

Re-Examining the Benefits and Challenges of Information and Communication Technology Integration in Media Communication in Nigeria: Educational and Developmental Perspective

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Abstract: Advances in Information and Communication Technology (ICTs) have completely transformed media process nationally and internationally. The thrust of this study is to re-examine the merits of its integration into media communication and major hindrances in Nigeria. With the aid of qualitative research, contents analysis and diffusion of innovations theory, the study observes enormous benefits associated with ICTs integration into media communication in Nigeria. The study further observes that ineffective government policy, high costs of ICTs products, poor or absence of ICTs knowledge and skills, epileptic power supply, lack of fund, etc. are major hindrances to the integration and its effects. It therefore, recommends government pro-active policies and funding assistance, ICT in-service training for media personnel, regularisation of power supply among others as panacea for the observed problems.

Key words: Information and communication technologies, power supply, media communication, diffusion, benefits and hindrances, observed problems

INTRODUCTION

During the 19th century, the channel for transmission of messages was mainly ship transportation and this takes months depending on its destination while news broadcasting hardly covers national boundaries. This is because information dissemination was primarily predicated on print, hard copy and analogue broadcasting by television and radio stations. This form of media communication, according to Akpan (2004) is sluggish, saturated in terms of audience and spectrum available to broadcasters and experiences elastic limit in terms of quality and services development. This information order is a one way flow to its audience wherein people had less room for feedback, criticism and censorship.

However, inventions and innovations changed the scenario between 20th and 21st centuries. In the contemporary times, messages are delivered in a matter of minutes or even seconds while media broadcasts cover virtually all the known world. In pulling down the dividing walls of information flow and negating challenges created by distance and nature, media activities have shifted away from the nation-states and created what is generally known as a 'global village' (Severin, 2001). According to Rodney (2007) "Mass communication media, ..., technology is shaping the scope of the mass media and all

media now share a common base. Fax machines are now newspapers, compact discs are books and satellites are television transmitters". This was expressed by Neuman as cited by Croteau and Hoynes (2003), thus:

"We are witnessing the evolution of a universal interconnected network of audio, video and electronic text communications that will blur the distinction between interpersonal and mass communication and between public and private communication"

The benefits were enormous. It altered geographic distance, provided for huge increase in the volume of communication, increased the speed of communication, provide opportunities for interactive communication, extended interpersonal relationship and allows for all forms of communication (Elegbeleye, 2005).

This transformation is widely attributed to the introduction of new Information and Telecommunication technologies such as digital computers, the internet, mobile phones, iPods and MP3 Players among others and their application or integration into communication processes. Their emergence signals the emergence of unique forms of digital media and is therefore called new media technologies by scholars (Flew, 2002). McQuail (2005) simply defined the new media as disparate set of communication technologies that share certain features a

part from being new, made possible by digitalization and being widely available for personal use as communication devices.”

Currently, peoples of all divides, culture and social orientations watch movies on DVDs, listen to music with their CD players and MP3 players, broadcasts and listen to news online via the internet and cable networks and publish and/or read papers online. These new media have fundamentally changed media communication and orchestrated the establishment of many newspapers and broadcast news websites whose geographic reach spread across continents and nations. Characteristically, information storage in miniature chips and discs, e-Mail, online business and video-conferencing activities symbolise this era (Fitzgerald and Dennis, 2005). These allow people to communicate, bank, shop and entertain with ease and from the comfort or convenience of their homes. In the light of these, this study focuses on re-examining the benefits and associated disadvantages of integrating information and communication technologies in media activities in Nigeria.

Framework of analysis: This study adopts diffusion of innovations theory to guide the analysis. Diffusion as used here refers to the process and channels of communicating innovations to and among members of a given social system. Basically, the theory provides a variant for explaining the dynamism of the spread of new ideas, their acceptance and application of the ideas in practical situations. It demonstrates that the diffusion of new ideas passes through five stages towards adoption, namely: knowledge, persuasion, decision, implementation and confirmation.

In the instant case of analysis, Akhagba (2014) observes that “the diffusion process typically involves both mass media and interpersonal communication channels. Today, new media technologies such as the internet and mobile phones which combine aspects of mass media and interpersonal channels represent formidable tools of diffusion.” It is therefore, a special model of information dissemination in a given society or era of civilisation responsible for advertising new innovations of products. On the other hand, an innovation refers to an idea, practice or object that is perceived as new by an individual or group of individuals (Rogers, 1995).

The theory seeks to explain how, why and at what rate these new idea, practice or object spread through and among existing cultures, systems and civilisations. Such adaptations alter the existing system and practices. This requires knowledge of the innovation, forming an attitude

toward the innovation, decision to adopt or reject, implementation of the new idea and confirmation of this decision (Fidler, 1997).

The relevance of the theory to the study is located on the fact that the new media technologies (i.e., ICTs) were born out of innovation and their adoption by people will certainly alter some their established systems and practices. Equally, the theory and the paper are technologically based while ICTs have changed or affected the operations of media communication generally. The theory is therefore, considered appropriate and necessary for this study.

AN OVERVIEW OF ICTs AND THE NEW MEDIA

Many scholars such as Rodriguez and Wilson III (2000) conceive ICT as a set of activities that ensure the processing, transmission and dissemination of information electronically. Others such as Anonymous (2000) view it as techniques employed people use in the process while Samadar (1995) perceived it as a tool or application and services employed to generate, process/transform and distribute information easily and accurately with cheaper costs. Broadly conceptualised, ICT refers to forms of technology that are used to generate, process, transmit, store and exchange information digitally. Simply put, ICTs are myriad of independent units used to transmit, distribute and control information and interconnectivity that exist in the forms of digital devices such as hardware or software.

These ICTs include technologies like radio, television, video, DVD, telephone, satellite systems, computer, network hardware and software as well as the equipment and services associated with these technologies. Others include:

Internet: The internet is a global network of networks of billions of computers (Nsude105) which facilitates business, sports, politics and other human activities across international boundaries. It is a multimedia information superhighway that allows “the simultaneous transmission of messages, sounds, film, pictures and text from one computer to another anywhere in the world to another” (Agba, 2001). The network is a solution to media problems such as the problems of news gathering, idea sharing, sending of information and information access.

Communication Satellite (COMSAT): A communication Satellite is a device located in the orbits or stationed in space for receiving, processing and transmitting signals or generating data that is transmitted to the earth. Most of

the media particularly in Nigeria rely on it for one kind of information or the other. Through microwave relay technology, communications satellites provide communications to radios, ships, vehicles, planes and hand-held terminals, TV and radio broadcasting for which application of other technologies like cable is impossible.

Digital television: This is a new media technology that broadcast television signals using state-of-the-art digital technology with extremely flexibility that allows the transmission of perfect pictures in a number of display formats. It projects signals with infinitesimal loss of definition (Aina, 2003). This results to improved graphic displays from telex and videotext systems.

Web Television (WebTV): The “WebTV” turns a television set into a computer screen which provides access to the web and several sites of its own (Baran, 2009). Its features enhance television viewing of different programmes in the internet. WebTV receiving and viewing device requires constant connection to the internet even while the television is playing (Arens, 2004).

Moving Picture Expert (group audio layer 3) (MP3): This is a compressed music file that enables the download of music and broadcasting messages easily using the internet. According to Baran (2009) MP3 is a “compression software that shrinks audio files to less than a tenth of their original size which can be shared over the internet by email or websites or by music sharing services.” It permits the storage and redistribution of downloaded broadcast contents to different people with ease.

Digital Versatile Disc (DVD): Digital Versatile Disc (DVD) also called Digital Videodisc is an advancement of the Compact Disc (CD) which is used to store data and images with no loss of fidelity. It is a reliable medium for storing and distributing contents.

Compact Disc Read Only Memory (CD-ROM): This is a “high-density storage medium with high concentration of data, combined with full motion video and high-quality audio” (McMillan, 2002). It holds images, audio and digital data with high quality and versatility functions. It can be an external or internal component of any size of computer.

Web radio: This refers to the technology that delivers radio programmes directly to people online through the

internet. Web radio can only be accessed with some form of file compression software like real player, Winamp or any other streaming software and they are available for free download (Baran, 2009). Nevertheless it does not permit full-web radio experience to those with dial-up access to the internet because it is sluggish and exhibits poor sound system when listening.

Video conferencing: This technology enables live discussion between groups of people in different places by the use of linked telephone and video screens (Fitzgerald and Dennis, 2005). This requires special purpose meeting rooms that are equipped with cameras and video displays monitors to capture and display the video signal.

Mobile telephone: This is a wireless technological device that enhances communication. According to Bel-Molokwu (2000), it operates by using a sense of radio transmitters with limited coverage. Some of the device is even used to read newspapers and magazines and listen to and watch live media broadcasts.

Podcasting: This is an online media delivery system that enables people create syndicated online talk-show or radio programme with content of their choice. It is downloadable.

Teletext technology: This is a high-breed communication service that incorporates elements of television broadcasting and print media. According to Fidler (1997) it is a ‘one way, non-interactive electronic messaging device which is most popular among journalist’s that “permits a limited number of pages of text to be transmitted by television broadcasting stations with their programme emissions” (Agba, 2002).

Videotext technology: This is an advanced technology used to simplify the process of interactivity and accessing of larger information online. At the early stage of its development, the technology was known as view data particularly in the United Kingdom. However, it was later developed to connect users or subscribers easily to larger central databases via a telephone and special decoder box.

Lister *et al.* (2009) outlined the major features or characteristics of these media technologies as follows: Digitality (wherein information is processes as data converted into numbers). Interactivity (wherein significant opportunities to manipulate and intervene in media avail), hypertext (wherein texts provide a network of links to other texts that are outside, above and beyond itself).

Dispersal (wherein the production and distribution of information are decentralized, highly individualized and intertwined with everyday life) and virtuality (wherein participants in online communication feel themselves in discussions).

On the other hand, Barr (2002) conceptualised the new media as a tool for communication and commercial exchange of goods and services while McQuail (2005) defined the new media as “disparate form of communication technologies that share certain features apart from being new, made possible by digitalization and being widely available for personal use as communication devices”. Such technologies include Mashup, internet art, video games and virtual worlds, multimedia CD-ROMs, software, web sites including brochure-ware, blogs and wikis, e-Mail and attachments, electronic kiosks, interactive television, mobile devices, podcasting, hypertext fiction and graphical user interfaces. Akhagba (2014) gave the characteristics of these technologies as being digital, networkable, dense, compressible, interactive and impartial.

The benefits of ICT in media communication: Information and communication technologies have fundamentally altered the landscape, nature, scope and reach of media communication in the 21st century. Nwanne (2016) observed that:

“The emergence of new media has no doubt positively affected the quality and rapidity of communication to the eternal delight of mankind. In doing this, there seems to be convergence of both the old and new media. Such a synergy has improved the way we communicate. The result has been a wonderful expansion of communication possibilities across the world”

They facilitate and enhance the creation, processing, sharing and dissemination of information in the broadcast industry with immediate accuracy and at cheaper costs. Thus it bridges the gap between the time of an event and the time the public is informed about it. Consequently, ICT makes news processing and reporting instant and timely delivered to a target destination or consumer without the constraint of time and space.

The use of ICTs for media activities has packaged news production and dissemination. ICTs reduced manual operations in the media and eliminated human flaws or weakness thereby leading to informed growth in the media. It enhanced news processing and reporting, news geographic coverage and facilitated individual and collective access to information via, the internet and satellite. It has also, enhanced news gathering

(Adigwe, 2000) information categorization, definition and expression as useful pieces of information. Similarly it enables information users to have easy access to information at lower costs.

It is pertinent to note that, the media industry, like some other concerns, enjoys the services of ICT as mechanisms of control during the production, distribution and dissemination of information or news (Berniger4) albeit in a liberalised form. That is the technologies provide the platforms that enable the audience or media consumers to express their own ideas and opinions with regards to issues. Everybody is a direct competitor of established media institutions, processes and news generation and dissemination (Akhagba, 2014).

ICTs propelled media helps to establish contacts with the targeted audience and also sustain the contacts thereby making communication a participatory affair. This has led to the improvement of media broadcasts and/or programmes because these participatory audience, using the internet, criticise and/or evaluate such programmes and offer suggestions on how to improve them (McQuail, 2005).

THE CHALLENGES OF ICTs INTEGRATION INTO MEDIA COMMUNICATION IN NIGERIA

In spite of the monumental merits of integrating ICTs in media communication in Nigeria, the process is faced with numerous challenges or hindrances. These include lack of appropriate ICTs knowledge and skills among communication professionals, the prevalence of poverty or insufficient financial power to secure ICTs and lack of fund to enable communication dynamics, abysmal power supply that makes it impossible for the media industry to provide the needful online 24h services and the prevalence of uncoordinated Cyber knowledge and activities (Hosan, 2013). Other major problems hindering people’s acceptance and usage of media ICTs technology include lack of significant usage opportunities, no or difficult access to computers or networks, people’s intimidation by the new technologies due to lack of skill and lack of users friendliness and unattractive usage style.

Distilled from Hosan’s observations above, media technologies are very expensive and considering the prevailing global economic meltdown and high economic recession in Nigeria, most of the media formations in Nigeria cannot afford to provide and integrate these ICTs in their operations. This is a fundamental limitation to the use of new media technologies for media broadcasting in Nigeria (Wells *et al.*, 2000). For instance, Nigeria’s currency exchange rate of about N400 to \$1 has extremely

limited the importation, purchase and maintenance of these media technologies. This has led to the unavailability of digital receivers for signal reception in many television stations. Thus, television programmes consumers as constrained to either incur the additional cost of a set-top digital turning box or pay more for a true digital receiving set that they can afford (Baran, 2009).

Complementing this is the problem of low level of professional education; literacy and lack of expertise/skills in the field of the new information and communication technologies among media personnel. Danaan (2006) attributed this scenario to the general low level of education and literacy among the Nigerian population which inevitably created great scarcity of skill and expertise. This problem shall linger for a long time because there is no effort to establish and run ICTs institutes in Nigeria.

Adjunct to these challenges, the inability of media administrators and technicians to control media contents on the web like the internet, e-Mail and WebTV among others has also posed a problem to Nigerian media communication. Everybody, irrespective of ideas, orientation, education and knowledge has unregulated access to publish or broadcast anything in the World Wide Web (WWW). Similarly, the World Wide Web and its contents are accessible to all at any time. This laid the foundation of ethical challenges being faced by the Nigeria media and the increasing amorality among Nigerian teenagers and youths.

The above challenge is strengthened by the prevailing absence of precise formulation and implementation ICTs/media policies in Nigeria. Although, the country formulated with good Information and Communication Technology Policy, her various regimes chose to politicize their implementation.

The problem of epileptic power supply seriously hinders the integration of ICTs into media communication simply because the functioning of these technologies depends on effective regular power supply. The operational costs of using power generating sets as alternative and Nigeria's habitual problem of adulterated and/or scarcity of fuel and diesel offers no panacea. Thus, most of the media communication facilities are either spoilt or dormant. Epileptic power supply is therefore a threat to media technologies (Danaan, 2006) and a hindrance to media communication in Nigeria.

In addition, the negative impact of bureaucratic policies and practices on ICTs integration in media communication has being enormous. Policies initiated towards this direction such as the policy which seeks to ensure that all media industries and broadcasters are ICT compliant certainly passes through many desks. In the

process, the contents and letters of the policy are either altered or killed by the time it is accepted and approved. Sometimes getting such approvals is limited or delayed by bureaucratic bottlenecks and huge financial requirement.

CONCLUSION

There are pervasive reports on the benefits of information and communication technologies to all aspects of human activities generally. These benefits are relative to aspect of society and human development considered. This study re-examined these benefits in relation with media communication in Nigeria. The literature reveals enormous positive contributions of ICT to media communication in Nigeria. ICT has created opportunities for widespread information dissemination and timely delivery of news. It has also, provoked easy access to news and information at lower costs, ensures wider reach of media broadcasting, promotes media dialogue and democratisation of information generation and transmission, provides access to larger data and linked Nigerian media to international communication stream through satellite and internet networks among other things.

However, in spite of these benefits, the costs of ICTs, lack or low level of appropriate ICT knowledge and skills, negative employee attitudes toward new technologies and resistance to change, epileptic power supply, ineffective government policies, bureaucratic bottlenecks, the inability of media administrators and technicians to control media contents on the web and financial incapacity have combined to hinder effective ICTs integration in the Nigeria's media communication sector.

RECOMMENDATIONS

In view of the foregoing, this study preffers the following recommendations: The various levels of government in Nigeria should synergise to solve the problem of epileptic power supply in Nigeria. There is need for the establishment of a knowledge economy where the acquisition and use of ICTs knowledge and skills are promoted as a matter of government policy. Stakeholders in the media industry should seek funds from local and international financiers with government as guarantor to enable them obtain current media technology.

Government should organize a national loan scheme that addresses the financial needs of media proprietors. Proprietors and managements of media communication outfits should arrange for and grant approvals for

staff in-service training on ICTs related courses to enable them acquire appropriate ICTs knowledge and skills. The government should introduce waiver clauses on the importation of ICTs components in order to allow for their easy acquisition.

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