

# Effect of Emerging Information and Communication Technology (ICT) on Bauchi Radio Corporation (BRC), Bauchi State, Nigeria

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**Abstract:** Information and Communication Technology (ICT), has revolutionized the media industry. It has transformed information gathering and dissemination in Radio Production. This study examines the application of Information and Communication Technology (ICT) by professional of Bauchi Radio Corporation (BRC). The objective of the study was to identify the various areas of application of Information & Communication technology (ICT) resources in Bauchi Radio Corporation. Survey design was adopted for the study using personal interview (focus group) and the data collected was qualitative. The survey revealed that ICTs have been widely applied in Radio production by professional at Bauchi Radio Corporation (BRC). 133 sample size was used in the study. The recommendation of this study include making fund available to upgrade ICT facilities and digitalized equipment's should be made available to Bauchi Radio Corporation (BRC).

**Keywords:** Effect, Emerging, Information, Communication, Technology, and Radio.

## I. INTRODUCTION

The advent of Information & Communication technology (ICT) in Nigeria had revolutionaries the information/communication sector of the nation's economy, Media houses and media practitioner could as a result of this, transmit messages, ideas and information between one part of the country to another and even across the national boundaries by the application of ICT resources such as the facsimile (Fax) machine, the internet as well as the use of the global system for mobile communication (GSM) in Nigeria, however people seldom appreciate the benefit of ICT resources especially in the information communication sector (Aniobolu & Ememeriagbon, 2009).

The adoption of Information and Communication Technologies (ICTs) have altered the analogue process, even though new technology has introduced some extra cost it has brought benefit in return. Portable computer means that reporters working away from the media can now deliver (sent) report quickly, simple and reliable using modem. The use of computer has enhanced news processing and reporting. With the internet journalism can now click on relevant site to source for foreign or even local news for subsequent broadcast (Chari, 2013).

According to Adigwe, I. (2012) cited in e- journal impact of ICT on news, Journalism and broadcast professionals in Nigeria years were using analogue technology in their programming, news gathering, processing and dissemination and journalistic endeavors which in any way delayed the delivery of reports to the targeted audience. However, with advent of ICT equipment which are now being used in the Programming, Gathering, Processing, Recording, Production, Transmission of new events by radio broadcast station in Nigeria. They have been an enhance or improved delivery of broadcast services.

Consequently, the acquisition utilization and application of information communication technologies in radio practice today makes the world activity less cumbersome, Caster and error proof the foregoing view is in tender with realistic scholarly position. Adopted by Maid (1996) who posits that new information communication technologies have revolutionized information gathering, processing, storage retrieval and transmission, making information available even more widely, rapidly and less expensive. It does not only gather, process and dissemination information they can also arrange, Marshall and select information rapidly. Inspire of the above merits, the truths still remain that acquisition and application of these advanced media technologies by media outfits in Nigeria especially the government owned stations in their gathering packaging and transmission equipment is still insufficient.

Just like in other parts of the developing world, in Nigeria there has been an upsurge in Internet penetration and the use of ICT particularly in the areas of health, education, business, agriculture, government/administration, tourism and transportation in the last 15 years (Jimoh, Pate, Lin and Schulman, 2012). In spite of that, ICT infrastructures in the country may still be regarded as underdeveloped when compared with other developing countries like South Africa, Malaysia, Brazil and South Korea.

Nigeria's Internet penetration, for instance, was less than 16% in 2012 while its Internet broadband penetration per 100 household was between 4% and 6% (Nigeria's National Broadband Plan, 2013-2018) which can be regarded as extremely lower compared with Malaysia's 10.9% in 2006

(UNDP/MDGs Malaysia 2010 Report), 55.6% in 2010 and 67.2% in the third quarter of 2013 (Malaysian Communications and Multimedia Commission, MCMC, 2013; Department of Statistics, Malaysia, 2013; National Broadband Initiative, Malaysia- NBI, 2014). According to 234next.com.

Nigeria had an average broadband download speed of 1.38 Mbps (Megabits per second) which is very much lower compared to the 10.1 Mbps of the United States (Google Public Data, 2012), and, according to Internet World Stats-IWS (2014), Nigeria's broadband download speed rose to 5.22 Mbps in November, 2013. In June, 2012 there were about 48.4 million internet users in Nigeria which was about 28.4% of the country's population.

In December, 2012 there were over 6.63 million Facebook users and the country's Internet penetration rate was 3.9% (IWS, 2014). In Malaysia, for instance, like in many other "emerging" developing countries, ICT is rapidly growing. The Malaysian Government is currently vigorously pursuing its famous national development plan, Malaysia 2020 in which it targets at least 25% of the country's population to be ICT-literate by the year 2020.

In Nigeria, the Federal Executive Council approved the National Information Technology Policy in March 2001 and the implementation started in April with the establishment of the National Information Technology Development Agency (NITDA), in charge of the mission to make Nigeria an ICT-capable country in Africa and a key player in the Information Society, while using ICT as a catalyst for sustainable development and global competitiveness (ICT4D Nigeria Annual Report, 2007). In the new policy draft document 2012, the vision and mission statements of the ICT policy are as follows:

**Vision:** [To make] Nigeria as a knowledge-based and globally competitive society. **Mission:** To fully integrate Information and Communication Technologies into the socioeconomic development of Nigeria in order to transform the country into a knowledge-based economy (Federal Ministry of Communication Technology-FMCT, 2012).

The project for establishing the Bauchi Radio Corporation commenced in the early months of 1977, by the Federal Government of Nigeria, under the Nigeria Broadcasting, NBC. From the state government also developed interest and worked in collaboration with the NBC to nurture the station. By December that year all necessary installations of basic equipment for transmission were successfully put in place. Test transmission was however delayed until 18<sup>th</sup> February, 1978 while full transmission commenced two days later, on 20<sup>th</sup> February, 1978. Garba (2015), in his analysis of community development campaign on community based radio stations stresses that in Bauchi state, the Bauchi Radio Corporation as well as all the major public and commercial Radio stations such as AIT, Ray Power and Globe FM are

relatively concentrated in Bauchi city and they remained less accessible to most part of the rural areas where 70% of the states' population lived.

At the time of inception, Mr. Herbert O. Uneagbu, who was then the state controller NBC, headed they station until the time of the transfer of the station to the Bauchi state Government. Shortly, in July 1979, Late Mallam Adamu Muhammad Misau, as the first indigenous officer from the state was appointed to head the pioneer management team as the first General Manager. ([www.brcbauchi.org](http://www.brcbauchi.org))

The station in 1977 started under the name of NBC Bauchi, then in 1979 the name Bauchi Broadcasting Corporation BBC, was adopted to replace the NBC. This change of name lasted for only six years, because the current name of Bauchi Radio Corporation, BRC was finally assumed to replace the Bauchi Broadcasting Corporation (BBC) ([www.brcbauchi.org](http://www.brcbauchi.org))

Interestingly, Bauchi Radio Corporation was the first to run an FM Radio Channel in the entire Northern part of the country in the early 1980s. Like all other older radio stations in the country, BRC has its own share of experience and developmental challenges, especially when measured against the background of mixed approaches by different government in the state in handling issues of information management and dissemination. The ability of the BRC to further enrich its programmes contents, also strengthened its broadest service and widened its areas of grass roots coverage, especially with the location of 10 rural-based FM radio stations in communities across the terrains of the state, they are established essentially to promote development by improving the general life quality of the people in the rural areas through social mobilization broadcast and thereby raising the consciousness of the people and public education in spheres of all human endeavors and BRC is made the supervising and monitoring agency of these stations (Garba, 2015).

The BRC website [www.brcbauchi.org](http://www.brcbauchi.org) is an additional information outlet from Bauchi state that provides latest information on issues and events coming out from the state. It also serves as link to other opportunities related to general information on general development aspects in the state and beyond. General renovation of the broadcasting house was done under the able leadership of Late Dr. Ahmed Mohammed Abdullahi on to further consolidate on what was so far achieved in this direction: furnished of recording and continuity studios, furnished of ICT office, a befitting Board Room, provision of required facilities, elegant staff Mosque, an aesthetic office environment, and a great effort of provided all other sundry facilities, such as staff canteen and efficient water system for a decent corporate Headquarters from this broadcast organization ([www.brcbauchi.org](http://www.brcbauchi.org)).

#### *Statement of Problem*

The National Broadcasting Commission (NBC) in its annual report stations on radio broadcasting in Nigeria observed that

most private and public owned broadcast media outfits are yet to make digital transmission part of their daily broadcasting, and even those who are into it are partially implementing it (Ishaq Kawu, 2018). This research is aimed at investigating how the broadcast professionals of Bauchi Radio Corporation embraced the use of ICTs in their journalistic and broadcast activities.

#### *Purpose of the study*

The goal of the study is to identify the application of Information & Communication technology (ICT) in Bauchi Radio Corporation.

#### *Objective of the study*

To identify the various areas of application of Information & Communication technology (ICT) resources in Bauchi Radio Corporation.

#### *Research question*

What are the areas of application of ICT resources in Bauchi Radio Corporation?

## II. LITERATURE REVIEW

### *The concept of broadcast media*

Broadcasting is a form of mass communication that involves the dissemination of information, news and entertainment to a large audience through electronic transmitters when the signals transmitted are audio (sound and speech) it is referred to as radio broadcasting but when both visuals (motion pictures) and audio signals are transmitted it is called television broadcasting (Adeniyi, 2009). A side the importance of broadcasting for education, entertainment and information, the society cannot maximize its potential for development and prosperity without a strong broadcast media organization such as CNN, BBC, and Aljazeera have contributed immensely to the economic strength of their host countries few can deny the power of the media in shaping the destiny of any nation. Mass communication scholars, Dr. Ibrahim of the University of Lagos, in 2010 at the university campus in a recent lecture that the potential of the media as a tool for political and economic power cannot be easily measured. This is why nations around the world is moving fast towards the digitalization of broadcast media. The global drive is so crucial because digital format of broadcasting is a higher quality than analogue. (Adamu & Abubakar, 2019).

### *Application of ICT in Media Organizations*

According to Nwodu (2004) Information and Communication Technologies (ICTs) refer "to a number of communication hardware used for instantaneous dissemination of information and social values across the globe." Information technology (ICT) provides limitless possibilities of increasing the quantity and enhancing the quality, speed and availability of information in a complex but inter-dependent world of

Business Communication. The idea of information technology dates back to the earliest time. The earliest form of writing for example was invented in 35 B.C. Nwamma (1997) reported that Tiro invented shorthand in 63 B.C. He equally noted that Henry Mill patented the typewriter in 1794, while the principle of the modern day facsimile (fax) transmission was patented by Brain Way Back in 1843.

Bozzkowski (2004) observes that, the potential implications of online technologies and world wide web (www) for the mass media has also had drastic connotation, raising the specter radical consequences for the production and consumption of news. He added that convergence computer and telecommunications brought about a media system that embraces all forms of human communication in digital format where the rules and constraints of the analogue world no longer apply, adding that these technologies are rapidly re-writing the traditional assumptions of newsroom organization and structure.

### *Effect of the used of ICT resources and Broadcast Media*

Information and Communication Technology (ICT) is a generic term used to express the convergence of telecommunications, information, broadcasting and communications. According to Rodriguez and Wilson (2000) ICT is seen as a set of activities which facilitate and enhance the processing, transmission and dissemination of information by electronic means.

ESCAP (2000) also perceived ICT as techniques people use in order to share, distribute and gather information for communicating through computers and computer networks. Promoting Information and Communication Technology as an integral part for enhancing timely news delivery in the broadcast industry was articulated by Samadar (1995) he added that ICT is a tool for facilitating, creation, storage, management and dissemination of information by electronic means.

Garrison (2001) noted that Information and Communication Technologies are most commonly adopted in newsroom because it facilities electronic mail, file transfer protocol, bulletin board systems, audio streaming, push technology, audio and video conferencing and internet telephony.

Also, Marcelle (2000) did not only see ICT as a complex entity but an application and services used for the production, distribution, processing, transformation of information with the aid of ICT tools. Nevertheless, Ogunsola and Aboyade (2005) are of the opinion that ICT came into being as a result of related technologies clearly stated by their functional usage in information access and communication is centralized through the Internet. As far as the digital age is concerned, the benefits accrue from ICT is enormous.

### *Constraints to effective utilization of ICT resources and Broadcast Media*

One of the sectors that has benefited immensely from the use of ICT is the broadcast industry. With the use of ICT, news processing and news reporting is immediate, timely, and helps reduce the space constraints ‘the death of distance’. The use of ICT has revolutionized news processing, news packaging and news reporting through the use of ICTs. There is no doubt that employment of ICT in the broadcast industry is to enhance and improve news delivery as timely as possible. To buttress this, Adigwe (2010) cited Soforowa (2009) when he noted that ICT is seen as the integration and utilization of computer technologies for the purpose of disseminating information to a target destination or consumer without the constraint of time and space.

### III. THEORETICAL PERSPECTIVE

#### *Diffusion of Innovation Theory*

The study adopts diffusion of innovation theory as its theoretical frame work.

Diffusion of innovation theory was found by Rodger in 2003. This theory emphasizes that, innovation spread through certain channels over time among the members of social system. According to this emphasis, spreading of new innovations require communication, time and social system or target audiences that the message should be diffused to. Diffusion of Innovations has been approved as a perfect model in spreading innovation.

Gibson, (2002), and Dooley, (1999) recommended this model as a theoretical frame- work that work best in many disciplines such as political sciences, communications, and education and in environmental issues among others. This model (the diffusion of innovation) is the most effective theory for investigating the degree of adoption of technology higher education and educational environment. Rodgers considered technology as “a design for instrumental action that reduces the uncertainty in the cause-effect correlations involved in achieving a desired outcome.

Information and communication technologies is a product of recent development in science and technology. ICTs as new innovation has undergone the first three innovation process outlined by journalist have reached the implementation stage of innovations process and gradually getting to the final innovation process. The relevance of diffusion innovation theory to this study is anchored on the ability of the broadcasting media particularly radio and television to adopt information and communication technologies which are perceived to be new innovation in news gathering techniques and the theory is trying to eliminate time and space barriers in the communication process, by using ICT system to change the way we feel, learn, think and the way we do things because of the messages we receive through the current technology.

#### *Research design*

The study adopts qualitative research method.

#### *Population*

The target population of this study consists of entire staff of the Bauchi Radio Corporation (BRC). BRC has a total population of 200 permanent and casual staff.

#### *Sample size*

The researcher has taken 20 staff as the sample.

#### *Sampling Technique*

Purposive sampling was used for selecting staff members of Bauchi Radio Corporation.

#### *Instrument for Data Collection*

The instrument for collecting data in this study is in-depth interview and Focus Group Discussions

### IV. DATA PRESENTATION AND ANALYSIS

*Research objective:*The objective of the study was to identify the various areas of application of Information and Communication Technology in Bauchi Radio Corporation.

The objective was achieved by asking some participants from News and Current Affairs irectorate, Programmes Directorate, Engineering Directorate, ICT Unit and Commercials Directorate of the station. All the participants stated that they make use of ICT for communication and access to the internet. They also informed that Bauchi Radio Corporation uses ICT for communication within and among its various Departments/Directorates. They share file, send messages, and edit production.

*From news and current affairs directorate; Sani Adamu Bello and Alhaji Abubakar said;*

*“Some components include; Desktop computers, Digital recorder, printers, modem, laptop and handsets for sending, and receiving information at high-speed. we are in a digital age now without ICT we will lacking behind, so we use ICT component to gather news type them which saves us time and it gives clarity our reporter are field workers so they go about with the digital recorder and send it report. We type our news with the computer we use the printer to print, not just any printer but the modern printer, we use gadgets like the recorders and we send in report on the sport using our handsets which are also ICT. We use them always; news cannot be produce in this generation without ICT”.*

Waziri Muhammad Ribina and Maidawa Magaji Zakmi of Programmes Directorate added that some of the ICT components used in BRC include desktop computers, laptops modern flash memory card, microphone, headphone, Console, and Equipment in the operation unit include; digital recorder, console, flash drive, desktop computers, equipment in the

library include tapes, playing machine, recording machine, LP recorder, tank table/IT Table, cassette, desktop computer, recorder.

They added that, in Bauchi Radio Corporation (BRC) and globally ICT has brought a tremendous change it he has contributed to the smooth production presentation let's say in the journalism profession in general, and in times of programme production, modern techniques are being applied to adhere strictly to rules given by National Broadcasting commission (NBC) act, when it comes to editing programmes and news.

According to the two participants from the Programmes Directorate they said:

*Thank God for the arrival of ICT, then they use to have difficulties in recording and editing with analogue equipment but with the coming of ICT things they spent hours on, you can take care of it now within ten to fifteen minutes for those that are yet to embrace ICT they should do that to meet up. However, with the advent of modern ICT components all these troubles are now a thing of the past. The computer makes the work faster and easier and reporters can self-edit reports on their own.*

From Engineering Directorate Mayel Amos and Isyaka Muhammad Gani said, computer is the major ICT component the transmitters used. ICT component is like the AM, the interface equipment is interfacing between digital and analogue. They added that, they have ICT facilities in all departments of the cooperation, we gather information as raw data in engineering and technical service, ICT is applicable to process them. Without ICT the work will be slow and in accurate, for accuracy ICT must be apply to send a message fast, thou we have not assume 100% digitalize but 70% are digital while the remaining percentage is still analogue.

According to them, BRC is a broadcast house and an electronic media, the engineering department is one of the most sensitive department in the media organization, ICT has come to make our work easier, if there are equipment you need to buy all you need to do is send for such equipment and different type of that equipment will be send through your system or computers by the dealers for you to make a choice no need to travel for long distance to purchase them it will just be provided at your door step.

In the Engineering Unit, they stored materials containing vital information in files in the cupboard. Most times, these materials are destroyed by rodents, cockroaches which eat up parts of the reports containing the vital information thereby rendering the work useless. All these are analogue forms which have been replaced by digital technologies/device with the emergence of ICT, information is no longer stored in the cupboard; rather it News Gathering Device (DSENG) which enable those in the engineering unit to click on relevant information needed for production activities.

Mal. Aminu Muhammad Gar and Dinnigwa Samuel of the Commercial Directorate said:

*Information and Communication Technology (ICT) is what is in vogue now meaning nothing can be done now without acquiring the use of Information and Communication Technology (ICT), so Bauchi Radio Corporation (BRC) is not exemption; all our links in the studio or with our clients according to them is based on ICT, we make use of the computer, flash drive and a lot of ICT components, so ICT goes long way in making out services better, facilitating our services and making our work more productive.*

*In all level of our services this ICT is been required and I must tell you that we use it maximally and in all our directorate we need the service of ICT and that we have been doing over the years and it has help us to be more productive and do our services better.*

Ibrahim Moh'd Mallam Goje and Aliyu Zakari from the ICT unit of the Bauchi Radio Corporation (BRC) said:

*Since the establishment of BRC over 35yaers ago, they station has been on analogue transmission, until some recent years, when ICT gadgets were introduced by the management which make it possible for the house to operate on ICT equipment, so when ICT was introduced there was a relief, since computer is now been used to type news stories and also tape recorders were used, still with the coming of ICT , digital recorder took over we record for several hours and the quality is superb, you can't compare the former with the later.*

Mallam Goje added that, ICT is in all the directorates of the BRC, they are in the news and current affairs, commercial services, engineering, account and programmes departments. All these areas in one way or the other are using ICT material in their day in day out activities, the programme department once established a website where we transmit online it was at the AM station of the BRC, if you search for [www.brc.org.ng](http://www.brc.org.ng) you will listen to BRC live were ever you are in the world.

## V. DISCUSSION OF FINDINGS

*Research Question: To what areas of application of ICT resources been used in the activities of Bauchi Radio Corporation?*

*The study found that Bauchi Radio Corporation makes use of ICTs to a great extent in their daily job routines from news gathering, writing, editing, broadcasting, planning and programming, as well as communicating internally and externally with their various publics. McLuhan (1964) already points out the idea that technology (ICT) has important role on how the media contents are been produced to the audience. To this end, ICT plays a very important role on how media messages are relayed by the broadcast professional of Bauchi Radio Corporation (BRC) to its listeners.*

## VI. CONCLUSION

Information and communication technologies as a tool for communication have enhanced the broadcast media stations in Nigeria. ICTs such as computer hardware and software's drastically improved broadcast news gathering and minimize the hazards, cost, time, space and risk involves in the old news gathering method. And ICTs it added new source of news online monitors. Majority of the respondents contacted in the survey appreciate the use of information and communication technologies on news gathering of broadcast media despite the challenges of high cost, poor telecommunication services, high tariff of internet, inadequate ICTs skill couple with these they still enable them to easily and speedily source for nearby and distance news item and improve their quality of news as well. ICTs, have been widely applied in Radio broadcasting by broadcast professionals at Bauchi Radio Corporation (BRC). ICT has made their work faster and easier and a general acceptance among the broadcast professional of BRC.

## VII. RECOMMENDATIONS:

The following recommendations have been formulated from the findings of this study:

- a. Media proprietors should motivate and sponsor their staff to acquire computer knowledge and employ professional information and communication technologies experts.
- b. The Networking need to be done within the units of the corporation for easy transfer of files, programmes and news bulletins.
- c. BRC been the state owned analog radio station, there is urgent need for the digitalization of the medium outfit to meet the global standard of broadcasting were the ICTs can make the job of Bauchi Radio Corporation (BRC)'s staff faster and easier.
- d. There should be regular training and re-training of staff in the use of ICTs. With this, the staff will be in tune with the dynamism and changing trends in the sector and follow up developments.
- e. There should be adequate funding of ICTs development in Bauchi Radio Corporation (BRC) and staff trainings.

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