when all the installations have been completed, it should be possible for anyone in Nigeria to receive any of the six zonal programmes by choice. In 1977 when the NTA was inaugurated, there were 7 stations with 3 in their final stages of commissioning whilst the other states had none at all. The first Director General was Vincent Maduka.

By December, 1979, there were scheduled broadcasts from every state capital in the country. At the last count, there are over 54 NTA stations in the country, and has its network centres in Lagos, Ibadan, Benin, Enugu, Kaduna, PortHarcourt, Markurdi, Jos, Sokoto and Maiduguri.

(iv) Organization

The decree establishing the NTA, provides for one national board and six zonal boards. The national board has overall responsibility for policy and standards, and remains the corporate legal entity with the Director General as Chief Executive. He is assisted at the headquartes by Departmental Directors of Engineering, News, Finance, Programmes, Legal and Manpower resources.

The chairman of each zonal board is a member of of the Central Board and the Chief Executive to the Zonal Managing Director. The zonal management consists essentially of Specialist Advisers to the Zonal Managing Director, namely- the Secretary to the board, Programmes Coordinator, Chief Engineer and Chief Accountant. In addition, the Zonal Auditor ensures that proper books are kept in the various production centres.

It is the duty of the zone to ensure that the programmes broadcast conform with the national policies and standards of NTA. The production centres which is the third tier within NTA, does the actual making of programmes. It is headed by a general manager and staff strength in the oldest stations numbers up to 500.

In March 1980, the board of the authority was dissolved and its functions were taken over by Chief Olu Adebajo, Special Adviser to the President on information.

In September 1980, the position was revised and an interim committee was set up by the President in council with powers to carry out the functions of the board. The members of the committee are the Permanent Secretary, Federal Department of Information, the Chief Press Secretary to the President, the Federal Directorate of Information, and the Director-General, NTA, with the Special Adviser known as the Chairman of the committee.

(v) Major achievements

The Nigerian Television Authority (NTA), is acclaimed the oldest and largest TV network in Africa and the most accomplished indigenous broadcast outfit in Nigeria.

The nta has over the years distinguished itself as a force in the field of television broadcasting globally. Its quality programmes have received numerous awards at international competitions and festivals, which include the following:

- 1st prize for drama category at the URTNA
- competition in Algiers, Senegal, with “*Cock Crow At Dawn*”,
”*Moment of Truth*”, etc.
- [
- 1st prize for drama category at the U.S. Prized Piece
Festival, with “Things Fall Apart”.
- 1st prize in documentary category with “A Labour
Honour Lost” at the 1988 TAMTAM International
Video Competition in Italy, among others.

The authority recently launched a pay satellite TV of
Over 40 channels known as “*Start Time*”, making the
second to do so in the country after DAAR Communications,

owners of AIT and RayPower radio launched the *DAARSAT* in late 2008.

(B) Profile of *The Guardian Newspapers*

(i) Location: Guardian newspapers ltd.,
Rutham House Complex, P.M.B.
1217, Oshodi, Lagos, Nigeria.
+234-014524111
+234-014524080
<http://www.ngrguardiannews.com>

(ii) Motto: Conscience Nurtured by Truth

(iii) Vision: an independent newspaper established for the purpose of presenting balanced coverage of events and promoting the best interest of Nigeria.

(iii) Mission:

- committed to the integrity and sovereignty of the federation of Nigeria, unity, sovereignty of Africa.
- committed to the best tradition and ideals of republican democracy

- believes in the responsibility of the state to protect and defend the citizens, create the condition for political, social, economic and cultural potentials of citizens.
- Does not in principle object to the ideology of free enterprise, believes in the state intervention judiciously, in the economic right of the nation
- At all times uphold the need for justice, probity in public life, equal access to to the nation’s resources and equal protection under the laws of Nigeria citizens
- Believes in the country and integrity of the Guardian

(iv) **Publications:** *Guardian Daily, Guardian on Sunday, Guardian on Saturday, Guardian Express, The African Guardian and The Financial Guardian* (the last two later disappeared)

(v) **Brief History:**

The Guardian Newspapers with its headquartes at the Rutham House Complex, Oshodi, Lagos, Nigeria, was established by a business Magnet, Chief Alex Ibru on March 13, 1983. Her motto “*Conscience Nurtured by Truth*” was coined from a quotation from the Nigeria’s legendry 19th century patriarch, Usman Dan Fodio – “conscience is an open wound, only truth can heal it”.

The Guardian newspapers started with a trailblazing direction in Nigerian journalism when it assembled powerful intellectuals like Late Dr. Olatunji Dare, Femi Kusa, Dr. Chinewinzu and Lade Bonuola, among others, as the core editorial team, with the promise to be the active flagship of the Nigerian mass media as well as democratic ideals.

The Guardian broad based editorial policy is shaped by its liberal ideology, crusading character and seminal content. The newspaper has since inception made outstanding contributions to both the Nigerian mass media scene and the nation in general. *The Guardian* has for many years served as the mecca of Nigerian journalism according to informed public opinion. It has consistently remained a home to a galaxy of brilliant minds and high class writers and journalists; a veritable training ground for emerging corps of the brightest young journalists in Nigeria.

The Guardian beginning from the 80s up to the 90s and even the present day has helped to shape critical public and private thinking in a most definite and authoritative manner that compel national and international decision makers to pay attention to its perspectives.

Successive governments in Nigeria, the ruling class and the elite respect *The Guardian* for its impeccable viewpoints, the same way the ordinary discerning reader count on the newspaper to

satisfy his curiosity, sharpen his intellect or deepen his world view as excellent debates and analysis take place on the pages of the daily.

Beyond setting enviable standards in the Nigerian media scene, *The Guardian* has also made a distinctive mark in promoting good governance, rule of law and social justice in the country to the delight of Nigerians as a people. *But if The Guardian* has distinguished itself, as the uncompromising watchdog of the Nigerian society, defender of the voiceless and grand darling of the populace, the paper had probably paid the most challenging prize in the line of duty.

The newspaper had been shut several times by the Nigerian military authorities, intolerant of its caustic criticism. For instance, Buhari/Idiagbo regime closed down *The Guardian* in 1984, while the late maximum ruler, General Sani Abacha sealed off its RUTHAM House headquarters in Lagos in 1997. Journalists in *The Guardian* have been assaulted, brutalized, arrested, detained and assassinated. Two *Guardian* newsmen – Tunde Thompson and Nduka Irabor were imprisoned under the draconian decree 4 of 1984 promulgated by General Mohammed Buhari. A *Guardian* reporter covering the Liberian civil war, Mr. Awotison disappeared in the 80s and had not been seen till date, while another *Guardian*

journalist, Mr. Bayo Olu was assassinated by unknown gunmen in October 14, 2009 under the Yar'Adua civilian administration.

The publisher, Mr. Alex Ibru had escaped a death plot in 1994 believed to have been instigated by the Abacha regime, peeved by the critical stance of *The Guardian*. Writing in the guardian of October 15, 2008, Irabor notes:

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To be able to fully share in the joy of the guardian's survival and longevity, one has to relieve the memory of the atmosphere of fear and trepidation in the media industry that characterized the military era in which the paper was nurtured. Few newspapers as bold as the guardian would have survived in such furnace of birth.

The Guardian has not only survived, but also proved a symbol of the indomitable spirit and model of excellence many thought impossible in Nigeria.

Appendix 2

Questionnaire

The School of Postgraduate Studies,
Department of Mass Communication,
University of Nigeria, Nsukka.
June 12, 2010.

Dear Respondent,

Request for Completion of questionnaire

I am a Masters' student of the University of Nigeria Nsukka, conducting a research on "An Appraisal of ICTs Application in the Nigerian Mass Media: A Study of *NTA* and *The Guardian Newspapers*". The research is for my Masters' degree project and it is purely for academic purpose.

As a way of gathering data for this study, I decided to use questionnaire as one of my data collection methods. I shall be grateful if you complete the questionnaire for me.

Please, be assured of your anonymity, as the information you offer will be treated with utmost confidentiality.

Thanks for your co-operation.

Yours faithfully,

Nwafor, Kenneth Adibe

Please, kindly tick () against your chosen option(s) in the space(s) provided but write out your view(s) where there are no options.

1. Sex: a. Male b. Female

2. Age: a. 18 - 27 - 37 c. 3 7
d. 48 and above

3. Educational qualification

a. FSLC

b. WASCE/SSCE/GCE

c. GCE A'LEVEL/NCE/OND

d. HND/B.A/B.Sc. and above

e. Others

4. Occupation:

a. farmers b. civil servant c. ess person

d. students e. others

5. Are you a staff of either NTA or *The Guardian newspaper*?

a. Yes b. No

6. Have you ever heard about ICTs (Information and Communication Technologies)? a. Yes No

7. Can you name some of the ICTs you know?

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8. Do you agree that ICTs are very relevant in the modern mass media? a. Yes
b. No
9. If you agree with question 7 above, what are the relevance of ICTs in the modern mass media?
- a. They facilitate speed of operation, accuracy, quality and quantity of media contents and programmes
- b. They enhance effective, efficient, easy and interesting media operations
- c. They guarantee reliability and profitability
- d. All of the above
10. Do you have access to any of the Nigerian mass media?
- a. Yes b. No
11. Which of these media do you have access to?
- a. Television newspapers c. Radio
- d. All of the above
12. Specifically, do you watch *NTA* programmes?
- a. Yes b. No
13. How many hours do you spend watching *NTA* in a day?
- a. 1-3hours -6 hours c. 7-9 s d. 10 hours and
above
14. Do you read *The Guardian newspapers*? a. Yes b. No
15. How often do you read *The Guardian newspapers*? a. often

b. Very often c. sometimes d. rarely

16. Using the *NTA* and *The Guardian newspapers* as examples, do you think the Nigerian mass media are fully utilizing ICTs in their media operations? a. Yes b. No

17. To what extent do you think the *NTA* and *The Guardian newspapers* apply ICTs in their operations? a. Very much b. moderately
c. Not very much t at all e. unde

18. Are you satisfied with the current level of ICTs application in *NTA* and *The Guardian newspapers*? a. Yes b. No

19. Do you watch the *BBC World*? a. Yes

20. If your answer is yes in question 17 above, compare the level of ICTs application in the *BBC World* and the *NTA*.

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21. Do you agree that ICTs are generally under utilized in *NTA* and *The Guardian newspapers*? a. Yes b. No

22. If your answer is yes in question 19 above, what are the causes of under utilization of ICTs in *NTA* and *The Guardian newspapers*?

a. Lack of infrastructures e.g. electricity

b. Few trained or skilled IT personnel

c. Illiteracy/poor knowledge of ICTs at all levels, from suppliers to users.

d. Financial constraints

e. Others, specify

23. Underutilization of ICTs has hampered the quality and quantity of programmes and contents of *NTA* and *The Guardian newspapers*.

a. agree b. strongly agree disagree

d. strongly disagree

24. Kindly suggest some practical measures to enhance ICTs application in *NTA* and *The Guardian newspapers*.

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