

**EVALUATION OF THE USE OF INFORMATION AND
COMMUNICATION TECHNOLOGY TOOLS IN RADIO STATIONS IN
KOGI STATE, NIGERIA**

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ABSTRACT

It is not disputable that radio stations in Kogi State have commenced the integration of information and communication technologies tools (ICT) in their operations. This is expedient as no radio station can survive this digital era with only analogue equipment. This study evaluates the use of information and communication technology tools in radio stations in Kogi State in order to ascertain the possibility of meeting up with the requirements by the International Telecommunication Union (ITU). It determines among other things the ICT tools available to the Radio stations, what the available technologies are used for, and the proficiency level of the broadcasters in using the technologies. To generate data for this research, survey research method was adopted. Questionnaire was used as the instrument for data collection. All the population was used for the study because the respondents were within a number that could be all examined. Findings from the analysed data show that the technologies available in Kogi State radio stations are the ones used in the processes of generating signals while transmission and their console is done through an analogue platform. It was also discovered that media staff are proficient in the technologies which they use in discharging their duties in their various units. Issues like virus and epileptic power supply, lack of digital console, digital transmitters are the major factors militating against the use of information technologies in radio stations. Based on the findings it was recommended that government and station owners should put in extra effort to provide their stations with digital transmitters/digital console so that the potentials of information and communication technology can be fully maximized.

Keywords: Information and Communication Technologies, globalisation, digital console, digital transmitters, radio transmissions.

Background to the Study

Prior to the arrival of information communication technologies (ICT), the media world relied principally on print and analogue broadcast models. The mechanical states of the equipment hindered effective production and dissemination of news and information. Even the transmission of broadcast signals was often affected by wave interference, hedges and unclear signals. The reception of signals was largely limited to the carrying capacity of the transmitter. As the world grew complex and sophisticated, information communication technology was invented. The invention of information communication technology has always been a catalyst for change in the broadcast industry. This change can be attributed to the introduction of (ICT) in broadcasting, occasioned by giant technological advancement. The advancement in media technologies has cut the barrier of time and space in our broadcast industry; it has also made communication easier and more democratic and the creation and distribution of media content easier.

Agu (2011, p.122) explains that information and communication technologies are “the various modern devices and application such as cable, satellite, the online network and telemetric applications that facilitate the circulation of ideas and create a link between data and human beings.” It is the use of computer software in analysing, processing, storing, retrieving, distribution and transfer of information. It could also be seen as the application of digital equipment in the aspect of information dissemination. These technologies are laptops, desktop computers, internet, microwave transmitter, condenser microphone, DVDs, audio CDs, digital recorders, GSM, audio console etc.

Through the information communication technology, media contents can now be transmitted through different ways without loss of quality. For instance, with CD, MP3 players and even multimedia phones, people listen to music in a stereophonic format at their convenient time. The computer is also used for word processing and storage quite unlike the analogue typewriter. Baran (2004, p.316) states thus:

Easier creation and distribution of content leads to more choice for media consumers; people can seek and receive contents they are interested in while ignoring other contents; a person can communicate to anywhere, from anyplace, at any time. This affords freedom of movement and more convenience in terms of space and time; individuals will have access to other people despite lack of physical proximity.

According to Danaan (2006, p.107) “dynamic elements in the system have widened the media horizon. Both the print media and electronic media are merging with the new digital technology to create the new media”. No wonder Rodney (2007, p.148) noted that “mass communication media in the modern age are blurring and blending together into what is really a single system or set of interrelated systems.”

Asemah (2011) noted that globalization cannot thrive without the mass media and global information technologies. To this end, several studies have shown that most radio stations use new media technologies in their daily operations. Based

on this, we are propelled to evaluate the use of these information communication technologies in radio broadcasting in Kogi State.

Statement of the Problem

In this globalization era, information communication technology has emerged with their overwhelming attributes that most aspects of human life are becoming technologically driven. It is believed that for any medium of information dissemination to remain relevant, the new communication technologies must be incorporated in their operations because they are believed to enhance productivity, interactivity as well as make room for a more vibrant system. Following the influx of communication technologies, radio stations in the country have commenced the use of new technologies in their operations.

In spite of the presence of new technologies in radio stations, the possibility of Nigerian radio stations to meet up with International Telecommunication Union ultimatum becomes bleak given that recent studies have shown their relative backwardness when compared to their counterparts in other developed countries. This leads us to probe the availability of new media technologies in radio stations within Kogi State; if the information communication technologies are used in radio stations in the state; the proficiency level of radio staff to use them and the challenges of these information and communication technology tools in radio stations in Kogi State. It is against this backdrop that this study is embarked on.

Objectives of the Study

- 1 To identify the information communication technology tools available in radio stations in Kogi State.
- 2 To ascertain the extent to which information communication technology tools are used in radio stations in Kogi State.
- 3 To ascertain the broadcasters' level of proficiency in the utilization of these information and communication technology tools.
- 4 To ascertain how the use of information communication technology tools has affected the radio operations in Kogi State.
- 5 To determine the major challenges militating against the use of information communication technology tools in radio stations in Kogi State.

Research Questions

1. What are the information communication technology tools available in radio stations in Kogi State?
2. To what extent are information communication technology tools used in radio stations in Kogi State?
3. How proficient are radio broadcasters in the utilization of these information communication technology tools?
4. How has the use of information communication technology tools affected radio operations in Kogi State?

5. What are the major challenges militating against the use of information communication technology tools in radio broadcasting stations in Kogi State?

Literature Review

In the words of Nwachukwu (2007, p.121) “we live in an information society engendered by the explosion in information and communication technologies.” To this effect, Nigerian broadcast stations are beginning to embrace the new media technology revolution. This is essential as Dokpesi (2007) in Agbenson (2011, p.16) noted that “You cannot transmit on analogue platform to digitised nations. If you must remain competitive you must acquire the latest technology to be relevant.” Several studies, Ganiyu (2011), Nyekere (2009), Olley (2009) and Gurumnaan (2009) confirmed that some of the broadcast stations have started applying the ICT tools in the running of their programme. Olley (2009) and Gurumnaan (2009) observed that ICT tools are adopted by most stations as they improve the feedback mechanisms, pave way for wider coverage, efficient editing, better audience satisfaction, wider information reach and better signals.

As at 2007, there were about 144 online radio stations in Nigeria. Eulogizing the online streaming of some Federal Radio Corporation of Nigeria (FRCN) stations then, Ben Egbuna, the then Director General of FRCN in Agbenson (2011, p11.) stated thus:

You can listen to our network news anywhere you are in the world now. This is unlike in the past when, if you move out of Nigeria, you are cut off from FRCN news. With the Web now, five of our FM stations are being streamed live, on the web. You can listen to Radio Nigeria wherever you are in the world. The web has helped us a lot.

By March 2018, the list of radio stations released by nigeriainfopedia.com was 239, excluding some community and campus radio stations, meaning that by 2019, radio stations in Nigeria would have been close to 300. Nearly all these stations are ICT disposed and transmit online. Although this is an improvement when compared to the status as at 2007, there is still the concern of the stations not being enough, considering the fact that in the United States of America alone, the Federal Communications Commission (FCC) in its 2019 publication puts the number of radio stations in the country at 30,657. Many other countries of the world are far ahead of Nigeria in radio establishment. Our concern in this study however is the ICT usage in radio stations in Kogi State. We would therefore concentrate on our chosen subject matter.

Agbenson (2011), in his study of Ray power and FRCN asserted that private stations are better placed than public stations in their use of new media technologies. However, this stands as a proof that the private broadcast media as well as the Federal Government broadcast media are making headway in this aspect of information and communication technology tools leaving the state owned broadcast media behind.

Despite the headway made in this area of ICT tools, most stations are yet to comply. This is blamed chiefly on high cost of these technologies and lack of adequate training by a whopping 81% of respondents in Nyekwere (2009). Olley (2009) accentuated this when he noted that more than 65% of his respondents blamed the poor level of new media technologies use on high cost of acquiring the new media facilities. Though the Broadcasting Organisation of Nigeria listed about sixty-eight stations with website addresses on October 2007 Soola and Alawode (2008), most of the broadcast stations only have a DOT com name in a bid to avoid being referred to as local champions as Olakitan (2012, p.4) noted that “today, a media organization without an online presence is a huge local champion.” This lends credence to the sayings of Nworah (2005) in Agbenso (2011) that the attempt to be at par with other developed world by Nigerian broadcast stations stops at the development of websites without taking into consideration other variables. Ganiyu (2011, p.132) posits that ‘print medium appears to be stronger than their electronic counterpart.’ This is obvious as even the local newspapers like the Trumpeta in Imo State are read online on www.imotrumpeta.com.

Radio Stations in Kogi State

Prime FM 98.1 is a federal radio broadcasting medium, for news and entertainment programmes. It commenced fully in 2011 having fulfilled all the necessary requirements needed for frequency modulated broadcasting as prescribed by the National Broadcasting Commission. Since then, Prime FM has continued to “blaze the trail” with issues pertaining to education, entertainment, politics and information. It covers the entire Kogi State with its programmes and operates through several departments which include, Engineering, News, Programmes, Production Departments and Marketing Unit which sees to the various ways through which funds can be sourced for the station. Others are the Maintenance Department, and Accounts Department. Prime FM radiates on 98.1 FM megahertz and is located at Ganaja, Lokoja Kogi State.

Confluence FM Lokoja is a Kogi State government owned radio station which started in 1992. Confluence FM Lokoja, broadcast programmes covers a wide range of fields of human endeavour like, economy, politics, tradition and culture. It has helped in rekindling hopes and aspirations of the people in its catchment area. It also provides its numerous listeners with the opportunity to interact with others on contemporary issues through programmes. It is located at Murtalar Muhammad Road, Lokoja, Kogi State. It operates through several departments which include Engineering, News, Programmes, Maintenance and Accounts Departments.

Grace F.M, is a private owned station which was established in the year 2003 by Rakiya Ogbeha. It is Located at No 35, Mount Patti Road, Lokoja. This radio station was established to educate, inform as well as entertain its audiences and it is known for its wide coverage. The station is made up of different departments structured to ensure effectiveness. They include the Director General’s Office which has the Corporate Affairs, Internal Audit, and Transport unit under it; Administration, Planning, Research and Statistics, Technical Services, News and Current Affairs, Programmes, as well as Finance and Supplies. The members of staff are well trained

and committed towards maintaining a good standard. They are making efforts to remain afloat in this era of information and communication technologies.

Concept of New Media and ICT Tools

The concept of new media emerged as a result of the changes in the ways through which audiences access media information. It is an outcome of the alteration in the traditional media of information.

Agu (2006, p.122) described this as “the emergence of a new alternative communication paradigm.” Here, programme production is not an exclusive preserve of the broadcaster rather the consumer also acts as a producer with the high interactivity brought about by these technologies. Bermejo (2009, p.134) described the newness of a medium in relation to time and distinction. In his view, “if something new is not simply more recent, but also something which has not been properly digested, tamed or domesticated, both in conceptual and practical terms, then newness has to do with historically situated comparisons and distinctions.” This means that the newness of the new media does not only lie on its recent nature but also on its abilities as distinct from the already existing media. This is made possible by several Information and Communication Technologies like computers, internet, handsets, scanners, printers, CD ROMs, iPods, iPads and similar apparatus which are adopted by people from all walks of life in their daily activities. These technologies are adopted by media practitioners in their operations in order to have a more enhanced and diversified style of information dissemination.

According to Asemah (2011, p.205) “the newness of the media generally has to do with the transformation in the ways individuals are able to relate to the media and determine the functions and place of these media in their everyday lives.” Danaan (2006), points out that new technologies have increasingly brought changes in the mass media which the likes of Marshal McLuhan, Daniel Bells and Joseph Licklider predicted many decades ago. He went on to say that this development has widened the media horizon as both the electronic media and the print media are merging with new digital technologies to create an age of New media.

New media are characterised by their interactive nature in the sense that the media consumer can react to the message as well as exchange messages instantly thereby taking part in citizen journalism. This is a situation where non journalists report news and events. Unlike the traditional media, new media are characterised by their multimedia nature (the ability to reach the same audience through a variety of means like text, audio, video graphics, and animation). They are also known for their on-demand access to messages in the sense that anyone can decide to access the message at his or her own convenience. In this case, he chooses the media message to access and discards others. This is what Pavlik (1998) in Olley (2009, p.25) referred to as “greater user choice control.” Rantao, (2008) in Ganiyu (2011, p.126) point out that “as a result of this greater level of independence which the new media gives to the audience, there is need to adapt by giving messages in multiple media platform.”

New media as described above are relevant because of the availability of information and communication technology equipment. In this regard therefore, one cannot discuss the new media in isolation of the ICT tools. Radio stations in Nigeria

adopt the use of those tools for enhanced transmission and ease in operation and it is expected that stations in Kogi State remain abreast in this information age especially in availability of equipment, proficiency of usage and efficiency of radio broadcasting.

Theoretical Framework

Technology Acceptance Model (TAM) has a link with the diffusion of innovation theory. It is an information systems theory that models how users come to accept and use a technology. Proponents of the model, Bagozzi, Davis and Warshaw (1992) in Baran and Davis (2009) point out that:

Because new technologies such as personal computers are complex and an element of uncertainty exists in the minds of decision makers with respect to the successful adoption of them, people form attitudes and intentions toward trying to learn to use the new technology prior to initiating efforts directed at using. Attitudes towards usage and intentions to use may be ill-formed or lacking in conviction or else may occur only after preliminary strivings to learn to use the technology evolve. Thus, actual usage may not be a direct or immediate consequence of such attitudes and intentions.

Earlier research on the diffusion of innovations also suggested a prominent role for perceived ease of use. Rogers (1962) in Asemah, Nwamuo and Nkwam-Uwaoma (2017, p. 109) analysed the adoption, finding that compatibility, relative advantage, and complexity had the most significant relationships with adoption across a broad range of innovation types.

Diffusion of innovations is a theory that seeks to explain how, why, and at what rate new ideas and technology spread. Everett Rogers, a professor of communication studies, popularized the theory in 1992 (and 2003) argues that diffusion is the process by which an innovation is communicated over time among the participants in a social system. The origins of the diffusion of innovations theory are varied and span multiple disciplines.

Rogers proposes that four main elements influence the spread of a new idea: the innovation itself, communication channels, time, and a social system. This process relies heavily on human capital. The innovation must be widely adopted in order to self-sustain. Within the rate of adoption, there is a point at which an innovation reaches critical mass.

This theory is imperative to this study because it makes us to beam search light on radio stations in Kogi State to explain how, why, and at what rate new ideas and technology are put to use in their operations.

Methodology

The survey research method was used for this study. This method was considered appropriate because surveys are useful in the measurement of public opinion, attitudes and orientation. The population for this study include all the media

practitioners in Kogi State Broadcasting Corporation, Grace FM, and Prime F.M. The total number of staff from these stations is 332 as broken down in the table below.

Table 1: Population of Staff in the Three Radio Stations

Radio Station	Staff strength
Kogi State Broadcasting Corporation	273
Grace FM	28
Prime F.M	31
Total	332

Purposive sampling was used to study all the radio stations in Kogi State metropolis. All the population was within the reach of the researchers, hence the adoption of census sampling. We directly administered the instrument, which was questionnaire, to the respondents. It was possible to reach them one-on-one since they were all at the station

Data Presentation and Analysis

All copies of the questionnaire were recovered giving us a 100% response rate. Radio stations like Grace FM and Prime FM have lower number of respondents. This is as a result of their total staff strength which is relatively lower than that of Kogi State Broadcasting Corporation.

Table 2: Sex Respondents

Sex	Kogi State Radio Corporation	Prime F.M	Grace F.M	Total	Percentage
Male	153	27	23	203	61.1%
Female	78	26	25	129	38.9%
Total	231	53	48	332	100

Table 3: Age of Respondents

Age	Kogi State Radio cooperation	Prime F.M	Grace F.M	Total	percentage
20-30	94	26	22	142	42.8%
31 -40	108	25	21	154	46.4%
41 and above	7	9	20	36	10.8%
Total	159	96	77	332	100

The import of these data to this work is that the work force of the stations under study constitutes more of younger and vibrant people who are more exposed to information and communication technology tools than the elderly ones as they came up during the ICT revolution. The fewer number of elderly ones can be attributed to the fact that most of them are not willing to upgrade. Also, since most

of the newly employed younger ones who are assisting them are well grounded with information and communication technology tools, they tend to leave a greater chunk of the work for them.

Table 4 Marital Status of Respondents

Marital Status	Kogi State Radio cooperation	Prime F.M	Grace F.M	Total	percentage
Married	122	27	26	175	52.7%
Single	111	25	21	157	47.3%
Total	233	52	47	332	100

Table 5 Academic Qualifications of Respondents

Academic Qualification	Kogi State Radio cooperation	Prime F.M	Grace F.M	Total	Percentage
SSCE/NECO/NAPEB	10	3	5	18	5.4%
HND/Degree	185	27	25	237	71.4%
Masters / PhD	52	14	11	77	23.2%
Total	247	44	41	332	100

Table 6 Length of Service

Length of service	Kogi State Radio cooperation	Prime F.M	Grace F.M	Total	Percentage
0-5 years	70	26	23	119	35.9%
6-10	63	29	14	106	31.9%
11-15	57	11	7	75	22.6%
16-20	24	5	3	32	9.6%
25 and above	-	-	-	-	
Total	214	71	47	332	100%

Table 7: Stations' Usage and Availability of ICT Tools

Station usage of new media technologies	Kogi State Radio Corporation	Prime F.M	Grace F.M	Total	Percentage
Yes	281	27	24	332	100%
No	-	-	-	-	
Can't say	-	-	-	-	

Table 7 above shows that ICT tools are available in all radio stations in Kogi State.

Table 8 Information and Communication Technologies Tools Stations Available at the Stations

ICT Tools station have	Kogi State radio corporation	Prime FM	Grace FM	Total	Percentage
a. Computer/Laptop	43	25	21	89	26.8
b. Cd/Flash drive	13	6	2	21	6.3
c. Handset/iPad	39	22	16	77	23.1
d. Internet	29	19	14	62	18.6
e. Digital console	-	-	-	-	-
f. Satellite Dish	16	12	4	32	9.6
g. Digital transmitter	-	-	-	-	-
All of the above	25	16	10	51	15.3
Total	165	100	67	332	100%

Though respondents say other new media or ICT tools are available, none of them admitted the presence of a digital transmitter.

Table 9: Extent of ICT Tools use in the Radio Stations

What are they used for in your station?	Kogi State radio corporation	Prime F.M	Grace F.M	Total	Percentage
News coverage	31	17	13	61	18.4
Programme production	23	9	14	46	13.0
News editing	13	7	12	32	9.6
News monitoring	53	27	13	93	28
News casting	-	-	-	-	-
Feedback mechanism	30	17	11	58	17.5
Advertising	-	-	-	-	-
Transmitting signals	-	-	-	-	-
All of the above	24	6	12	42	12.7
Total	174	83	75	332	100%

The table above shows that none of the respondents admitted they make use of ICT tools in their stations for Advertising and transmitting signals despite using the tools for other purposes.

Table 10: Assessing the use of ICT Tools in the Radio Stations

Assessing the use of ICT in your radio station	Kogi State Radio corporation	Prime FM	Grace FM	Total	Percentage
Encouraging	73	31	15	119	35.8
Not Encouraging	51	19	23	93	28.0
Can't say	81	20	19	120	36.2
Total	205	70	57	332	100%

Table 11: Distribution of Respondents showing their Areas of Specialisation

Area of specialization	Kogi State Radio Corporation	Prime F.m	Grace F.M	Total	%
a. Computer Science	15	6	9	30	9.1
b. Mass Communication	70	15	21	106	31.9
C. Language	36	30	24	90	27.1
d. Engineering	47	24	15	86	25.9
e. Others	10	3	7	20	6.0
f. Total	178	78	76	332	100%

Table 12: Distribution of Respondents showing their Units in the Station

Unit in the Stations	Kogi State Radio Corporation	Prime F.M	Grace F.M	Total	Percentage
Administrative Unit	25	14	11	50	15.0
News Department	39	20	31	90	27.1
Programmes Department	32	17	20	69	20.7
Technical Department	27	14	17	58	17.4
Production Department	23	19	12	54	16.2
Others	5	4	2	11	3.3
Total	151	88	93	332	100

Table 13: Often used ICT Tools in the Radio Stations

ICT Tools	Kogi State broadcasting corporation	Prime FM	Grace FM	Total	%
a. Computer/Laptop	40	28	20	88	26.5
b. CD drive/flash	3	2	1	6	1.8
c. Handset/iPad	5	1	1	7	2.1
d. Internet		-	-	-	-
e. Satellite Dish	3	1	1	5	1.5
f. Digital Console	-	-	-	-	-
g. Digital Transmitter	-	-	-	-	-
h. All of the above	-	-	-	-	-
a and d	34	10	6	50	15.0
a-c	36	12	9	57	17.1

a-d	11	7	4	22	6.6
a-f	50	28	19	97	29.2
Total	182	89	61	332	100%
11.How Respondents learnt the Use of the Tools?	Kogi State Broadcasting Corporation	Prime FM	Grace FM	Total	Percentage
a. Through personal training	102	25	22	149	44.8
c. In-house training	75	19	17	111	33.4
d. Training within and outside the country	60	7	5	72	21.6
Total	237	51	44	332	100%
12 Level of Competence/Efficiency in using the Technologies	Kogi State broadcasting corporation	Prime FM	Grace FM	Total	%
a. I can use them without assistance	198	29	27	254	76.5
b. I must be assisted	16	21	9	46	13.8
c. Can't say	15	9	8	32	9.6
Total	229	59	44	332	100%

Table 14: Level of Proficiency in the Utilization of ICT Tools

Level of Proficiency	Kogi State Radio corporation	Prime F.M	Grace F.M	Total	Percentage
Very Proficient	15	5	10	30	9.0
Proficient	189	27	24	240	72.3
Not proficient	30	5	7	42	12.7
Can't say	14	2	4	20	6.0
Total	248	39	45	332	100

Table 15: Distribution showing effects of the use of ICT tools on Radio Operations

Options	Kogi State broadcasting corporation	Prime F.M	Grace F.M	Total	Percentage	
Positive change(s) noticed in the radio stations	a. Quick service delivery	34	14	11	59	17.7
	b. Flexibility	12	7	4	23	6.9
	c. Enhanced feedback mechanism	-	-	-		
	d. Editing made easy	37	9	6	52	15.6
	e. Efficiency	41	18	14	73	21.9
	f. Wide coverage	3	2	2	7	2.1
	g. All of the above	11	5	3	19	5.7
	h. a-e	50	25	24	99	29.8
	Total	188	80	64	332	100
14. Negative or side effects	a. Laxity among staff	16	12	11	39	11.7
	b. Redundancy	15	9	6	30	9
	c. Lack of professionalism	26	17	14	57	17.2
	d. All of the above	32	20	16	68	20.5
	e. None of the above	92	25	21	138	41.6
	Total	181	83	68	332	100

Table 15 above shows audience response with regards to how information communication technologies have affected broadcasting operations.

Table 16: Distribution showing the challenges militating against the use of ICT Tools

	Option	Kogi State Broadcasting Corporation	Prime FM	Grace FM	Total	Percentage
16. The Factor(s)	a. Poor training	12	7	3	22	6.6
	b. Lack of capital	19	14	11	44	13.2
	c. Epilectic power supply	39	16	13	68	20.4
	d. Issues like Virus	38	15	12	65	19.5
	e. Insecurity of the technologies	1	1	1	3	0.9
	f. Atmospheric condition	15	9	7	31	9.3
	g. Bad leadership	10	4	2	16	4.8
	h. All of theabove	17	6	4	27	8.1
	i. a – f	34	12	10	56	16.8
	Total	185	84	63	332	100

Table 16 above shows the challenges facing the use of information and communication technology tools and some factors are militating against the use of information communication technology tools in the selected stations

Discussion of findings

Research Question One: What are the information and communication technologies tools available in radio stations in Kogi State?

From table 8 above which consists of data collected with respect to research question one, it is glaring that all the respondents (100%) admitted that there are information and communication technologies tools in their stations. Information and communication technology tools in the selected stations are computers/laptops, CDs, flash drive, handsets/ipads, internet, and satellite dish and all the respondents admitted the use of the above tools. However, none of the respondents admitted the use of digital console and digital transmitter and.

To evaluate the use of information and communication technologies tools in radio stations, it was pertinent to ascertain the ones accessible to media staff or the ones available in Nigerian radio stations. From the information given by the respondents, it is obvious that the information communication technology tools available to them are computers, printers, CD, flash drive, internet, handsets and satellite dishes. This shows that indeed, the status of information and technology tools awareness is really high. The Technology Acceptance model (TAM) is valid here in the sense that information systems theory models how users come to accept and use a technology

This is in line with the assertion of Nwachukwu (2007), that we live in a world of information and communication technology where awareness of and utilization of these communication gadgets can spell the difference between the survival and death of organizations.

In the opinion of Agbenson (2011), this is in a bid to keep up with their counterparts in other countries. However, not even one respondent indicated that there was a digital transmitter in the stations. Looking at the table, one can observe that 21 of the respondents indicated the presence of computers in their stations. This could be attributed to the fact that most other technologies are attached to the computer. On the other hand, the absence of digital transmitters is clearly evident. This shows that one of the most important technologies necessary for the smooth transition to “complete digital transmission” is not yet available. In this situation, it becomes difficult to transmit to digitized nations because as Dokpesi (2007) in Agbenson (2011) noted, “You cannot transmit on analogue platform to digitized nations. If you must remain competitive you must acquire the latest technology to be relevant.”

Research Question Two: To what extent are information and communication technologies tools used in radio stations in Kogi State?

A good number asserted that information communication technology tools are applied in various radio operations like news coverage, programme production, news editing, news monitoring, news casting, feedback mechanism. Sixty one respondents, representing 18.4% of the total respondents are of the view that they are only used in news coverage, 32 representing 9.6% said that they are used for news editing, 58 representing 17.5% said they are used to expedite the feedback processes. No respondent believed that the tools are used in signal transmission and advertising.

When asked to assess the use of information communication technologies tools in their stations, 119 respondents (35.8%) asserted that it was encouraging; 93 respondents (28.0%) said it was not encouraging while 120 representing 36.6% could not say anything with regards to this.

The available information above shows that information communication technology tools are used to a reasonably great extent in the sense that they are used in news coverage, news editing, programme production, news monitoring, feedback mechanism. This lends credence to Agu (2006), that these technologies are used to calibrate sound, store sounds, disseminate sounds and retrieve sound.

Also, the table 8 shows that information communication technology tools are not used in the process of signal transmission. This builds from the fact that none of the radio stations has a digital transmitter. In a radio station, the process of information dissemination is never complete until the information is transmitted to the general audience. In other words, media stations cannot perform beyond the technological innovations that are available to them as asserted by the technological determinism theory. It was noticed that the availability of internet facilities helped in monitoring other stations, sourcing news, sourcing information for programmes, sending and receiving mails etc which makes us to believe Nworah (2005) cited in Agbenson (2011) that the strive to meet up with western media stops with the setting up of internets. This could also not be far the assumption of Ikpe and Olise (2010)

that the mere fact that an organization has a website can boost the image of the organization. It is not disputable that these stations have internet presence but they have not fully commenced online streaming. Therefore, this finding refutes previous studies which believe that all media stations have commenced online streaming and accentuates the fact that newspapers are doing better with their online presence (Ganiyu (2011)). From this, it can be inferred that the Nigerian radio stations are yet to maximize the potentials of internet. This is not unconnected to the poor ranking of Nigeria in the Network Readiness Index of 2016. The World Economic Forum, (2016) ranked Nigeria at index 3 with a change 0.96% in the use of modern information communication technologies. This implies a very low ranking judging by the ranking of other countries of the world.

According to the respondents, the availability of internet is just for the purpose of sourcing for programme information, monitoring news, downloading the latest music for the listening pleasure of the audience etc. This shows that the internet has no doubt enhanced the broadcasters' work in that they can file in their report from anywhere so long as there is internet access. The transmitters used by all the stations are still solid state transmitters which is an improvement from the initial bulky transmitters made of valves which emitted an enormous amount of heat thereby endangering the lives of the technicians. This is quite different from the digital transmitters made of transistors. In other words, the technologies are useful for the production of signals which are then transmitted through an analogue process. The implication of this information is that the import of these technologies is more evident in various processes of signal production as against signal transmission. In such a situation, the chance of radio stations in Kogi State to meet up with the world standard becomes bleak. This is glaring as Dokpesi (2007) in Agbenso (2011) noted that one cannot transmit on analogue platform to digitized nations. Given that younger people are more endeared to the internet as a medium through which they source information (Ganiyu, 2011), they are denied the opportunity to benefit from the programmes of their favourite stations. No wonder Gurumnaan (2007), asserted from his study that nothing much has been done in the aspect of audience satisfaction. Also, Nigerians in the Diaspora who would love to get information about their communities are denied such opportunities.

Assessing the use of information and technology tools in the various stations, a greater percentage of the respondents (35%) asserted that it was quite encouraging. One of the major reasons which they gave for this response was that their stations were no longer as they used to be. Indeed, this is an improvement from previous studies like Olley (2009) which showed the use of ICT tools was not encouraging. For instance, radio stations were replete with typewriters, cassettes and so many analogue equipment which were not even sufficient. It was observed at the stations in Kogi State that most of the analogue equipment have been dumped for the new technologies. However, 3.1% of the respondents were not pleased that the new technologies were not sufficient for operations. Also 6.9% could not give a verdict to this effect. This could be attributed to their relative newness in the station or their level of awareness about the new media technologies.

Research Question Three: How proficient are radio broadcasters in the utilization of these information and communication technology tools?

With regards to their units of operation, 90 respondents representing 27.1% belong to the news unit; 69 respondents (20.7%) belong to the programmes unit; 58 respondents (17.4%) belong to the technical unit; 24 (12%) belong to production unit; 50 respondents representing 15.0% belong to the administrative unit while 11 representing 3.3% belong to other units.

A look at tables 12, 13, 14 above shows that radio media staff use technologies based on the services they render in the station. For instance, the job of the staff in news unit warrants the use of computers, internet, handsets, printers, and flash drive which was what they indicated that they used. Also, those in the programmes and technical unit noted they used computers, handsets, internet, satellite and digital console. In a follow-up question, they explained that they used them for all the all studio operations. The same thing applies to those in the production unit, administrative unit and other units. The tables show a correlation between the services rendered by the staff and the technologies which they use.

With reference to how they got acquainted with the use of these technologies, a greater percentage (44.8%) indicated they trained on a personal basis. This corroborates the findings of Gurumnaan (2009) and Olley (2009) that most media staff are responsible for their training. Those were the ones who studied related courses in the university and those who went to upgrade themselves before and after they were employed. This is rather challenging given the salaries of some media staff especially the younger ones.

However, with 36.7% respondents having in-house training, it could be asserted that radio stations are beginning to pay more premium on staff up-bringing on ICT knowing that knowledge and competence in its use is expedient for the maximization of the potentials of information and communication technologies. Those who had only in-house training were of the opinion that their area of study did not allow them much exposure to the technicalities of the technologies. According to them, the little knowledge they had before the in-house training was by adaptation. Knowing the dangers of using the technologies without adequate training, the stations have resorted to in-house training to brush up their new intakes as well as upgrade their other staff that have stayed with them for a while. Only a few of the staff have been trained within and outside the country. Gurumnaan (2009, p.99) says these broadcast stations under study do not give adequate staff training to their media workers.

Accepting that all the respondents have one kind of training or the other in the use of information and communication technologies, one can assert that media staff are fairly proficient enough. It also affirms Wilson's (2005, p.205) assertion that "those who cannot operate machines have been left behind." On the level of proficiency, the fact that 76.5% of the respondents indicated they can use these technologies without assistance proves that the proficiency level is really high. The few that indicted their need for assistance were the elderly ones among them who started with the stations when analogue equipment were still in vogue. Also in reference to their proficiency level it was indicated that a high percentage of the

respondents (72.2%) are proficient in the utilization of information and communication technologies.

Research Question Four: How has the use of information and communication technology tools affected the radio operations in Kogi State?

Table 15 above shows audience response with regards to how information and communication technology tools have affected broadcasting operations. The entire population asserted that information and communication technology tools have brought about such positive changes as quicker service delivery, flexibility, enhanced feedback mechanism, editing made easy and efficiency. However, this does not include wider coverage but a few percentage of the sample opined that they have led to quicker service delivery while some of them were of the view that they have led to greater efficiency. Fifteen percent opined ICT tools have made editing easier for them while 23 respondents (6.9%) noted that they have led to flexibility in radio operations. Seven respondents (2.1%) indicated that they have resulted in wider coverage. Probing further to know the negative effects on radio stations, many respondents (41.6%) asserted that they have no single negative influence while others said the tools have some negative effects such as laxity among members of staff (11.7%), lack of professionalism (17.2%), and redundancy (9%).

Looking at how the information and communication technology tools have affected the radio stations, table 9 shows that a greater percentage of the respondents indicated they have affected them positively in terms of quicker service delivery, enhanced feedback mechanism, flexibility, editing made easy as well as greater efficiency. In other words, the positive effects of these technologies are quite glaring. The table also showed that only seven people noted that their station has wider coverage as a result of the information and communication technology tools. This buttresses the technological determinism theory which asserts that the technology obtainable in a society brings about development of the values and social system.

Research Question Five: What are the major challenges militating against the use of information and communication technology tools in radio stations?

With regards to the challenges facing the use of information and communication technology tools, a substantial proportion of respondents agreed to the fact that some factors are militating against the use of new media technologies in the selected stations. Chiefly among these challenges are issues like virus, epileptic power supply, adverse weather as indicated by 65 (19.5%), 68 (20.4%), 31 (9.3%) respondents, respectively. Others are bad leadership, poor training and insecurity of the technologies as indicated by 16 or 4.8. %, 22 or 6.6%, and 3 or 0.9% respondents respectively.

With regards to the challenges facing the use of information and communication technology tools in radio stations, the problems of epileptic power supply and virus ranked highest. On the side of epileptic power supply, it is obvious that this is a national issue but where it affects them most is that the “on-and off” nature tends to destroy these technologies. As a result of these, they rely mainly on generating sets which gulp a huge amount of money. On the issue of virus, the respondents decried the incessant loss of information. This even goes to the extent of

rendering some of these technologies useless. Another major factor militating against the use of these technologies is adverse atmospheric conditions. Others are lack of capital, poor training, insecurity of technologies and bad leadership. The implication of this is that the major problems militating against the use of information and communication technology tools in the radio stations are ones beyond the control of the stations. This corroborates Olley's (2009) idea about challenges facing information and communication technologies tools. However, it exposed more of the problems which the previous studies did not highlight like epileptic power supply, virus, adverse atmospheric conditions among others.

Conclusions and Recommendations

Radio stations are trying their best to meet up with the challenges of the globalised world as they have embraced ICT tools. This is evident from the way information and communication technology tools technologies are being used in these stations to ensure the generation of signal. However, the fact that they have not commenced digital transmission leaves us with no doubt that the deadline set by International Telecommunication Union for all radio stations to go digital may not be met by radio stations.

Despite some challenges like epileptic power supply, issues like virus and other problems, radio staff have remained undaunted as they determined to acquire as much training as possible to the extent that most of them can use these technologies without assistance. Though technologies are made to lessen the problems of human beings, there are still some inherent negative effects. In other words, the information and communication technology tools came with both positive and negative effects but the positive sides of it outweigh the negative sides.

Findings in this study suggest that the awareness level of information and communication technology tools is relatively high. However, digital transmitters and digital consoles are still lacking. Therefore, Government and station owners should put in extra effort to provide their stations with digital transmitters so that potentials of information and communication technology tools can be fully maximized. Though media owners have commenced in-house training of staff, training within and outside the country is also important so that they can get acquainted with what their counterparts all over the world are doing. Such training will enable them to know the various ways through which the potentials of information and communication technology tools can be harnessed.

The negative effects can be combated by introducing more programmes that will absorb more staff. Also, the staff should be encouraged to diversify in order not to remain redundant as a result of the information and communication technologies while those who exhibit a lesser fair attitude towards their duties should be sanctioned appropriately with regards to the challenges militating against the use of information and communication technology tools. Media owners should equip their stations with high quality technologies that can withstand adverse weather conditions and virus. Also, antivirus and backup facilities should be made readily available to prevent loss of important information.

Furthermore, the electronic media especially radio stations should be provided with a more favourable environment to facilitate their practice. Since

information and communication technology tools are powered by electricity, government should endeavour to harness all possible opportunities to improve power supply in the country so that radio stations will not have to spend much money running on generating sets.

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