

**'WE ARE AWARE BUT NOT PREPARED': BROADCAST
JOURNALISTS' PERCEPTION OF CHALLENGES
AND BENEFITS OF DIGITIZATION OF BROADCASTING
IN OYO STATE, NIGERIA**

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Abstract

Nigeria is among the African nations expected to migrate to digital transmission by 2020 as proposed by the International Telecommunication Union (ITU). Existing media and communication studies have focused on the benefits and challenges of the digital migration process. However, scanty scholarly attention has been paid to the levels of awareness of, and preparedness for, digitization of broadcasting among broadcasters in Nigeria especially in Ibadan, Oyo State, being the host to the first television station in Africa. Driven by the Technological Determinism and Diffusion of Innovation theories as the framework, the study employed survey and in-depth interviews as the research methods to examine broadcast journalists' levels of awareness, readiness for, and perception of, the challenges and benefits of digital switchover. A total of 300 copies of the questionnaire were administered to broadcasters (208 were returned in usable form and constitute the basis of analysis and discussion in the study) who were purposively and conveniently selected from ten broadcast stations in Ibadan. An Administrator from the National Broadcasting Commission Abuja and one Administrator each from the Broadcasting Corporation of Oyo State and Diamond FM, Ibadan were purposively selected as interview participants. Findings show that most broadcasters (57.7%) were aware of the digital switchover. However, 49.0% of the broadcasters confirmed that they were not adequately prepared for digital transition. Moreover, the broadcast journalists confirmed that, apart from skills, costs of content creation and procurement of digital

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technologies required by digital broadcast were the major impediments to digital switchover while they identified job creation, more revenue generation, richer contents, stronger bandwidths, and enhanced patronage as the benefits of digital broadcast. Relevant government agencies in charge of digital switchover in Nigeria should, through training and equipment procurement, motivate and empower broadcasters and broadcast stations to prepare them for a successful digital switchover.

Keywords: Analogue broadcasting, Digital switchover in Nigeria, Broadcast stations in Ibadan, NBC, ITU.

Introduction

In broadcasting, the proliferation of digital technologies to modify the structures of news production, news presentation, news transmission and news reception is novel and trending (Reese, 2010; Stigbrand & Nygren, 2013; Jaakola, Hellman, Koljonen & Valiverronen, 2015; Kramp & Loosen, 2018). This supports the International Telecommunication Union's (ITU) recommendation for a global migration from analogue to digital broadcasting by June 17, 2020 (Okore, 2010). As explained by Akinreti, Ojo, Odegbenle, Owolabi, Tsebee Asor, Goke, Jegede and Nwaolikpe (2013) the clarion call for the transition to digital broadcasting by the ITU is hinged on the following objectives:

The International Telecommunication Union, in its agreement, stated that the transition from analogue to digital broadcasting is set to improve coverage of digital television transmission, ensure that the bandwidths are available for wireless broadcasting services, enhance sound and picture, in particular, High-Definition Television (HDTV), enable more channels (additional content) and give unfettered access to digital radio transmission. (p.90)

The ITU's project of digitizing broadcast media globally is to revamp and proffer solutions to the lapses of analogue broadcasting which include defects in sound and picture quality, limited channels and no internet access. As a signatory to ITU's Treaty for "an equitable and people-centred information society" (Akinreti, et al, 2013, p.89), the journey so far in Nigeria has been lingering as the country failed to meet three of her stipulated deadlines: June 17, 2012, December 31, 2012, and January 1, 2015. Besides, Nigeria began her quest for

transition with the inauguration of a Presidential Advisory Committee (PAC) by Late President Umar Musa Yar'Adua in October 2008. Hence, PAC together with the National Broadcasting Commission (NBC) was mandated to design a policy on the transition from analogue to digital broadcasting using the best practices or models, advise the government on any action relevant to smooth transition, recommend appropriate regulatory legislation and licensing framework for digital broadcasting, endorse government interventions and subsidy, determine the quantum of the expected digital dividend, suggest possible means of discarding analogue equipment and television boxes, discuss the environmental impact of such discard, if any, as well as proffer curative measures to be taken, and consider consumer education (Lamidi, 2014; Endong, 2015).

In a country that intends to phase out analogue transmission and attain full digital switchover in broadcast stations of thirty-six states in less than two years, it is instructive to provide empirical evidence and contribute to the ongoing conversation on the broadcasters' awareness of, and readiness for, digital migration process across the states. Existing studies in Nigeria (e. g. Alalibo, 2009; Odunlami, 2009; Olley, 2009; Ogedi, 2009; Okon & Eleba, 2013; Alalibo, 2017; and Obot & Inwang, 2017) that investigated the state of preparedness and awareness of broadcast media professionals to the digitization of broadcasting with a focus on Delta, Ogun, Edo, Enugu, Rivers, Akwa-Ibom states observed that communication professionals were aware of digital migration and willing to broadcast digitally but they lacked the financial prowess to acquire the new digital technologies. However, without empirical evidence as to the situation among broadcast stations and broadcasters in Ibadan, which is the host of the first television station in Africa, the existing findings may be deficient in representing the situation in Nigeria. In other words, it is imperative to understand the perspectives held by broadcasters from Ibadan regarding the implications of digital switchover. It is, therefore, essential to fill this knowledge gap by focusing on Ibadan Oyo state, in our attempt to establish the extent to which broadcasters from the zone are aware of, and prepared for, the digitization of broadcasting in Nigeria. The following research questions were crafted to guide the study: 1) What is the level of awareness of broadcasters in Ibadan about the innovation of digital switchover in broadcasting? 2) To what extent are the broadcasters prepared to adopt digital technologies in their broadcast operations? 3) What challenges and benefits do the broadcasters envisage in the digital migration and/or full digital switchover? To answer the foregoing research questions, we employed the Technological Determinism and Diffusion of Innovation theories

as the framework, while we used the mixed-methods design of the survey and in-depth interviews.

An Overview of Digitization of Broadcasting

The shift from digital to analogue broadcasting is momentous because “it is the first significant innovative science in the evolutionary broadcast technology, especially in television broadcasting since the evolution of colour television in the 1950s” (Basse-Duke, 2017, p. 69). Thus, the advancement to a technologically driven mode of transmission is apt because it will improve the transmission of broadcast signals. Defining digitization, Rodman (2006) cited in Omale, Ekhaerafo, and Essien (2016), notes that the innovation of digital technology in broadcasting is an attempt to switch off all modes of traditional analogue broadcast transmission and replace them with a refined model of communication:

Digitization is the process of conversion of analogue information in any form: texts, photographs, voice, etc. to digital form with suitable electronic devices, such as a scanner or specialised computer chips, so that the information can be processed, stored and transmitted through digital circuits, equipment and networks. (p. 152)

Rodman’s definition indicates that digital broadcast will, with digital compliant devices, transform the process of analogue broadcast transmission. Similarly, Eze, Oreykeh, and Ezeanwu (2017) citing Suarez Candell (2007) pen that digitization is “a technological process through which data, graphics, sounds and images are converted into a digital binary language (zeroes and ones) for computer use” (p.1). Likewise, Omale et al. (2016) opined “digital terrestrial transmission also called digital television transition is the cutting-edge technology that enables the broadcast industry to do away with the obsolete method of transmission such that broadcast transmission becomes digital compliant” (p.152). Therefore, the recommendation for the disposal of antiquated analogue equipment is timely as it will be redundant when broadcast organisations connect to digitization globally.

Digital Migration Process in Nigeria: Empirical Review

Like other countries that signed the pact for digital migration, Nigeria is on the verge of digitizing her entire broadcast industry before the International Telecommunication Union’s deadline. Besides, the corpus of Nigerian media research associated with adopting digitized broadcasting can be said to have taken a tripartite dimension. The

first aspect is concerned with studies that tilt towards identifying the challenges such as unawareness, poverty, high costs of procuring digital devices, epileptic power supply, policy inconsistency, and scarcity of manpower (Berger, 2010; Ihehu & Uche, 2012; Balarabe, 2013; Akinreti, et al. 2013; Ogbuoshi & Efetobor, 2014; Nwanne, 2016; Obisi & Remi, 2016; Obot & Inwang, 2017; Agbo & Chukwuma, 2017; Westley, Mazhinyi & Nnegha, 2017), and those relating to benefits such as cost-effective, media convergence, rich programme contents, quality signals, and multiple channels (Alonso, 2008; Olley, 2009; Okike, 2010; Ihehu & Uche, 2012; Uzuegbunam, 2013; Ogbuoshi & Efetobor, 2014; Olagoke, 2015; Ajayi, Patricia, Evrboen, Falana & Lawal, 2016; Obot & Inwang, 2017; Idachaba, 2018). A critical consideration of the issues related to digital switchover suggests that if the constraints of migrating to digital broadcasting are well managed, media organisations across Nigeria are assured of benefitting significantly from the digital switchover.

The second thematic areas are scholarly investigations that focus on the preparedness for, perception, and awareness of digital broadcasting among communication practitioners in some states (e.g. Delta, Ogun, Edo, Enugu, Rivers and Akwa-Ibom). Such studies have established that broadcast professionals expressed enthusiasm in embracing the digital revolution in broadcasting. However, for most journalists, digital broadcasting would be valuable if there is access to the new digital technologies to enhance efficiency in the business of searching, gathering, editing, diffusing and transmitting news (Alailibo, 2009; Odunlami, 2009; Ogedi, 2009; Olley, 2009; Okon & Eleba, 2013; Alailibo, 2017; Obot & Inwang, 2017).

The third focus is on the assessment of the viability of consumers' adoption of digital broadcasting in Nigeria. For instance, Njoku (2015) and Eze *et al.* (2017) who examined the level of awareness of residents in Enugu metropolis and some parts of the south-south region on the digital migration process, observed that though there is a low awareness level on the digitization of broadcasting, the residents are hopeful that digital broadcasting will render favourable and impressive viewership than analogue broadcasting. This observation is expected as it is similar to studies conducted in other African nations including Kenya, Mauritius and South Africa (Berger, 2010; Mbatha & Lesame, 2014; Njogu, 2016) which attest that initially, consumers found it difficult to adjust to digital transmission due to squat publicity and unavailability of funds to purchase set-top boxes thereby making them unable to watch television. However, over time, these nations were able to embark on massive sensitization campaigns and introduce subsidized rates to help their citizens procure set-top boxes.

Theoretical Framework

The Technological Determinism and Diffusion of Innovation theories are adopted as the framework for this study. The two theories, as they are relevant to the study, are explained as follows:

Technological Determinism Theory

The basic assumption of the Technological Determinism Theory is that “the media technologies shape how individuals think, feel, act and how a society operates as we move from one technological age to another- such as from tribal to literates, print and electronic” (Talabi, 2017, p.14) citing (Griffin, 2000). This, therefore, validates the notion that society is influenced and shaped by technological development. Similarly, changes in the modes of communication shape human life because for McLuhan and other technological determinists like Thorstein Veblen and Cooley, among others, social changes in human life are controlled by technology, technological advancement, communications technology and media (Hauer, 2017; Talabi, 2017). The relevance of the technological determinism theory is in its strength in allowing individuals to create innovations or technologies that can satisfy their needs since machines can increase and boost human productivity (Talabi, 2017). Secondly, it is claimed that technology is the main driver of social change because it is part of human existence and that the ability of man to invent and drive technology is what distinguishes him from other living species (Obalanlege, 2015). However, technology is just what it is until it is adopted and functional. All technologies take time to be developed, accepted, and widely adopted by the users (Talabi, 2017). Hence, the assumptions of the technology determinism theory are insufficient. This makes the theoretical constructs of the diffusion of innovations necessary and the combination of the two theories relevant and imperative in this study.

Diffusion of Innovations Theory

The Diffusion of Innovations Theory has been of interest to communication scholars and formed the core of their research based on the highly technological innovations witnessed in the media industry. According to Rogers (1983, p.5), diffusion “is a process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication whereby messages are concerned with new ideas” whereas innovation is the introduction of something new like a project, practice or an idea” (p. 5). It is, therefore, expedient to note that the adopters of digitization consider the knowledge and usefulness of digital technology of great

importance since it is a global innovation meant to improve the functionality of broadcast operations. More so, digital technology will thrive if its adopters are conversant with the way it works. Eze, et al. (2017, p.4) citing Rogers (1995) enumerate five stages of the adoption process. These include:

- **Awareness:** This stage is concerned with the introduction of innovation to a person who does not have ample information or either sees the need to get more information or considers buying or using the product or service.
- **Interest:** Here, one decides to seek more information about the innovation but does not know how or if it can be useful in their own life.
- **Evaluation:** This relates to the individual making decisions about innovation. If the innovation appears to be useful, he could try it.
- **Trial:** At this stage, the innovation is used to a limited extent
- **Adoption stage:** Here, the decision to adopt an innovation is informed by the information gathered in the interest and evaluation stages as well as the outcome of the trial stage.

Rogers (1983) also opines that the rates of adoption are determined by an adopters' category. Rogers defines an adopter as a classification of individuals within a social system based on innovativeness. The categories of adopters are:

Innovators

Innovators are the first individuals to adopt an innovation. They are willing to take risks, youngest in age, have the highest social class, have great financial lucidity, very social, and have close contact with scientific sources and interaction with other innovators. They are venturesome and interested in new ideas. They absorb innovation quickly because they can absorb risk and when the innovation fails, they can bear the burden of their financial status.

Early Adopters

This is the second-fastest category that adopts innovation. They represent opinion leaders. These individuals have the highest degree of opinion leadership among the other categories. They are typically young, have a higher social status, have more financial lucidity and advanced education, and are more socially forward than the other three categories. They are aware of the need to change and are so comfortable adopting new ideas. They do not need the information to convince them to change.

Early Majority

Individuals in this category adopt an innovation after a varying degree of time. This type of adoption is significantly longer than that of the innovators and early adopters. They tend to be slower in the adoption process. They have limited contact with early adopters and seldom hold positions of opinion leadership in a system. They have less tolerance to risk because their financial resources are not as buoyant as the above two categories.

Late Majority

Individuals in this category will adopt an innovation after the average member of society. They approach an innovation with a high degree of scepticism and after most of society has adopted the innovation. They have below-average status, little financial lucidity, and little opinion leadership. They have no risk tolerance and always give reasons for not adopting an innovation.

Laggards

Individuals in this category are the last to adopt an innovation. Unlike some of the previous categories, individuals here show little or no opinion leadership. They have an aversion to change agents and tend to be advanced in age. An average laggard tends to be focused on traditions, likely to have the lowest status, the lowest financial lucidity, be the oldest of all other adopters and in contact with only family and close friends. Tradition and conservativeness bind these people. They are very sceptical of change and are the hardest group to bring on board. Strategies to appeal to this population include statistics, fear appeals, and pressure from people in the other adopter groups.

Given the overall objectives of this study, combining the Technological Determinism and Diffusion of Innovation theories as the framework is relevant. On the one hand, the Technological Determinism Theory is used to explain how digital switchover as a new media technology would shape the thinking, feelings, and operations of the broadcast journalists as Nigeria moves from analogue broadcasting to digital broadcasting. On the other hand, Diffusion of Innovation Theory would explain how the broadcast journalists as adopters of digitization consider the knowledge and usefulness of the digital technology in terms of its importance as a global innovation aimed at improving the entire broadcast industry across the world.

Methodology

The study employed the mixed-methods design. Specifically, survey and in-depth interviews were used as the methods. A total of 300

copies of the questionnaire were administered to broadcasters who were purposively and conveniently selected from ten broadcast stations in Ibadan. Eventually, 208 copies of the questionnaire were retrieved. One administrator was purposively selected from National Broadcasting Commission Abuja, while one administrator each was selected, through purposive and convenience sampling techniques, from the Broadcasting Corporation of Oyo State and Diamond FM, Ibadan for the in-depth interviews. The quantitative data were analysed using descriptive statistics while the qualitative data were subjected to theme mapping.

Findings

Research Question One: *What is the level of awareness of broadcasters in Ibadan about the innovation of digital switchover in broadcasting?*

To answer this question, we examined the respondents' awareness of analogue switch-off and digital switchover in broadcasting. Results are presented in Table 1.

Table 1: Respondents' Awareness of Digital Switchover (DSO)

Respondents' awareness of DSO	Frequency	Percentage (%)
No Extent	8	3.8%
Very Little Extent	17	8.2%
Little Extent	63	30.3%
Great Extent	120	57.7%
Total	208	100

As shown in Table 1, most of the respondents (57.7%) were to a great extent aware of digital switchover while only 3.8% of the respondents stated they are not aware.

Research Question Two: *To what extent are the broadcasters prepared to adopt digital technologies in their broadcast operations?*

The second research question was constructed to test the extent of preparedness of broadcasters to adopt digital technologies in their broadcast operations. To answer the research question, we used both the quantitative and qualitative data from the survey and in-depth interviews, respectively. Quantitative findings are presented in Table 4 and complemented by responses of the interviewees.

Table 2: Broadcasters' Preparedness to Adopt Digital Technologies

Preparedness of broadcasters to adopt digital technologies	Great Extent	Little Extent	Very Little Extent	No Extent	No response	TOTAL
Prepared and ready for digital broadcast operations.	47 (22.6%)	102 (49.0%)	47 (22.6%)	10 (4.8%)	2 (1%)	208 (100%)
Prepared but the process for digitization in my organisation is slow.	64 (30.8%)	76 (36.5%)	49 (23.6%)	17 (8.2%)	2 (1%)	208 (100%)
Waiting for other media organisations to set the pace before we begin the plans for digital migration.	38 (18.3%)	66 (31.7%)	48 (23.1%)	53 (25.5%)	3 (1.4%)	208 (100%)
The deadline is far and there is still time.	49 (23.6%)	62 (29.8%)	45 (21.6%)	47 (22.6%)	5 (2.4%)	208 (100%)
Waiting for the government and the National Broadcasting Commission to spell out policies.	69 (33.2%)	67 (32.2%)	42 (20.2%)	26 (12.5%)	4 (1.9%)	208 (100%)
We are satisfied with analogue broadcasting not interested in digital terrestrial transmission.	17 (8.2%)	47 (22.6%)	43 (20.7%)	97 (46.6%)	4 (1.9%)	208 (100%)
The date for digital switchover should be extended to prepare for digital transmission.	83 (40.0%)	59 (28.4%)	35 (16.8%)	28 (13.5%)	3 (1.4%)	208 (100%)
The media station is not financially buoyant to acquire digital technologies	66 (31.7%)	59 (28.4%)	44 (21.2%)	35 (16.8%)	4 (1.9%)	208 (100%)
Training and skill acquisition have begun to fully equip broadcasters for digital broadcasters.	36 (17.3%)	71 (34.1%)	53 (25.5%)	45 (21.6%)	3 (1.4%)	208 (100%)

The results presented in Table 2 reveal that 49.0% of the respondents are not prepared for digital broadcast operations. Nevertheless, Director of Broadcast Monitoring, National Broadcasting Commission (NBC) Headquarters Abuja, Dr Armstrong Idachaba opined that the commission was prepared for digital transmission:

All the television stations in Jos (Plateau State's capital), Abuja, Kaduna, Enugu, Ilorin (Kwara State's capital) and Osun are already on the digital platform, which gives us some indices that the transmission is on course and the optimism that other television stations will come on board.

Moreover, 40.0% of the respondents opined that to a great extent an extension of the date is crucial to ensuring that a substantial number

of broadcasters were prepared for digital switchover. Furthermore, the results show that to a great extent 31.7% of the media stations were not financially buoyant to acquire digital technologies. These results validate the reason for the lingering transition process, which is to a little extent slow in the broadcast stations as stated by 36.5% of the respondents. In the same vein, 31.7% of the broadcasters were to a little extent waiting for other media organisations to set the pace before they could begin preparations for migration while 25.5% of the broadcasters were not waiting for other media stations.

Whether or not broadcast stations were engaging in preparatory measures to hasten the digitization process formed part of the discussions during the interview sessions. Director of Engineering Broadcasting Corporation of Oyo State (BCOS), Engr Oladipupo Smith explained that the corporation has taken initiative by commencing procedures to prepare her broadcasters for the digitization process: BCOS is ready for Digital Switchover, as the pursuit for digital broadcasting did not start yesterday. The corporation is prepared to ensure that all her transmitting equipment are digitally compliant. All her analogue equipment has been phased out and no longer procured but where analogue devices are indispensable or unavoidable, we have digital converters installed. Studio Manager Diamond FM, Engr Bakare Jeleel Atanda also shared this line of thought:

As a radio station, there is not much required of us yet. However, it is easier for radio stations to switch digitally provided that the device called the transmitter is digital. Again, it is important to disburse obsolete analogue equipment as well as change the mode of signal modulation because it will be wrong to purchase analogue equipment when the world is going digital.

While the interviewee from BCOS stated that procedures had begun to transit to digitized broadcasting, the interviewee from Diamond FM opined that not much was required of them to switch over to digital broadcasting. However, all the interviewees acknowledged that the digitization of broadcasting calls for the disposal of the analogue transmitter. Like other narratives that observed the challenges to the digital migration process (Berger, 2010; Ihehu & Uche, 2012; Balarabe, 2013; Akinreti, et al. 2013; Ogbuoshi & Efetobor, 2014; Nwanne, 2016; Obisi & Remi, 2016; Obot & Inwang, 2017; Agbo & Chukwuma, 2017; Westley, Mazhinyi & Nnegha, 2017 etc.), findings show that broadcast organizations lack the financial strength to acquire digital technologies as stated by 31.7% of the respondents. This is also substantiated by the Director of Broadcast Monitoring, National Broadcasting

Commission (NBC) Headquarters Abuja, Dr Armstrong Idachaba, that funds will be needed for content creation: Digital broadcasting is a policy, and the Federal Government has mandated NBC as an agency of the government to drive Digital Switchover. The NBC is aware that stations will scramble for content to fill the multiple channels that digitization provides, so she is planning to create as part of her policy, a content production fund whereby the Commission can raise funds to avail opportunities for young content creators to access for content creation.

Research Question Three: *What challenges and benefits do the broadcasters envisage in digital migration and/or full digital switchover?* This research question was constructed to investigate the perceived challenges and benefits of migrating to digital broadcasting. The findings are presented in Table 3.

Table 3: Implications of Digital Switchover

Implications of Digital Switchover	S.A	A	S.D	D	U	N.R	TOTAL
Skills and technical knowledge to integrate digital technologies.	142 (68.3%)	49 (23.6%)	3 (1.4%)	2 (1%)	3 (1.4%)	9 (4.3%)	208 (100%)
Literacy to stay relevant in the profession.	123 (59.1%)	64 (30.8%)	7 (3.4%)	5 (2.4%)	1 (0.5%)	8 (3.8%)	208 (100%)
Change the working conditions of broadcasters.	126 (60.6%)	62 (29.8%)	6 (2.9%)	4 (1.9%)	1 (0.5%)	9 (4.3%)	208 (100%)
Limited job opportunities due to the automation of broadcast services.	70 (33.7%)	69 (33.2%)	21 (10.1%)	30 (14.4%)	8 (3.8%)	10 (4.8%)	208 (100%)
Competition	116 (55.8%)	64 (30.8%)	7 (3.4%)	6 (2.9%)	6 (2.9%)	9 (4.3%)	208 (100%)
Replacing analogue equipment with digital technologies is capital-intensive.	115 (55.3%)	59 (28.4%)	13 (6.3%)	6 (2.9%)	6 (2.9%)	9 (4.3%)	208 (100%)
High demand for content.	117 (56.3%)	64 (30.8%)	7 (3.4%)	8 (3.8%)	4 (1.9%)	8 (3.8%)	208 (100%)
Demand more transmission hours.	53 (25.5%)	74 (35.6%)	22 (10.5%)	40 (19.2%)	12 (5.8%)	7 (3.4%)	208 (100%)
Change the style of news presentation.	96 (46.2%)	69 (31.2%)	11 (5.3%)	16 (7.7%)	11 (5.3%)	5 (2.4%)	208 (100%)
Necessitate a reshuffling and re-organisation of broadcasters.	81 (38.9%)	85 (40.9%)	14 (6.7%)	14 (6.7%)	7 (3.4%)	7 (3.4%)	208 (100%)

*SA (Strongly Agree), A (Agree), SD (Strongly Disagree), D (Disagree), U (Undecided), NR (No Response)

The results presented in Table 3 affirm that technical knowledge and literacy are fundamental to digital terrestrial transmission as confirmed by 68.3% of the broadcasters who strongly agreed that digitization requires that broadcasters possess technical skills and knowledge to integrate digital technologies. Similarly, 59.1% of the broadcasters agreed that digitization demands literacy in the enterprise and operations of new digital technologies for them to be relevant and effective in the profession. What's more, broadcasters strongly agree that asides from changing their working conditions as revealed by 60.6% of the respondents, digitization will cause limited job opportunities due to the automation of broadcast services as revealed by 33.2% of the respondents. This could be partly due to the deployment of digital technologies or machines to replace manpower.

Another challenge perceived by the broadcasters is competition. Findings show that 55.8% of the respondents strongly agreed that digital switchover would encourage rivalry among broadcasters and media organisations. Also, 55.3% of the respondents strongly agreed that purchasing digital equipment is capital-intensive. To probe further, we inquired during the interview session if broadcasters should be allowed to operate on analogue transmission pending when they are financially stable to operate digitally. Director of Engineering, Broadcasting Corporation of Oyo State, Engr Oladipupo Smith is of this opinion: I agree a hundred percent that broadcast stations be given the leverage to operate on analogue while they pull resources for digital transmission because in the developed countries digital switchover is never achieved once, it is done in phases. For instance, in the United States broadcasters were given a luxury of time to operate on analogue when the media stations observed that they could no longer run analogue transmission due to the lump sum they spend they had to appeal to the US government to shut down analogue transmission. Engr Bakare Jeleel Atanda, Studio Manager Diamond FM, held a contrary opinion:

I do not think it is advisable neither do I agree that broadcast stations can operate on analogue transmission. At the conference held by the International Telecommunication Union, which Nigeria was part of, it was jointly agreed that all broadcast stations switch to digital broadcasting. So, any broadcast station in any part of the world that does not adhere will be isolated and left behind from the global village, which might take them many years to recover from.

Here, the interviewee foresaw a digital divide or disparity between Nigeria and other nations if it continued to operate the analogue transmission. This is understandable because allowing analogue transmission when countries have migrated globally will create a technological gap between Nigeria and other countries. Again, the availability of content to fill the multiple channels that digitization offers is a pressing implication. Most of the respondents (56.3%) strongly agreed that digitization would demand content creation and production. To buttress this point, Dr Armstrong Idachaba, Director of Broadcast Monitoring, National Broadcasting Commission Abuja, stated that: Anywhere in the world, what drives broadcasting is content. In the digital era, technology will allow for the multiplicity of channels, which means content creation will be competitive. Thus, the broadcasters that will survive will have to be innovative and creative and that requires money. Content is the business of the day. For television channels to get compelling content, they need to source money from advertisers or sponsors. What is expected of media stations is the production of their content, which will be delivered to the signal distributor or carrier who will put it together for live transmission.

The thoughts of Dr Armstrong corroborate the upsurge in the demand for content for digital broadcasting as stated by 56.3% of the respondents. Findings in Table 3 equally show that 40.9% of the respondents agreed that digitisation of broadcasting would necessitate a reshuffling and reorganisation of broadcasters, 35.6% said it would demand more transmission hours while 46.2% of the respondents strongly agreed that digitisation would change the style of news presentation. Some of the benefits that digitization offers its adopters, as evident in the findings presented in Table 4, are the provision of revenue streams for investors, increase in the listenership as well as viewership of broadcast stations and the call for the increment of the remuneration of technically skilled workers.

Table 4: Benefits of Digitizing Broadcast Transmission

Benefits of digitization	S. A	A	S. D	D	U	N.R	TOTAL
Revenue streams for investors and the media	100 (48.1%)	73 (35.1%)	11 (5.3%)	11 (5.3%)	4 (1.9%)	9 (4.3%)	208 (100%)
Increase listenership and viewership	103 (49.5%)	66 (31.7%)	11 (5.3%)	13 (6.3%)	6 (2.9%)	9 (4.3%)	208 (100%)
Increase remuneration	82 (39.4%)	78 (37.5%)	10 (4.8%)	16 (7.7%)	13 (6.3%)	9 (4.3%)	208 (100%)
Create more bandwidths for broadcast transmission.	97 (46.6%)	80 (38.5%)	10 (4.8%)	7 (3.4%)	6 (2.9%)	8 (3.8%)	208 (100%)

Findings in Table 4 show that adopters of digital broadcasting would benefit a lot as 48.1% of the respondents strongly agreed that digital switchover is a revenue stream for investors. Also, 49.5% of the respondents strongly agreed that digitization would increase the listenership and viewership of broadcast media organisations. Again, 39.4% of the respondents strongly agreed that adopting digitized broadcasting would call for an increment in the salaries of technically skilled broadcasters while 46.6% of the respondents strongly agreed that digital broadcast would create clearer signals and stronger bandwidths.

Discussion of Findings

Like other media and communication studies on the awareness and perception of broadcasters on the digitization of broadcasting that established that broadcasters were aware of the digital switchover but not ready to migrate, this study equally affirmed that 57.7% of broadcasters in Ibadan were aware of, while 49.0% were unprepared for digital broadcasting. Awareness, as stated by the Diffusion of Innovations Theory, could be attributed to the volume and quality of media campaigns and conferences adopted at creating awareness about the innovation (Rogers, 1983). In other words, in espousing an innovation, the media first concentrates its efforts on awareness after which other procedures such as personal contacts, organised expertise, advice, and experience are integrated into the adoption process.

One of the propositions of the Diffusion of Innovation theory states that an individual requires the "How-to-knowledge" before the adoption of innovation to enable him to use the innovation correctly (Eze et al., 2017). Therefore, being aware of innovation is insufficient as it is important that the adopters of digitized broadcasting are not only prepared but also motivated to procure and operate digital technologies in their broadcast operations. To fast track the migration process, the National Broadcasting Commission states that it has concluded a pilot test transmission in six states. Generally, this is not encouraging for a nation planning to digitize the broadcast operations of thirty-six states because not only is digital switchover lingering, the possibility of meeting up with the deadline is almost impossible as 40% of the respondents call for an extension of the deadline coupled with the fact that the Commission is expected to engage in monitoring and evaluation exercises in all thirty-six states to measure the achievements of the pilot test transmission process as well as map out plans to curtail its constraints. Besides, the lack of preparedness as stated by 49.0% of the respondents is largely attributed to finance

to acquire digital technologies as revealed by 31.7% of the broadcasters. This state of preparedness categorizes the Nigerian broadcast industry under the trial stage as suggested by the Diffusion of Innovations Theory which states that innovators will test the validity of and engage innovations to a little extent before they adopt the innovation fully.

Finally, in terms of the implications for digital switchover, the study established that the broadcast journalists agreed that adopting digitization of broadcasting comes with a myriad of challenges which include costs of procuring digital-compliant equipment, costs of intensive training and sensitization programmes for broadcasters, reshuffling and reorganisation of broadcasters, environmental pollution as a result of the disposal of antiquated analogue equipment, instability of power supply, and creation of digital contents. These findings, on the one hand, validate the position of the Technological Determinism Theory that every technological innovation is prone to limitations. On the other hand, more revenue generation, enhanced patronage, cost-effectiveness, cheaper and richer contents, and stronger bandwidths as recompenses identified in the study, confirm the notion of the Technological determinists that machines are instrumental in boosting human productivity and functionality (Talabi, 2017).

Conclusion

This study was designed to investigate broadcast journalists' levels of awareness, readiness for, and perception of the challenges and benefits of digital switchover in Oyo State, Nigeria. The study has established that broadcast journalists were aware of, but unprepared for, the digital switchover plan. As such, we infer that curative strategies are needed to curtail the constraints and maximize the potentials of migrating to the digitization of broadcasting. First, we recommend practical training, sensitisation and reorientation of the broadcast journalists in handling digital technologies not only in Oyo State but also across Nigeria. The exposure of broadcasters to digital technologies broadcasting will aid the mastery of the principles and applications of the technologies before the proposed deadline. It is often said that practice makes perfect. Thus, without the recurrent practice of the use of digital equipment, broadcasters would not have a grasp of digital broadcast operations using its technologies.

Second, we recommend that broadcasters should always produce quality contents that will appeal to the audience as well as attract sponsors and adverts. Most importantly, the availability of contents is required to fill the multiple channels that digitization offers. Furthermore, we advise that the Federal Government and other government

agencies, as well as investors, assist broadcast media stations by subsidizing the costs of procurement of digital technologies such as multiplexers, digital encoders, transmitters, digital decoders, digital teleprompters and digital cameras. This step will, to a large extent, motivate broadcast journalists and empower broadcast station owners for a swift and seamless transition to digital transmission and prevent Nigeria from being a dumping site for outdated analogue devices.

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