CHAPTER ONE: INTRODUCTION

The computer, mobile media, smartphone, Internet, social media and a raft of other new media and digital communication technologies are used by reporters in the course of their duties. These systems have not only transformed journalism practice, especially in the area of content production, but also changed forever the way this content is transmitted to the audience. From the primitive times, the need for more effective means of communication has continued to elicit technological innovations but the 21st century has brought a disruptive dimension to it.

Advances in technology have contributed to the exponential development of mass media. Fang (1997) attributes evolutions in communication technologies to man's desire to document things in more lasting configurations. On the development of the electronic media, MacBride, et al. (1981) provides a useful historical account:

> The photograph was invented by Edison early in the second part of the 19thcentury. Telegraphy was invented around 1840 by Sir Charles Wheatstone and Samuel Morse. Around 1895, Marconi and Popoff succeeded independently of one another in transmitting and receiving wireless messages. In 1906, Fessender transmitted the human voice by radio. Already, in 1904, the first photograph was transmitted by photo-telegraphic apparatus (Berlin system), while the first picture was televised in 1923.The first radio broadcasting networks were installed in the 1920s, television broadcasting began in the 1930s and regular transmission of colour television began in 1954 (p. 10).

Television and radio, since those early days of their invention, have witnessed a lot of transformation, occasioned largely by technological development that has culminated in the emergence of the Internet, with the attendant upsetting the traditional way of doing things. Online radio and television are now available in a convergence that allows feedback from the audience at little or no costs. Even then, the Internet and the social media may have become the norm these days, but humanity's insatiable crave to improve the means of communication are attestations that the end of technological inventions, innovations and improvements is not in sight yet.

1.1 Background to the Study

Broadcast media thrived globally before the coming of the internet and new media as a very significant medium for news, information, entertainment and social development although there were other media attempts before its advent. Globally, telegraph and print media have become common before radio's arrival followed later by television, internet and then, the new media amidst economic and sociopolitical issues across countries. An insight on communication technology and broadcast media at the global terrain is therefore, an important starting point to examining the use patterns of new media technology in the broadcast newsrooms.

1.1.1 Global Electronic Communication Technologies: The Telegraph

The Telegraph is a significant landmark in communication history and the maiden model of communication that could be transported from a large distance. The first electrical telegraph instrument was built in Germany in 1833 and in 1844 Morse established a telegraph line from Washington to Baltimore. Radio and television were acclaimed to have developed from the telegraph as "contemporary media age can trace its origins back to the electrical telegraph" (Lule, 2012, p.15). The electronic revolution in communication came with the development of the telegraph, telephone, and radio. Peters (Jensen, 2010) credited the telegraph with giving communication a recognition from the last half of the nineteenth century as 'a general category of human activity'(p.4) as before this time, letters and periodicals took hours, days and even months to arrive at their destination making most information irrelevant.

The advent of the telegraph initiated a change in the communication process as messages were transmitted instantaneously and more effectively. The immediacy in communication was provided by the telegraph (Starkey, 2008) which revolutionized long-distance communication system. Bittner (1989) explains the technology works through mechanical transmission of short and long sounds-dots and dashes which represent the letters of the alphabet, which a skilful telegraph operator could easily "send or receive 20 words per minute, although only those centers equipped with telegraph lines could send and receive messages" (p. 5).

In fact, the functions of the telegraph then were similar to roles performed by the internet, computers and mobile phones of today, which shows that technology can be refashioned to suit communication purposes. The advent of the telegraph initiated more developments in the process of communication and "encouraged scholars and other commentators to think of the diverse practice of social interaction in the flesh, via wires and over the air…" (Jensen, 2010, p.4). The developments in telegraphs brought about patents in radio, prints, television, telecoms, Internet, new media, and media convergence as we are experiencing today. This affirms McLuhan (1964, p.1) assertions on the essence of technological development that, "the message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs." Since the telegraph gave birth to the electronic media of communication as we have them today, including new media technologies and mobile media technology, it can be regarded as the life-wire of communication technology.

1.1.2 Development of Radio: A Global Perspective

Radio was the next electronic media to emanate from the development of telegraph following wide experimentations by early patents because of some limitations of the telegraph. There are diverse accounts as regards the beginning of radio globally, though each points to telegraph as contributory to

its origin. William Cooke and Charles Wheatstone developed the first commercial service electric telegraph which began operation in England in 1838 (http://earlyradiohistory.us/sec002.htm). Radio started operationally with Samuel Morse's (American Morse Code) electromagnetic telegraph in 1844 (Baran, 2009, p. 193-194). The electromagnetic telegraph was widely adopted throughout the United States, while a more consistent version was developed in Europe, known as Continental Morse Code. The global use of radio with the American Morse Code system implies that a single standard telegraphic code was needed in order to avoid confusion. The advent of the Continental Morse (International Morse) however, overtook the former radio communication attempts (http://earlyradiohistory.us/sec002.htm).

The actual radio technology however, started in 1864 with patent by James Clerk Maxwell, a Scottish Mathematician, and physicist who theorized that when electricity passes through a wire it gives off invisible waves under certain conditions. Many other people also contributed to the development of radio across the globe: Heinrich Hertz, a young German proved Maxwell's theory in 1887; while Professor Popov, a Russian Scientist experimented with wireless transmission around 1895. Thereafter, Guglielmo Marconi an Italian inventor through his "wireless telegraphy,"(http://earlyradiohistory.us/) in 1895 through 1899 successfully transmitted wireless signal in a radiotelegraphy experiment across two miles (Spiker, 2004). Even in its infancy, the Federal Communication Commission affirms that Guglielmo Marconi's radio apparatus was widely believed to have contributed to the survival of over 700 people in the Titanic disaster in 1912. They would have perished if ships at sea were still using carrier pigeons to transmit over large distances (FCC. gov). Lee DeForest and John Ambrose Fleming in 1906 developed the vacuum-tube transmitter which allowed for amplification and detection which led to the first transmission of voice and music (Spiker, 2004, Bittner, 1989, Lule, 2012).

Several other inventors from different parts of the world contributed to further development of the radio, including Nikola Tesla, Amos Dolbear, Harold Power, Charles David Herrold, Reginald Fessenden and William Crookes, Oliver Heavyside, Edwin Howard Armstrong, Ernst Alexanderson, Philo T. Farnsworth, and David Sarnoff. Baran (2009) and Bittner, (1989) agree that, Reginald Fessenden in 1906 used Alexanderson's Alternator to become the first to transmit a programme of speech and music while Edwin Armstrong in 1930 initiated frequency modulation which led to the invention of a new kind of radio called FM radio (Whetmore,1985). Edwin Armstrong also patented other broadcast technologies called regeneration, and the superheterodyne circuit, which is a means of receiving, converting and amplifying weak, high-frequency electromagnetic waves. This further enhanced the development of the radio and its inventions, considered by many to provide the foundation for cellular phones (FCC. Gov).

Apparently, radio has served the purposes of information and entertainment right from the early days to date. Amplifying vacuum tubes revolutionized radio receivers and transmitters by mid-1920s and with the advent of voice broadcasting and US government takeover of the industry in the World War 1, radio matured quickly (Bittner, 1989). Early radio was used for military communication, but soon the technology entered the home. However, with more developments in technology, radio continued to spread across nations until it got to Africa and Nigeria in 1932 through the colonial government as discussed in chapter two.

1.1.3 Development of Television: A Global Account

The evolution of television started alongside the radio as inventors conceived the idea of television long before the technology to create it appeared. Early pioneers speculated that if audio waves could be separated from the electromagnetic spectrum to create radio; television waves could equally be separated to transmit visual images (Lule, 2012). As in the radio, the invention of the television was the result of the works of many individuals in the late 19th century and early 20th century. Individuals and corporations competed in various parts of the world to deliver television which superseded previous technologies.

The concept of television can be traced back to 1839 when Alexandre Edmon Becquerel, a French Physicist, discovered the electrochemical effects of light (Bittner, 1989, p. 112). In fact, several technological developments set the stage for television during the late 1800s. Bittner (1989); Lule (2012); and Baran (2009) concur that the cathode ray tube and the scanning disk are two key technical developments in the late 1800s that played a critical part in the evolution of television. The cathode ray tube (CRT), invented by German physicist Karl Ferdinand Braun in 1897 was the forerunner of the television picture tube. It had a fluorescent screen that emitted a visible light (in the form of images) when struck by a beam of electrons. In fact, the two types of primitive television systems: mechanical systems and electronic systems evolved from the cathode ray tube and the scanning disk (Lule, 2012).

Mechanical television was the first type of television invented through the efforts of many scientists. Between 1843 and 1846, Alexander Bain introduced the facsimile machine for facsimile transmission systems for still photographs which pioneered a method of mechanical scanning of images. Frederick Bakewell demonstrated a working laboratory version in 1851. Willoughby Smith discovered the photoconductivity of the element selenium in 1873. In 1876, George Carey, a Boston civil servant, “envisioned the complete television systems, putting forward drawings for a “selenium camera” that would enable people to “see by electricity” a year later” (Lule 2012, p.383).

Another key television invention of the 1880s was the mechanical scanner system invented by German inventor Paul Julius Gottlieb Nipkow patented in 1884. The scanning disk was a large, flat metal disk that could be used as a rotating camera. Bittner (1989) observes that "Nipkow transferred the light passing through each hole into electrical energy and transmitted this electrical energy through wires to a receiver that also had a synchronized disc connected to a transmitter"(p. 112). In the mechanical process, when the disk is rotated, the light passed through the holes, separating pictures into pinpoints of light that could be transmitted as a series of electronic lines. The number of scanned lines equalled the number of perforations, and each rotation of the disk produced a television frame (Lule, 2012, p. 383).

Nipkow's scanning disk served as the groundwork for further experiments on the transmission of visual images for several decades. Boris Rosing a Russian scientist in 1907 used both the CRT and the mechanical scanner system in an experimental television system (Lule, 2012, p. 383). John Logie Baird a Scottish inventor also employed the Nipkow disk in his prototype video systems in the 1920s when amplification made television practical (Wikipedia.org, p.2). The technical disadvantages of the mechanical television system is low resolution that cause fuzzy images; and "the use of a spinning disk limited the number of new pictures that could be seen per second, resulting in excessive flickering" (Lule, 2012, p. 388). In essence, mechanical television produces only small images and was the main type of television until the 1930s.

The next breakthrough in electronic television came in the 1920s and was credited to Vladimir Zworykin, a Russian immigrant and Philo Farnsworth, an American. In 1923 Zworykin patented the 'iconoscope television pickup tube' a new device that used electrons to detect and transmit pictures, instantly and this ended television's mechanical era (Bittner, 1989, p. 113). Electronic television was first successfully demonstrated in San Francisco on September 7, 1927, through a system designed by Philo Taylor Farnsworth that scanned images with a beam of electrons, which is regarded as the direct ancestor of modern television (Baran, 2009). The world's first television station WRGB (formerly called W2XB**)** started in 1928 by the General Electric facility in Schenectady, New York (Wikipedia.org, p.3). Television broadcasting began as early as 1928 in Washington, DC when the Federal Radio Commission authorized inventor Charles Jenkins to broadcast from W3XK, an experimental station in Maryland (Lule, 2012)). In the 1930s, however, regular analogue television broadcasting began in some parts of Europe and North America. By the end of the decade, there were roughly 25,000 all-electronic television receivers in existence worldwide, the majority of them in the UK (*W*ikipedia.org/).

Television thereafter, rapidly replaced radio as the new mass medium following the World war. It changed from radio formats developing new types of shows, including the magazine-style variety show and the television spectacular during its "golden age" in the 1950s (Lule, 2012, p.388). Unlike today, early television program formats were based on network radio shows as newscasters simply read the news as they would do during a radio broadcast; while the network relied on newsreel companies to provide footage of news events (Lule, 2012). The media terrain changed during the early 1950s, as television programming branch out from radio broadcasting, borrowed ideas from theatre to create acclaimed dramatic anthologies such as *Playhouse 90* (1956) and *The U.S. Steel Hour* (1953) as well as producing quality news films to accompany coverage of daily events (p. 388).

In fact, the technological advancements in television progressed after subsequent experimentation by scientists and inventors to develop from electronic television to colour television in 1954. The production of television news was achieved using analogue media technologies just as in radio until the advent of the internet and digitalization. Meanwhile, improvements in definition, the advent of colour pictures and subsequent developments increased the vividness of the perception and the range of television use. Digitalization subsequently, initiated the introduction of different type of television, including terrestrial television, smart television, internet television, cable television, 3D television, HDTV and satellite television among others. Television was eventually introduced in Nigeria in 1959 with WNTV Ibadan being the first in Africa as noted in the next chapter.

The internet advent of 1969 and digitalization thereafter, lead to the introduction of mobile technologies, social media and recently, new media technologies which completely turned around the news media. The new media technologies are technologies of the new media that offers the users a different experience incomparable to the analogue system. It introduced most technological trends in digital broadcast equipment such as digital cameras, digital editing suites, digital recorders, and digital transmitter among others which changed the newsroom culture of broadcast media industry. Some new media technologies enable video conference, mobile chats, mobile interview, audios, videos and graphics to be displayed on the screen screen-touch or remote-controlled devices employed in programme transmission by foreign news channels. In essence, the introduction and application of new media technologies in media practice holistically affected contemporary practices in broadcast newsrooms in such areas as news gathering, processing, editing, publication, analyzing and storing of data or information in mass media.

The global impact of the new media is so obvious and highly evident in the rate of adoption of new media technology in Nigeria. Anim (2013) reported ITU's observation in 2012 that there were more than 6,630,200 Facebook users in Nigeria "that outstrips the daily circulation of all newspapers in the

country- which is well under 300,000- in staggering fashion"(p. 13). According to the International Telecommunication Union (ITU), Broadband Commission Report titled *The State of Broadband 2014-Broadband for All*, in 2013 Nigeria had a mobile broadband penetration rate of 10.1 percent occupying the 93rd position in the global ranking; and equally ranked 101st position in the worldwide percentage of individuals using the Internet. However, on the percentage of individuals using the Internet in developing countries, the country's ranking rose to the 54th position, that is 38.0% (ITU Report 2014) as against 63rd position or 32.9% in 2012 (ITU Report, 2013). A report on *ThisDay* online newspaper equally indicates that Nigeria has no fewer than 154.1 million mobile subscribers as at February, 2017 with a teledensity of 110.9% (Okonji, 2017). This implies that so many people are actually using some new media technologies in the country to a great extent.

At the global level, "social media and messaging apps became more central to more people in 2015. Facebook reached a billion users a day for the first time, Instagram broke through 400 million users and despite its difficulties, Twitter still reaches around 350 million active users each month" (Newman, 2016, p.24). Today, there is a growing dependency on smartphone globally as the 2017 Reuters Institute *Digital News Report* shows that, on average across 36 countries, 46% of smartphone user's access news from the bed and 32% in the bathroom or toilet. Countries like the US have even "reached the tipping point with smartphones now preferred by as many people as computers for news" (Newman, 2018, p.37). One can rightly claim the existence of a continuous information and technological intensification across the world today.

Although some Nigerians use new media technology with an increased access to the Internet as testified to by the above reports notwithstanding, the extent of this use by the broadcast newsrooms and in journalism practice has not been adequately ascertained. Media industry in sub- Saharan Africa seem to be slow in adjusting to the Internet and the global ramifications produced by the new media technology unlike journalists in the Western World who are already accustomed to the tremendous growth in new media technologies. This elucidated the need to also explore the hindrances to effective use of new media technology in the region; and make recommendations on how to fill up the gaps in technology use patterns- between the third world and the Westerners. Hinged on the premise that the digital divide is no longer a matter of who has access to technology; emphasizes should be on adoption and availability. The gap between those who are able to utilize technology effectively and those who lack the skills and the knowledge needed to do so should therefore, principally be considered concomitantly (Bonfadelli, 2002).

Recent merger of new media technologies also culminated into media convergence, which is "the coming together of the media" (Fagerjord, 2010, p. 188) or "the coming together of computing,

telecommunications and media in a digital environment" (Pavlik & McIntosh, 2013, p. 8). It has equally become central to newsroom activities in developed societies and has been shown to increase effective communication. Today, with the application of media convergence, media organizations, "no longer distribute content solely through traditional channels, but instead deliver it via the Internet, satellite, and a host of other digital technologies (Pavlik and McIntosh, 2013, p. 14). In what Jenkins (2006, p. 19) described as the migratory behaviour of media audiences, convergence enables audience members to search for information or entertainment in any medium and from any source.

New media technologies have greatly changed media use patterns in print and broadcast newsrooms around the world caused by sudden increase in information and communication technologies. But the argument that "you cannot transmit on the analogue platform to digitized nations, if you must remain competitive you must acquire the latest technology to be relevant" by Dokpesi (Agbenson, 2011, para 16) is a truism in the light of the state of new media use in Nigeria. On production and other operations of the media before the ICTs revolution, Ekhareafo, Asemah & Edegoh (2013, p.5) pointed out that print media operation was cumbersome and likewise broadcast news production. They agree that ICTs have simplified the complicated process of journalism as journalists now type their news reports on the computers, send to the news editor who will recall them on his/her computer and do all vetting on the computer. The sub-editors also recall the available news report on their computers or Videos Display Terminal (VCTs) and handle the editing and all the formatting work right on the computer. The above authors further note that modern lithographic machines and printing machines are digital, thereby eliminating time wasted. The machines print faster, collate, count and do other necessary finishing.

In addition, the question of whether old media technologies are driven out of existence by new media technologies has long generated debates in academic and scholarly research with no definite answer. This being the case, a key concern of the current study becomes that of finding out the extent to which there is media convergence in broadcast newsrooms as well as the extent to which the above picture of the prevalence in the use of new media technologies both in broadcast practices and in individual use is reflective of practices in broadcast journalism and broadcast newsrooms in South East Nigeria. The study, thus explored the intersections of new media technologies, media convergence, journalism, media practice and technology use in order to enhance an understanding of the impact of new media technology for broadcast media newsroom practices. The study did this by examining the extent of use of new media technologies by broadcast media industries in South East, Nigeria to produce media contents, news and current affairs programmes, and so on in their bid to remain relevant in a fast-changing technology-driven world.

1.2 Statement of the Research Problem

Throughout the last two decades, one of the most widely debated notions in the field of media studies has been the new media. Scholarship has revealed that new media technologies create many new opportunities including interactivity and participation, emergence of citizen journalism, cross-media and multimedia journalism, promotion and distribution of programming across a wider array of platforms and the emergence of media consumption which favours increased use of interactive and participatory digital platforms that are not tied to a single location or confined to the display of a single type of media among other opportunities (Deuze, 2006; Baran,2010; Erdal, 2011; Drulă, 2014). Although the concept of new media technology is now ubiquitous in both scholarly and popular publications, it appears the question of how and to what extent, the broadcast media of radio and television use new media technologies in newsroom practices in South East, Nigeria has not been adequately investigated – a reason for the lack of any visible policy in this area in the operations of broadcasting stations. It was therefore important to examine the patterns of use of new media technologies in broadcast newsrooms across the five states of the South East, Nigeria so as to discover any obstacle to the application of new media technologies for effective media practice, considering the vista opportunities of new media technologies in newsrooms particularly for broadcasters in more advanced countries of the world.

1.3 Objectives of the Study

The broad objective of the study was to investigate the pattern of use of new media technologies in broadcast stations in South East, Nigeria. Consequently, the study was informed by the following specific objectives:

1. To determine the new media technology that is predominantly available in the selected broadcast newsrooms in South East, Nigeria.
2. To ascertain the extent of use of new media technologies in the operations of each broadcast newsroom in South East Nigeria.
3. To assess the differential in the usage pattern of new media technologies in selected newsrooms in South East, Nigeria
4. To discover the most popularly used new media technologies in each broadcast newsrooms in South East Nigeria?
5. To explore the factors affecting the use of new media technologies among media practitioners in selected stations in South East, Nigeria.
6. To discover the dispositions of media practitioners towards the use of new media technologies in newsrooms activities in South East, Nigeria.

1.4 Research Questions

1. Which new media technology is predominately available in the selected broadcast newsroom in South East, Nigeria?
2. To what extent does each broadcast newsroom use new media technologies in their operations in South East Nigeria?
3. What is the differential in the usage pattern of new media technologies in selected newsrooms in South East, Nigeria?
4. Which is the most popularly used new media technology in each broadcast newsrooms in South East Nigeria?
5. What factors affect the use of new media technologies among media practitioners in selected stations in South East, Nigeria?
6. What are the dispositions of media practitioners towards the use of new media technologies in newsrooms activities in South East, Nigeria?

1.5 Scope of the Study

The research focused on the use pattern of new media technologies in broadcast newsrooms in the South East geopolitical zone of Nigeria and encompasses all the broadcast stations of radio and television operators from the five states of the South East. Any other geopolitical zone could have been studied, but the researcher took a purposive decision to delimit the scope to the South East, in the belief that other researchers might choose to conduct similar studies in those regions that were not covered.

The South East is one of the six geopolitical zones that house the 36 states (excluding the Federal Capital Territory (FCT) Abuja into which the country has been carved up. The other five geopolitical zones are North East (NE), the North-Central (NC) or the Middle-Belt Zone (MB), the North- West (NW), the South-West (SW), and South-South Zone (SS). The six geopolitical zones were created during the regime of President Ibrahim Badamasi Babangida in 1996. It is interesting to note that these zones have not been entirely carved out based on geopolitical location, but rather states with similar cultures, ethnic groups, and common history were bunched together in the same zone. This explains the reason why regions in Nigeria are geopolitical in nature, as well as evidence of different backgrounds, unique features and unequal human development level. The zonal breakdown comprises:

1. North Central (Nigeria): known as Middle Belt; includes Benue State, Kogi State, Kwara State, Nasarawa State, Niger State, Federal Capital Territory and Plateau State.
2. North East (Nigeria): Adamawa State, Bauchi State, Borno State, Gombe State, Taraba State and Yobe State.

3. North West (Nigeria): Jigawa State, Kaduna State, Kano State, Katsina State, Kebbi State, Sokoto State and Zamfara State.
4. South East (Nigeria): known as former East-Central State of Abia State, Anambra State, Ebonyi State, Enugu State and Imo State.
5. South-South (Nigeria): known as former Southeastern State includes Akwa-Ibom State, Cross-River State, Bayelsa State, Rivers State, Delta State and Edo State.
6. South West (Nigeria): includes Ekiti State, Lagos State, Ogun State, Ondo State, Osun State, and Oyo State.

South East region of Nigeria made up of only the five states of Abia, Anambra, Enugu, Ebonyi and Imo are home to the Igbo speaking people of Nigeria and is located in the eastern mangrove forest portion of the country. Shielded from large-scale invasion during the Jihad and conversion to Islam by the mangrove forest, the inaccessibility of the region, however, retarded internal mobility and delayed contact with early European explorers, traders and missionaries (Uche, 1989, p. 14). The influence of western education in Igbo land today has further guaranteed the availability of a lot of schools, banks, markets, hospitals, industries and so on.

1.6 Significance of the Study

Recent years have seen a plethora of research related to new media, new media technologies and media practice (e.g., Ekhareafo, Asemah & Edegoh, 2013; Harcup, 2011; Vobič, 2009; Poel & Borra, 2012; Hansen, 2013; Hindman &Thomas, 2013; Jacobson, 2012; Antony & Thomas, 2012; Himelboim & McCreery, 2012). However, little or no attention has been paid to the use of the ethnographic method, especially observation, in the study of the usage pattern of new media technologies in media practice of broadcast stations in South East Nigeria. Political and media pundits (Skinner, Compton & Gasher, 2005; Jenkins, 2006; Okigbo & Hyden, 2004; Trippi, 2004) believe that information is power and the news media are the midwife of democracy. Researchers have also projected the indispensable role of information and education to democratic governance (Udogu, 2008) and transparency (Norensdon, 2008).

Accordingly, in the practical sense, this survey was important as it mapped the technologies in use in broadcast newsrooms across the South East and, thereby, provided a score-sheet of the stations' level of preparedness for the much campaigned-for digital switch-over mandated by the International Telecommunication Union ITU. Equally, new media technologies and convergence are making media practitioners in other countries to be extremely effective and socially responsible. Hence, if the technologies in South East, Nigeria broadcast stations are mapped and their application and employment patterns in newsrooms well documented, recommendations for more dependable

performance when taken will make the Nigerian broadcast practitioners highly efficient and socially responsible to also foster democracy and growth.

This study was as well significant because its findings could contribute to the growth of broadcast journalism practice in Nigeria. It will make clear the vast opportunities intrinsic to new media technology used in broadcast stations with regards to news production and dissemination of news and current affairs content. The utilization of new media technologies has been credited by Ekhareafo, Asemah & Edegoh, (2013, p. 5) with the transformation of media houses towards profitability, improved performance and quality of production, the emergence of the location-based journalist, among others. Embracing new media technologies in broadcast media operations could prove to be cost-effective in the gathering and dissemination of information by broadcast media houses and media practitioners in South East Nigeria.

Theoretically, findings from the research should hopefully initiate ideas for further inquiry and investigations as well as function as a possible contribution to the consortium of knowledge in the field of new media technologies. The social media (Twitter, Facebook, Whatsapp, YouTube and Skype) as a case in point changed the relationship between the broadcaster and his/her audience since its debut in 2004. The new media technology connectivity provides an immediate, informative, intelligent, interactive platform for discussion and debate and has also helped to bring closer communication contents and receivers, making for swift feedback and reduction in communities. This study should also help bring to the fore the exact role of social media in news production as well as highlight issues regarding their effective use in broadcast newsrooms in South East, Nigeria. These opportunities should push mass communication educators to modify the course contents in communication schools to reflect the new converging media technologies. This will further, assist in graduating new media compliant journalists and media practitioners to help boost the utilization of new media technologies in the broadcast industries in Nigeria.

1.7 Definition of Terms

For the purposes of clarity, the following terms used in this study were defined:

1. **Adoption:** The classic definition of the term "adoption" is found in Rogers & Shoemaker (1971) as "making full use of a new idea as the best course of action available." In this study, adoption implies the decision to use new media technologies in media practices by media practitioners in broadcast newsrooms in South Eastern Nigeria to enhance media performance and foster development.

2. **Blog: A** blog is a discussion website that may be informal that is published on the Internet. It consists of distinct posts. Blogs in this context implies websites where broadcast journalists can post their thoughts about various news topics and discuss them with others.
3. **Broadcast Journalism:** Broadcast journalism is regarded as the act of gathering, assessing, creating, and presenting news, information and current affairs programmes in South East Nigeria through broadcast media.
4. **Change:** This means embracing new practices or alternative methods of news gathering and dispersal**.** But in this study, the change means the utilization of the new media, including the social media and mobile technology by journalists, media practitioners and operators in South East Nigerian in sourcing, producing and disseminating news contents.
5. **Disposition:** Dispositions are regarded as the natural tendencies of each individual to take on a specific position in any field. Someone's disposition is the way they tend to behave or feel about a particular condition. It relates to the willingness to do something. In this context, disposition means the level of willingness as well as the positive or negative way media practitioners think and feel with regards to the use of new media technologies in newsroom activities in southeastern Nigeria.
6. **Journalism Practice:** In operational terms, journalism practice means the way employed by media practitioners in South East Nigerian newsrooms in doing news work; for instance, the manner in which reporters and editors carry out activities like newsgathering, editing, and dissemination.
7. **Media Convergence:** This refers to the consolidation of media content across different media such as radio, TV, newspaper, magazine and online**.** It is the practice of sharing, collaboration and partnership among different newsrooms to deliver media content to the audience anytime, anywhere, and on demand. In this study, media convergence is used interchangeably as convergence journalism, cross-media, digital journalism, multimedia, and new media technologies. This study also views media convergence as the status of collaboration and partnership between broadcast media organizations in South East, Nigeria in terms of capacity sharing and technologies in newsrooms.
8. **Media Practice:** Media practice implies activities that are directly oriented to the media and actions whose possibility is conditioned by the prior existence, presence or functioning of the media. Media practices in this study are defined as the ways that media news, products or contents are produced and then broadcast by broadcast media stations to audiences in South - East Nigeria.
9. **New Media Technologies:** They are technologies of the new media that are internet, web-based and digital. This comprises of new media technologies such as digital broadcast technologies; hardware; software; social media platforms and Internet blogs; computers,

Internet, smart mobile technologies like smartphones and iPad; multimedia platforms; websites; news portals and online news portals and digital broadcasting.

10. **Old Media Technologies:** The old media technologies are traditional means of communication and expression that have existed since before the advent of the internet and new media such as television, radio and every analogue broadcast technology.
11. **Social Media:** Social media is "an umbrella term that is used to refer to a new era of web-enabled applications that are built around user-generated or user-manipulated content, such as wikis, blogs, podcasts, and social networking sites" (Pew Internet & American Life Project, 2010). Social media in this study implies various digital tools and applications that facilitate interactive communication and content exchange among and between the media and its audience; e.g. Facebook, Twitter, YouTube, Whatsapp and Internet blogs.
12. **Social Networks:** A social network is a website that allows people with similar interests to come together and share information, photos and videos. Some people connect on social networking for personal or business endeavour. Those who engage on social network sites as a personal endeavour interact by using various social media platforms to discuss their lives and interests. Social network in this study refers to websites such as Facebook, Whatsapp, YouTube and Twitter that enable news media practitioners to engage and keep in constant contact with their audiences online.
13. **Usage Pattern:** This refers to the act, manner and amount of using something. Here, we are referring to the act, the amount and manner of using new media technologies in radio and TV stations newsrooms in South East, Nigeria.

CHAPTER TWO: LITERATURE REVIEW

This chapter centred on a review of the related literature concerning the study: **"New Media Use Patterns in Broadcast Newsrooms: A Study of Selected Stations in South East, Nigeria."** It reviewed works of literature in such areas as new media technologies, Nigerian broadcast media, communications and information technology, computer technology, journalism, communication theories, development and media convergence. Specifically, the review encompassed the former phases of mass media, new media and media convergence, the various categories of new media technologies, the various sorts of convergence, and its potentials for fostering development, social media, citizen participation, new phases of journalism, technology use patterns, communication theories and an overview of the Nigerian media system. The various obstacles to new media adoption were also reviewed. The chapter ended with a discourse of the theories that undergird this study under the theoretical framework.

2.1.1 Broadcast Media and Media Technology Landscape in Nigeria

At any age, new technologies are easily among the most noticeable signs of changing times. In this 21st century, new media technologies include the Internet, social media, satellite and cable television, telecommunications, personal computers (PC), new office technologies, word processors, and so on. Satellite technology and subsequent inventions such as the Internet and new media technologies can be said to have eliminated the barriers of time and space, thereby changing forever the processes of communication. The world can, therefore, be said to be in a process of structural transformation, a process that is not only multidimensional but one which as Castells (2007) observes, is connected with the coming into being of a new technological paradigm, that is grounded on information and communication technologies. The media world has witnessed a kind of merger of technologies or convergence in the 21st century, with the new media diffusing at high speed in the society. Today, we are in the era of Web 2.0 of media convergence, social media and the arrival of smart digital technologies such as the smartphones with high definition operating systems that are increasing, displacing the PCs, and even laptops.

For a study of this nature however, concerned in part with accounting for the myriad of ways, developments in new media technologies have impacted contemporary broadcast newsrooms and broadcast journalism practice in Nigeria with concentration on the South East, any discussions of the new or the more conventional media technologies that marginalize the broadcast media terrain in Nigeria will amount to media studies without memory. Providing an account of the media environment in Nigeria will, in other words, help in contextualizing our understanding of the use pattern of new

media technologies in broadcast newsrooms in South East Nigeria in particular and their impact on broadcast media practices.

Nigeria as a developing country has a fairly well-established media industry (Uche, 1989; Jibo, 1996) which since the 1920s has become a vibrant institution (Adesoji, 2006). Some of the initial factors that contributed to the evolution and growth of the media in Nigeria include the increased literacy level and later the awakened consciousness of some African intellectuals whose interests in social, political and economic matters fuelled a renewed zeal to contribute to the national discourse through the mass media (Sobowale 1985, p. 30). Missionary activities on West African coasts, especially Freetown, were also the bedrock of media evolution in Nigeria (Omu 1978). Newspapers, for instance, served as platforms for mobilizing the people, spreading nationalist awareness and opposing the worst manifestations of colonial subjugation (Omu 1978, in Ismail, 2011).

The early Nigerian press availed the reader of the most distinguished intellectual forum in the Nigerian history, one in which the high standard of debate, discussion, the quality of thought and expression did not fail to fascinate the modern reader. The mass media, especially the press, played a pivotal part in the Nigerian society by aiding in promoting political awareness, sensitizing the populace, moulding and steering public opinion (Adesoji, 2006; Omu, 1978). The attainment of independence and brutal military regimes did not snuff out the flame of the readiness of the mass media in Nigeria. When the regime became too hostile to the media, not even the peril of imprisonment was enough to deter journalists who in some cases went underground and resorted to guerrilla methods in order to perform the business they believed strongly in (Adesoji, 2006).

The history of broadcasting in Nigeria, however, took a different dimension from print. Hinged on the belief that the historical evolution of media practice in Nigeria has always been closely associated with the nationalist consciousness against British colonialism and the politics of resistance against internal authoritarian regimes, Tsaaior (2011) categorized the Nigerian media practice into two: the traditional analogue era and the postmodern technology era. The next two sections take up the evolution of radio and television with a focus on this aspect of the categorizations.

2.1.1.2 Radio in Nigeria

Unlike the newspaper publication which began in Nigeria in 1859, radio broadcasting started in the country in 1932. This happened sequel to the decision of the British colonial government to link its West African colonies with the “mother-country” Britain. Radio broadcasting was initially presented as an experimentation of the Empire Service of the BBC. Nevertheless, the increasing popularity of the rediffusion system in Nigeria made it expand to other regions of the country besides Lagos. This

method of broadcasting known as "wired wireless" differed from the wireless broadcasting which is the transmission of programmes through radio waves (electromagnetic waves). Milton at (Uche, 1989, p. 36) describes how the re-diffusion system was, initially technically developed in Nigeria:

> The programmes in this system are distributed by landlines from the studio to the various listening boxes for which the subscribers pay a fee. Amplification is needed in some locations and provided by a makeshift and homebuilt apparatus. This system caught the interest of Nigeria and was expanded to include stations in Ibadan, Abeokuta, Ijebu Ode, Calabar, Port Harcourt, Enugu, Kano, Kaduna, Jos and Zaria (p. 36).

The programmes were, in terms of contents, orientation, and styles of presentation that of BBC's and so were, consequently mostly alien to the experience of their Nigerian listeners (Pate & Abubakar, 2013, p.2; Ojebode & Akingbulu, 2009, p. 205). In other words, the re-diffused programmes had no direct relevance to the basic needs and lifestyles of the indigenous audiences as they were intended to fill the listening needs of serving colonial administrators. It is, therefore, evident that the original purpose behind the initiation of radio in the country was to convey the messages of the colonial rulers to the people of Nigeria. Under this dispensation, there was equally a gap in communication as the programme producers were not only unfamiliar with the Nigerian culture; this limited form of radio broadcasting did not also offer access to many Nigerians. Duyile (1987) notes that by 1939, the Radio Distribution Service had less than 1000 subscribers and over 2000 licensed receivers. By 1944, distribution stations had been opened in Lagos, Ibadan, Kaduna, Enugu, Calabar and Port Harcourt. Despite this major limitation of being out of the reach of most Nigerians at the time, radio could be said to have diffused quite rapidly as a means of communication.

Full broadcasting services, however, began in the country with the establishment of the Nigerian Broadcasting Service (NBS) in 1952. The NBS was later transformed into the Nigerian Broadcasting Corporation (NBC) in 1956. The passage of a new colonial constitution in 1954 led to the establishment of regional broadcast stations (radio and television); first, in the West in 1959; then the East in 1960 and, lastly; the North in 1962, to champion the course of their regions (Pate & Abubakar, 2013, p. 2).

The Radio Distribution System (Re-diffusion) was subsequently succeeded by Radio Nigeria that was established through the Nigerian Broadcasting Corporation (NBC) Incorporated and operates under Nigerian Broadcasting Corporation Ordinance of 1956. During this period, Radio Nigeria was divided along the lines of former three Regions and managed by the concerned Regional governments with main headquarters in Lagos. The federal government subsequently set up a TV station in 1962 and the NBC began to expand in 1967 and built a station in each state. This development was reversed by a policy change in the 1970s, as the government ordered the transfer of most NBC stations in the states, except for those in Lagos, Ibadan and Enugu, and added the Kaduna station of the Broadcasting

Corporation of Northern Nigeria. The NBC later became the Federal Radio Corporation of Nigeria (FRCN) charged with the control of all the federal radio stations.

In 1984, however, the military seized power again and scrapped the new federal radio stations as its economic policy, Structural Adjustment Programme (SAP), includes steps to cut down on state subsidies. This led to the introduction of the concept of news commercialization in the state broadcast stations. In 1992, there was a reversal of policy in what was until then absolute government control of the broadcast media in the country. The military regime of Gen. Ibrahim Babangida promulgated Decree no. 38 which liberalized the broadcast sector and allowed for the establishment of private commercial broadcasting. The decree established a regulatory body, the National Broadcasting Commission (NBC), which began work in 1993 and issued the first set of licenses the same year as well as opened the door to private participation in the ownership and operation of broadcasting stations. This policy actually broke the 60 years of the government monopoly on broadcasting in Nigeria and ushered in privatization and media democratization.

2.1.1.3 Television in Nigeria

The history of television in Nigeria followed much the same pattern as that of the radio. While it was the Federal Government that started the first radio broadcasting station in the nation, the regional governments were the first to venture into television broadcasting (Uche 1989, p. 61). Television started in Nigeria on October 31, 1959, with the establishment of Western Nigeria Television (WNTV) in Ibadan in the former Western Region. WNTV was established by an Act of the region's House of Parliament with the initial intention of improving formal and informal education. Betiang (2013, p. 2) recalled that during the commissioning of WNTV in Ibadan, Awolowo regarded television as a medium for "mass information and instruction," as well as "a powerful influence for good" that would make our country greater. The establishment of WNTV produced an immediate reaction from the Eastern and Northern regions. Eastern Nigeria Television (ENTV) followed with its own television station on October 1, 1960, while Radio Kaduna Television (RKTV) took off in March 1962, as television service of the Broadcasting Company of Northern Nigeria (BCNN) (Betiang, 2013, p. 2).

Folarin (2000) categorizes the timeline for television broadcasting in Nigeria into four distinct phases. The first phase took off with the establishment of the Western Nigeria Television/Western Nigeria Broadcasting Service (WNTV/ WNBS) Ibadan in 1959 to the outbreak of the civil war in 1967. Uche (1989, p. 61) said of this period that educational development was high on the agenda of the regions, because when the former Eastern region started its own television broadcasting system in 1960, its primary motive "was also the need for formal and informal education. But, it, too, soon abandoned this objective and joined the WNTV in commercial broadcasting." Incidentally, it was the same overseas

company that built the WNBS radio and television systems which later set up the Eastern Nigeria Broadcasting Corporation ENBC radio and television broadcasting facilities (Uche, 1989). The Northern region was able to set up their own television in 1962 still in the footprints of WNBS and ENBC. In this first phase, television broadcasting was made to become regional and experimental as most of the programmes were foreign-based.

The second phase, according to Folarin's classification continued from the conflicts in 1970 till the Federal government takeover of television services and the establishment of the Nigerian Television Authority (NTA). The new body, the Nigeria Television Authority (NTA), was formed during this time to centralize all federal and state TV stations (Pate &Abubakar, 2013, p. 2). The third phase was marked by the return of broadcasting to the legislative concurrent list from 1979 through the 1990s, when the National Broadcasting Commission (NBC) established in 1992 through Decree 38 (and later Act 55 of 1999) to deregulate the broadcast industry.

The fourth stage is the era of deregulated and competitive broadcasting in the present day Nigeria, an era which has witnessed an astronomical rise in the number of terrestrial and cable TV stations to more than about one hundred and sixty-six. Before broadcasting was deregulated, broadcast media ownership was the exclusive preserve of the federal government, hence its presence on the exclusive list before it was downgraded to the concurrent list, giving the various state authorities to own and run their own radio and television station at their own will. With the creation of more states, the number of broadcast stations increased. It is noteworthy that the deregulation of broadcasting in Nigeria coincided with the information and communication technologies (ICT) revolution which started in the later part of the 20th century. The ICT revolution resulted in "the radical elimination of the old information system characterized by a slow analogue technology' and their substitution with the "new fast and highly efficient digital technology" (Mbam, 2006, p. 63).

2.1.1.4 Old Media Technology and Broadcasting

We have traced the history of radio and television, which are today seen as belonging to the traditional media system. Each medium of communication has its own technological capabilities that affect the delivery of text, sound, and visual images. Media before the advance of the Internet can be thought of as belonging to the era of traditional mass media, which typically involved one-to-many communication; with anonymous receivers; through one-way communication channels; and with a clear differentiation between producers and recipients. It is imperative at this juncture to reexamine the old media technology for us to understand the new media properly.

In the literature review section, we traced the evolution of communication; considered the Nigerian communication context and; included the birth of broadcast media in Nigeria. Those outlets including radio, television, newspaper, and magazine are called the traditional old mass media of communication. The old media became the content of the new media and hence, to know the new media, we must understand the old media system on the ground (McLuhan,1964). Obviously, the development of digital media, the rise of the Internet, and the proliferation of mobile devices have combined to split open the very significance of mass media in various ways (Bolter and Grusin 2000). Defining mass media has become problematic today as various media technologies are converging for effectiveness. In newsrooms, for instance, media contents formerly stored on audio cassette tapes are being transferred to DVDs and CDs while old videotapes are resolved in mini DVDs and flash drives. The content of the new media technologies apparently, includes the old media technologies McLuhan studied such as speech; writings; numbers; photographs; telephony; and audio recordings, radio, movies, and television in the form of audios and videos. Boczkowski (2004, p. 172) underscores that "it is important to account for the largely offline shaping of content and artefacts that enable users' online experience."

Another reason to reexamine old media is that the ground has actually changed from electronic mass media to interactive digital media as well as the impacts of the old media. Apparently, traditional media are not the same in 2018 as they were in 1964 when McLuhan's book first hit the presses. They have undergone some technical improvements such as large flat and smart screens for TV and Dolby sound, digital recorders, digital cameras, digital radio, online newspapers, desktop publishing and digital animation for the movies and so on. Yet, the real story of this change impact is that the ground has changed underneath these media, as well as their place in our culture and their effect on society. The traditional mass media include those media technologies that are produced to accomplish a big audience through mass communication such as print media of newspaper and magazine; and broadcast media that "transmit their information electronically and comprises of television, radio, film, movies, CDs, DVDs, and other devices such as cameras and video consoles"(Ayotunde, 2012, p. 94).

Okunna and Omenugha (2012) concur with Whetmore (1985) that any means of information dissemination referred to as mass medium must reach a large number of people simultaneously with a technological device located between the source and the audience. Building on this assumption, the print media encompassing newspapers and magazines and the electronic media, which include radio and television, are the major classes of mass media. They are distinct mass media regarded as old media, which function in different ways revolving around the production and dissemination of news and other programmes.

2.1.2 The Internet: Origin of New Media Technology

The Internet is unparalleled in its ability to function as a digital platform that enables all the features of print, sound, still photographs, and video; and still does it 'live'. It is the communication platform through which digital media contents can be delivered to a wide variety of devices, including desktop computers, wireless laptops, Smartphones, and other mobile devices. The internet started in the early 1960s when MIT Professor Joseph Licklider conceived the idea of a network of information-sharing computers (Waldrop 2001). This concept was later financed by the U.S. Defense Advanced Research Projects Agency (DARPA), a body within the Defense Department dedicated to the development of new technologies for military use. The prospective decentralized computer network was meant to allow core U.S. government agencies to communicate during a national emergency, such as after a nuclear attack (Wikipedia. org). The Advanced Research Projects Agency Network (ARPANET) subsequently went online in 1969, first linking just four universities with over 50 universities and government sites later networked by 1975.

The control of ARPANET was transferred to the Defense Communication Agency (DCA), which later decided to create a separate sub-network dedicated to military uses, MILNET. The National Science Foundation took over internet control in 1983 with the mandate to disseminate the new technology among U.S. universities for research purposes forbidding commercial uses of the emerging Internet. It was the result of the passage of the High-Performance Computing and Communication Act by the US Congress in 1991, authored by Al Gore that provided funding to substantially expand infrastructures for the information superhighway (Baran, 2010). With that, the new information and communication technology (the Internet) spreads to other regions of the universe, including Africa and Nigeria towards the year 2000. Let us examine some relevant concepts that are fundamental to the advent of new media technologies.

The global impact of information and communication technology was initially regarded as putting the world in an 'Information Society'. Bell's (1973) *The Coming of the Postindustrial Society: a Venture in Social Forecasting* actually brought the information age to the attention of social scientists in the United States and Europe (Mansell, 2009; Webster 2006). Bell (Mansell, 2009, p. 3) argues 'the axial principle of the postindustrial society… is the centrality of theoretical knowledge and its new role, when codified, as the director of social change' and "it was now necessary to focus on business and management issues as well as broader societal concerns". This clearly shows the position of the information age towards all-round development as Daniel Bell was actually the first to introduce the term 'Information Society' *(*Mansell, 2009; Webster, 2006). Bell claimed the world has entered a new system, a post-industrial society with several distinguishing features characterized by a heightened presence and significance of information since "technology… is the basis of increased productivity,

and productivity has been the transforming fact of economic life" (Webster, 2006 p. 44). This apparently initiated a new form of information revolution based on technological advancement as, "new technologies are one of the most visible indicators of new times, and accordingly, are frequently taken to signal the coming of an information society (p. 21)."

Another concept is 'the global village concept' which believes that the internet makes the world a global community. The first person to popularize the term 'global village' was Marshall McLuhan (1962) in *Gutenberg Galaxy: The Making of Typographic Man*; though the term 'global village' was first coined by Lewis (1948) in his *America and Cosmic Man (*Mansell, 2009). We cannot talk about new media without discussing McLuhan's global village concept. In *The Gutenberg Galaxy,* McLuhan (1962) focused on the shift from oral to print societies, exploring the social implications of the 15th-century invention of the printing press by Johannes Gutenberg. He argued that new media technologies reworked the balance of our senses, isolated and highlighted certain senses at the expense of others. Print, from his perspective, intensified the visual—we use our eyes to read—and separated it from other senses, particularly, sound. In his other work, *Understanding Media: the Extensions of Man,* McLuhan (1964) also turned to the shift from print to electronic media, especially television. In it, he argued that; by delivering both images and sound, electronic media could help reconnect the senses that had been fragmented by a print's exclusive focus on the visual, thereby bringing us back to a kind of preprint state of harmony. McLuhan argued that by allowing us to see images and hear sounds of distant places instantaneously, electronic media are global extensions of our senses as "we have extended our central nervous system itself in a global embrace, abolishing both space and time," (p. 19) This perspective led him to utopian predictions of the development of a new "global village" based on the wonders of the information and communication technology.

Globalization which had an overpowering influence on global societies also occurred prior to the concept of the information society that was made possible by the availability of information and communication technologies. Webster (2006, p. 69) regards globalization as a long-term development that accelerated during and since the 1970s and refers not merely to an increasing internationalization of affairs that suggests more interaction between autonomous nation-states. This entails that the globalization concept started before the advent of the information society; though new technologies are hugely fostering the pace of globalization across the globe. Modern technologies such as the internet, new media technologies, mobile technologies, satellite systems, telecommunications facilities among others, provide a technological dimension for the globalization of communication and the spread of communications networks that straddle the earth. An Ofcom 2016 report indicates that:

> Almost nine in ten UK adults say they use the internet, on any device, in any location - unchanged since 2014. Two-thirds (66%) of adults use the internet both at home and elsewhere, while one in five (18%) uses it just at home and 4% use it only outside the home.

> In total, nearly nine in ten (87%) UK adults say they use the internet, on any device, either at home or elsewhere, in 2015 (vs. 86% in 2014). Just over one in ten (13%) do not use the internet at all, which rises to 65% of those aged 75+, and 33% of 65-74s (p.8).

This proves that in developed nations, the use of the internet is rife, especially among adults of working age. This trend is, however, becoming common in Nigeria and other developing countries with an increased rate of broadband internet and mobile technology subscriptions (Okonji, 2017). McQuail (2012, p. 101) corroborates Schement &Curtis (1995) view that the coming of satellite technology and subsequent inventions (such as the Internet and new media) which crosses the barriers of time and space, actually changed global communication process. But, as in the 1960s, there was considerable scepticism about the effects of innovations in technologies on society, especially on the mass media. For instance, Lyon (in Mansell, 2009) warned it was improbable that the dynamics of industrial capitalism would be altered substantially by the spread of digital technologies, and advocated that technology is examined more critically.

Mansell (2009, p. 4) further agrees with McLuhan's mindset that "the advent of a new medium often reveals the lineaments and assumptions… of an old medium." This is a truism and visible in the manner in which the social media (web 2.0) has overtaken the internet (web 1.0) as a news medium and users now spend more time on social networks than on other new media platforms (Pew Research Center, 2018). Today, we have smart technologies like the smartphone and iPad with high definition operating systems that have virtually displaced the PCs, and even laptops. There are also technological trends in digital broadcast types of hardware/ equipment like digital cameras, digital editing suites, digital recorders, and digital transmitter among others that have even displaced the analogue broadcast technologies in some stations (Vobic, 2009). This clearly shows that regular alterations in information and communication technology are likely to adversely affect the traditional media of communication, if not properly harnessed especially by media practitioners.

Vobic's assertion succinctly captures what is happening in the 21st-century mass media, where the mass communication process is experiencing great transformations as results of media convergence, digital technologies, social media and multimedia that are products of the second and third phases of new media technology development. Evidently, in some broadcast stations in Nigeria for instance, almost every programme has an interactive section for the audience. Interactivity and participation have, in fact, became the 'cream of every broadcast programmes' and the audiences seem to be thrilled with this new innovation. Under this setup, the producers or presenters of such broadcast programmes normally give out their social network accounts, names and phone numbers for use by the audiences, who post updates or make phone calls while the programme is being broadcast.

2.1.3 New Media Technology: The New Age

New media technologies brought about a paradigm shift in global communication which started with the concept of the new media. The new media concept came after the advent of ICT around the 2000s with the initiation of new media technologies like social media, mobile media, and digital technologies. The condition was attributed to originating from various scholars which might be a reason for not accepting a universal accord on the meaning of the expression ‘new media'. Rheingold (1991) describes new media as the culmination or present stage of development of all human media over time. Under this dispensation, new media is placed at the end of a chronological list that begins with oral communication, writing, printing, drawing, and painting, and then stretches and weaves its way through the image and communication media of the nineteenth and twentieth century's, photography, film, TV, video and semaphore, telegraphy, telephony and radio.

Bolter and Grusin (1999) on their part define new media as a concept of remediation. They called the representation of one medium in another remediation; arguing that remediation is the defining characteristic of the new digital media, though, “all mediation are remediation” (p. 55). This implies that new media developed from an older medium; and is thus, remediation. But if this viewpoint is to be taken, how does one distinguish new media from old media? In fact, their ideas originate with the McLuhan earlier assertion that the first content of a new medium is some older medium. Old and new media remediate or refashion each other mutually, and “what is new about new media comes from the particular ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media” (Bolter & Grusin, 1999, p.15). Actually, new media refashions old media as shown even in the appearances and functions of most broadcast technologies like computers, cameras, recorders, mixers and consoles with the great resemblance in both digital and older versions. The authors regret that in the “last decade of the twentieth century, we are in an unusual position to appreciate remediation, because of the rapid development of new digital media and the nearly as rapid response by traditional media” (p. 5). Thus, older electronic and print media are trying to reaffirm their position within their former culture as the digital new media challenge that position.

Bolter & Grusin as well believe that “the new and old media are invoking the twin logics of immediacy and hypermediacy in their efforts to remake themselves and each other” (p.5). For example, the written word refashioned the spoken word, and the spoken word responded to the challenge of the new medium by adopting the new vocabulary that writing made possible. The authors’ positions that "introducing a new media technology neither does mean simply inventing new hardware and software, but rather fashioning (or refashioning) such a network"(p. 19) is a good

indicator that old and new technologies could be merged for effectiveness as observed in today's media convergence.

Media technologies vary beyond their common role as a mechanism of communication as it "constitute networks or hybrids that can be expressed in physical, social, aesthetic, and economic terms" Bolter& Grusin (2000, p, 19) The authors agreed to the earlier stated assertion on two types of media development of traditional mass media versus new media. Though the global communication process apparently changed with the internet and new media, they argued that new digital media are not external agents that came to disrupt an unsuspecting culture that "emerge from within cultural contexts, and they refashion other media, which are embedded in the same or similar contexts" (Bolter& Grusin, 2000, p, 19). Based on this, new media technologies should not be seen as a killer of old technologies, especially in the area of news production that is commonly regarded as a focal and sacred task in every broadcast station. Once again, their position does not tell us which are the new media and which are the older media and amounts to defining new media in terms of chronology. Their assertion, nevertheless, contains a truism that applies to the relation of newer and older media through the ages.

Manovich (2001) on his part, describes new media as new cultural forms which are native to computers or rely on computers for distribution: websites, human-computer interface, virtual worlds, VR, multimedia, computer games, computer animation, digital video, special effects in cinema and net films, interactive computer installations. In a clear distinction between new media and old media, he observes that the popular understanding of new media identifies it with the user's computer for distribution and exhibition rather than production. Manovich consequently explains that:

> Texts distributed on a computer (websites and electronic books) are considered to be new media; whereas texts distributed on paper are not. Similarly, photographs that are put on a CD-ROM and require a computer to be viewed are considered new media; the same photographs printed in a book are not (Manovich 2001, p. 19).

Manovich definition considers the technology and not the content as new media. This is a deviation from Bolter& Grusin (2000, p, 15) viewpoints that "what is new about new media comes from the particular ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media." However, it might rhyme with McLuhan's stand that "the medium is the message." Manovich's standpoint remains the reason for this study aimed at examining the use of new media technologies in broadcasting.

Castells (2005) on his part argues the world has been in a process of structural transformation for over three decades and the process which is multidimensional, "is associated with the emergence of a new

technological paradigm, based on information and communication technologies, that took shape in the 1970s and diffused unevenly around the world" (p. 3). Webster (2006, p. 100) believes Castells's core argument is basically hinged on the 'information age' which announces 'a new society' brought into being by the development of networks (enabled by ICTs) and gives priority to information flows.

Castells provided a basis for understanding the concept of new media technologies linking the technological transformation to a network society as "technology is a necessary, albeit not sufficient condition for the emergence of a new form of social organization based on networking, that is, on the diffusion of networking in all realms of activity on the basis of digital communication networks" (p.3). Castells (2005) mindset draws attention to the cultural and institutional manifestations of network societies and the importance or logic of emergent social formations, a child of technological progression even witnessed in broadcast news management. The method of searching for and distributing news contents apparently shifted in the new media technology era with social media networks providing interactivity and audience participation. Castell's description of technological changes in communication as a networked society is not out of scope as other researchers shared similar views.

For Peters (2009, p. 14) the approximation of the term 'new media' began in the latter half of the 20th-century.The Oxford English Dictionary, however, attributed its first use to McLuhan (1960) in the *Journal of Economic History*. Peters (2009) claims that McLuhan first used the term, 'new media' in association with technical characteristics such as 'electronic information gathering' and 'global reach' which, was novel that time. There was little mention of the term "new media" until 2000 when it starts expanding following the arrival of the 'global village concept'. Bermejo (2009) on his part, described the newness of a medium in relation to time and distinction. In his views, "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"(p.134). 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. Bermejo's thoughts also align with McLuhan (1964) ideology that 'the medium is the message'; Castells (2005) mindset that 'the network is the medium' and; Bolter & Grusin (1999, p. 45) ideologies on remediation. These opportunities are made possible by several new media technologies such as computers, internet, iPods, blogs, handsets, scanners, printers, CD ROMs, smartphones, digital cameras, digital types of equipment, iPads amongst other which are adopted by people in their daily activities.

Fagerjord (2010) on his part ascribed the origin of new media to Nicholas Negroponte, who did a lot of research on new media technology and its impact on society. He notes that most of Negroponte's

influential books *Being Digital* originated in the column at *Wired*, Negroponte's former workplace. Fagerjord points that Negroponte could no longer write about the changes that would come with the digital future in 1998, as the future had arrived and thus, was forced to regret in his final column that, "the digital revolution is over," (p. 187). McQuail (2010, p. 39) agrees with Lievrouw &Livingstone's definition of new media that there is a union of three elements: "technological artefacts and devices; activities, practice and uses; and, social arrangements and organizations that form around the devices and practices" (p. 39). The three identified elements are observable in the new media era as people are communicating with mobile technologies and interact on social networks.

Today, new media technologies have created major impacts on communication and information flow in every facet of society as a whole and in the mass media in particular. The consolidation of such technologies in the broadcast media has major influences on the diffusion and production of media contents. This further pushed traditional media to seek fresh ways of satisfying the requirements of its audience with constant advances in new media technology and the increase in new media utilization. Thus, the term "new media" in this work would generally refer to those digital new media technologies that are internet and computer-based; interactive, multiplatform, digital, incorporate two-way communication, and might require some form of computing as opposed to "old media" such as the telephone, newspaper, radio, and TV. This definition of new media is therefore similar to the definitions of other authors in the foregoing.

2.1.3.1 New Media Technology, New Audience

New media technologies apparently, altered the concept of media audience as media audience presently have more access to an increasing amount of contents: news, information, and entertainment in different platforms and formats thereby, competing with traditional mass media. This new sort of audience is quite dissimilar from the former as they are non-traditional, non-passive, participative, independent, assertive, broad, open to new ideas, engaging and interactive. Anderson (2012, p. 77) posits that a radically new attitude toward audiences, materialized in recent years alongside the rise of digital technologies, social media, and user-generated content, that was referred to by Coddington (2010) in his new-media maxim as "the people formerly known as the audience" (Rosen, 2012). This notion was first articulated in 2006 by media theorist and NYU professor Jay Rosen in an influential blog post. The notion of "the former audience" and its relationship to journalism ultimately revolves around a series of digital new media technologies that shift the direction of communication from a one-to-many broadcasting system to a many-to-many conversational system. As Jenkins (2006) argued in *Convergence Culture*, the new media forms converge with existing forms and with the media industries built around those forms, in an often uneasy coexistence. The resultant effect is a new

audience and a new model of communication. Describing the new audience, Rosen (2012, p.14) is of the view that:

> The people formerly known as the audience . . . , are those who were on the receiving end of a media system that ran one way, in a broadcasting pattern, with high entry fees and a few firms competing to speak very loudly while the rest of the population listened in isolation from one another—and who today are not in a situation like that at all.

This new audience has more freedom and access to the media and does not necessarily rely on the conventional media for information supply. The new media technologies in Rosen's view include social media like online commenting systems and Facebook; media for the creative personal expression like blogs and podcasts; and new channels of distribution like Twitter. Rosen argues that this passively receptive audience is no longer the model for thinking about media consumption, especially when the new model treats consumption itself as part of the production of media. Walker (Rosen, 2012, p. 14) pinpoints that, "these audience graduate from wanting media when they want it; to wanting it without the filler; to wanting media to be way better than it is; to publishing and broadcasting themselves when it meets a need or sounds like fun" (p. 14).

This point actually emphasizes the need for interactivity and audience segmentation in broadcast stations because the 'new felt need' is currently driving the 21st-century audiences to content production and dispersal. That is a hallmark of citizen journalism, which has become a common phenomenon in new media platforms today. The ability of multi-platforms to facilitate greater audience value as surmised by the BBC's Director-General in his *Creative Future* vision of a strategy for the corporation because "programmes won't be shown once and then forgotten. They'll be there forever to be linked, clipped, rediscovered, and built into bigger ideas" (Thompson, 2006, p. 14). Audience migration to multi-platform strategies are not solely dependent on the more effective use of content; as the impetus to re-envisage corporate missions in a more platform neutral way also reflects massive changes in media consumption patterns and in the appetites of (especially younger) audiences that threaten to leave conventional media behind unless they change. Research conducted by UK regulator Ofcom in 2008, also confirms that although broadcast television remains supreme in its popularity, audiences are embracing the additional choice, control and opportunities for participation offered by the internet and mobile connectivity (Ofcom, 2008).

The ways through which new media enable new forms of participation and collaboration was further elucidated by Jenkins (2006). He argues that there are shifts in the strategies of media organizations towards a more multi-platform approach and towards a re-balancing of top-down versus bottom-up participatory culture which 'is being driven by economic calculations and not by some broad mission to empower the public' (Jenkins, 2006, p. 243). But, can the two be neatly separated? If digitized,

platform-neutral, interactive and multi-layered forms of content are what audiences demand, it surely follows that more resources and efforts ought to be directed towards supplying this. We recall in emphasis, Castells (2007) assertions that:

> Technology is not simply a tool, it is a medium; it is a social construction, with its own implications. The development of the technology of self-communication is also the product of our culture, a culture that emphasizes individual autonomy, and the self-construction of the project of the social actor.

Castells argues that the more an individual has a project of autonomy (personal, professional, socio-political, communicative), the more he/she uses the Internet. And in a time sequence, the more one uses the Internet; the more autonomous one becomes vis-à-vis societal rules and institutions. While the above argument might crystallize the idea that new media technology guarantees audience autonomy with regards to media content access, however, for that to happen, adoption and usability of the technology must equally be guaranteed. It further implies that technology use is reflective of the socio-cultural existence of an individual or organization. In newsrooms where there are high utility and availability of new media technologies, there will be a new culture, contrasting with the old newsroom culture (Vobic, 2009), and the practitioners have to work with the new culture for robust efficacy in the journalistic practices

As a result of the escalating pace in new media technology advancements, interactivity has become a strong driving force of the new media as audience members are now more proximal both to the media and media contents. Interactivity is a switching pivotal that allows the audience to be more selective in their choices of information sources and interactions with other people (Lievrouw &Livingstone, 2006). Audiences of mass media over the decade are believed to perceive information differently and retain information selectively. The new media technologies under this context provide users with the means to generate, seek and share content selectively; and to interact with other individuals and groups, on a scale that was impractical with traditional mass media. In comparison, Jenkins, Cliton, Purushotma, Robison &Weigel, (2006 p. 8) argue that "interactivity is a property of the technology, while participation is a property of culture." This also implies that new media technology could foster interactivity especially in the activities of the traditional mass media. The interactive feature of new media has the potential to improve the relationship between journalists, news organizations, and their publics by increasing the interaction among citizens, news, and journalists (Pavlik and Bridges, 2013, p. 5).

This redefinition of the media audience was practically impossible in the old media days, as journalism was mostly on a one- way flow and the most people were largely dependent on print and broadcast. Scholars (Deuze, 2007; Chaffe & Metzger, 2001) even consider print journalism a dying

art, because of the steady decline in print newspaper sales. The same might happen to the broadcast media if proactive steps are not taken especially in the area of full digitization of stations. Vobic (2009, p. 6) shares the above scholar's views and regrets that journalism is "coming to an end" as the boundaries between journalism and other forms of public communication are vanishing and the internet is making other media rather obsolete. Vobic asserts that commercialization and cross-media mergers have eroded the distinct professional identities of newsrooms and their publications, whether in print, broadcast or online.

Invariably, the above assertions should push media houses and even journalism departments all over the world to rethink the direction journalism is being taught and practised, as techniques of about seventeen years ago are not applicable today. Chaffee & Metzger (2001, p. 369) envisaged an end to mass communication and confirm that today media institutions are changing such that mass production has become less mass. The explosion of available channels afforded by the new media technologies contributed to de-massification of the media by diffusing audiences for any particular media product. The authors believe that this has resulted in channel specialization as:

> The old model of broadcasting to the masses has given way to market segmentation and targeting to niche audiences. Although existing media institutions are well positioned to adapt to these changing conditions, the fact that the new media shrink the size of the audience for any particular channel is likely to create opportunities for others. (Chaffee & Metzger, 2001, p. 369)

Asemah (2011) also agrees there is a change in audience nature in the form of “de-massification” involving the relegation of a certain degree of control which the content producer has on the mass communication process to the media consumer; while “asynchroniety” occurs when audience members send and receive messages at their own convenience. He believes that this new system introduced on-demand access to content on a digital device as well as interactive user feedback, creative participation and community formation around the media content. Chaffee & Metzger, (2001); Castells (2006); Vobic (2009) and Asemah (2011) mindsets on niche audience and de-massification, are palpable in the new programming model presently adopted by some Nigerian radios and televisions which allow interactivity in every programme. Under this setup, the different presenters use their social media accounts and even email addresses to reach and manage their particular audiences. The presenter under this new model creates social media accounts for each programme thereby segmenting the broadcast audience for each programme. For example, news and current affairs programmes such as Coal City FM's ‘Ka Ora Malu' and Dream FM's ‘Political Voices now have niche audiences that participate actively in the programmes.

2.1.3.2 New Media Technology, New Patterns of Use

The expanding impacts of new media technologies in communication also initiated new media practices and new types of journalism as mentioned earlier such as citizen journalism; multimedia; digital journalism; pack journalism; cyber journalism; smart journalism; digital broadcasting, among others (Baran, 2009; Baran, 2010; Deuze, 2006). These notable scholars believe that the use of social networking, smartphones, and other new media technologies have become the primary ways of receiving and sharing information in our society and should, therefore, be of great concern to the media practitioners. The signs of this trend are observable from the manner whereby most people are immediately bound to their computers, iPad, cell telephones, smartphones, iPhones and other Bluetooth and Wi-Fi devices for communication updates ranging from news, programmes, music, video, and films to even weather forecast with the new media technologies. Jenkins et al. (2006, p.9) observe that new media promote affinity space that guarantees innovative informal learning among the users. This provided support for Blau (2005, p.3) viewpoint that media landscape will be reshaped by the bottom-up energy of media created by amateurs and hobbyists and bring forth tremendous creativity, though it will change the media practice. This emerging new generation of media maker and viewer, "could lead to a sea change in how media is media and consumed" (p. 3).

Actually, global newsrooms are today being impacted by new media technologies in line with Blau's predictions and broadcasters are even forced to acclimatize to the new terrains so as to remain in business. Jenkins et al, (2006) mindsets corroborate Blau's points as they both stressed that new media brought about a participatory culture among its users where anybody can be a content producer as well as the content consumer. Chaffee & Metzger (2001, p 369) equally agree that "contemporary media allow for a greater quantity of information transmission and retrieval; place more control over both content creation and selection in the hands of their users; do so with less cost to the average consumer." Even at that, this technological advancement seems to represent a potentially better form of journalism because it can re-engage an increasingly distrusting and alienated audience.

Jenkins et al (2006, p. 8) on point argue that with the force of new media technology penetrations globally, "participatory culture is emerging as the culture absorbs and responds to the explosion of new media technologies that make it possible for the average consumers to archive, annotate, appropriate, and re-circulates media content in powerful new ways." The authors, however, believe that new media technology trends might present many threats to the most cherished values, ethics, and standards of journalism. Therefore, it is evident that authenticity of content, source verification, accuracy, and truth be handled with caution under this dispensation as anyone with a computer and a modem or internet access can become a global publisher and poses as a threat to the conventional media.

Talabi (2011, p. 18) in consonance observes that “journalism today finds itself at a rare moment in history where, for the first time, its hegemony as gatekeeper of the news is threatened by not just new technology and competitors, but potentially, by the audience it serves.” The new media technologies according to Talabi are equipped with easy-to-use web publishing tools, “always-on connections and increasingly powerful mobile devices” (p.18) even as the online audience has the means to become an active participant in the creation and dissemination of news and information on the internet.

Talabi's stand tackles the now-in-vogue citizen journalism that is making everyone a reporter. Some examples in point include the recent alleged fake news story on the demise of President Muhammadu Buhari on February 2017; numerous reports on recovery looted funds; and the Calabar viewing Center tragedy in March 2017 among others. Citizen journalism is further enabled by smart mobile technologies. Opportunities for self-expression that were once traversed by the old media are now celebrated by the new media technologies (Chaffee & Metzger, 2001). Research and literature conversely, suggest that new media technology challenges one of the most fundamental truths in journalism that, “the professional journalist is the one who determines what publics see, hear and read about the world” (Fulton, 1996; Singer, 1998 cited in Deuze, 2006, p. 451).

In the same way, Deuze (2006, p. 451) citing Bardoel & Deuze (2001); Pavlik et al. (2001); Teoh Kheng Yau & Al-Hawamdeh (2001) agree that one major challenge of journalism today is the effects of new media rudiments like the combination of mastering newsgathering and storytelling techniques in all media formats (so-called ‘multi-Skilling'). The consolidation of digital network technologies coupled with a rethinking of the news producer-consumer relationship was equally pinpointed by this author as another big challenge facing news media studies and training in the 21st century. This means that there is a conspicuous distinction between the 20th and 21st-century newsroom compositions and operations as argued by Vobic (2009). Deuze assertions indicate some likelihood of a lacuna existing in any news organization where there is new media illiteracy. Talabi (2010) and Deuze (2006) mindsets equally corroborate Chaffee & Metzger (2001, p. 370) view that the “threat of homogenized media content is diminished as new technologies enable many millions of individuals to become content producers; and as audiences are re-conceptualized as smaller and discrete “taste cultures,” rather than as an amorphous mass.”

Studies (Vobic, 2009; Himelboim & McCreery, 2012) reveal that new media technology uses in broadcast news gathering are on the increase in many newsrooms across countries of the world, among reporters and editors with its benefits recognized at every point of the entire supply chain of news. This technological development and penetrations in the broadcast industry have improved the packaging of news and programmes in more attractive and better ways. For instance, the continuous

usage of online media contents and facilities has contributed to higher productivity and efficiency at a reduced price. Corroborating with the views of (Pavlik, 2000; Stone & Bierhoff, 2002; Deuze, 2007; Klinenberg, 2005; Singer, 2004; Avilés & Carvajal, 2008), Vobic (2009) in a study of newsroom convergence in Slovenia observes that:

> Structural and organizational changes in newsrooms and transformations of news work have been emerging since the mid-1990s, for at least some form of convergence between formerly separated staffers, newsrooms and departments, as a result of the gradual advancement of information and communication technologies and simultaneous uncertainties in media markets worldwide (p.6).

With new media convergence, the 21st-century newsrooms are redesigned entirely and journalists can "move freely between print, television, radio and online outlets and meet the demands of the new media environment" (Klinenberg in Vobic, 2009, p. 8). This means that there will be a superabundance of information and sources of news information on new media technologies. The recording of news with high sophisticated digital editing database, digital recorders, photo imaging and data mixing software has provided cutting-edge facilities to the broadcast industry likewise; the use of telefax, websites, social media, online database and web-based news/information sites, online chat, online readers and newsmakers facilities in information collection and reporting.

Pavlik and Bridges (2013, p. 5) in a similar vein agree that the new technological forces influence journalism and media in at least four basic ways. First, they transform how journalists and other media professionals do their work, including how they gather, edit, and produce the news and has the potential to improve productivity, efficiency, and access to information. Next, is that technological change transforms news and media organizations and business practices and models. Pavlik and Bridges also argue that digital technology also restructure the delivery of news, greatly reducing the cost of delivering news which transforms the news business model. In summation, the relationship between media and their public is redefined as audiences go from passive recipients to active producers of news and other social media contents.

The Internet constitutes a rival to conventional media organizations which serves as alternative source of information and entertainment on multiplatform. Integrating new technologies and applications in a traditional news media, new media technologies can serve the news media's social role of providing information on a wide range of issues, and from a variety of perspectives (Himelboim & McCreery, 2012, p. 1). The authors argue that news media can now present information in new ways with new media technologies which give audiences more control to personalize their news consumption. With new media technologies, there will be contributions from users on websites, blogs and video or discussion forums. This can allow information to disseminate in new ways, such as via social networking sites and emailing articles (p.1).

The above discourse on the potentials of new media in news organizations aptly substantiates Castells (2005) who positions that society shapes technology, in accordance with the needs, values, and interests of people who make use of the technology. Journalism is also seen as a prevailing force in the public creation of common expertise (Schudson, 2003). In contrast, Hirst (2011) and Rosenberg &Feldman, (2008) points of view that these changes are often driven by technology – the printing press, typewriter, telephone, radio, and television each had an impact on researching, sourcing and reporting the news shows that the old traditional media equally has its own impact. Dennis and Merrill as cited in Kur &Essien (2014, p. 59) underscore the effect of new media technology adoption on point that old media commonly embraced new media via the internet "without risking their well-grounded core business and are producing useful products on the internet that complement what they are doing with traditional printing and broadcasting." They assert that every medium print or broadcast, as well as alternative newsweekly should have a website that mostly reproduces there content a daily or weekly basis.

Kur and Essien argue that the new media has become a force to reckon with in media communication considering its overwhelming effect in the Nigerian society today. They recommend that every journalist brace up to these challenges so as to survive the 21st-century journalism trends. Unfortunately, as new media use seems to be evolving rapidly in the practices of mass communication around the globe, the Nigerian media organizations, however, are yet to fully tap its potentialities and remain the focal point here. This is a truism as new media technology has within a short period, globally became an integral part of media production and distribution as shown in the foregoing scholarly discussions. New media technology has also demonstrated itself as an all-around medium of communication contending with print and broadcast. Caroline Lees, editor of the European Journalism Observatory's English language site in 2016 warned that "Internet connectivity, YouTube and amateur footage from citizen journalists have helped to create a new form of journalism that has enhanced international reporting…"(Lee, 2016, para 1). Accordingly, Lindsey Hilsum, International Editor for Channel 4 News cited in (Lee, 2016, para2) reports:

> Connectivity has had a significant impact: reshaping global communications and transcending national boundaries. The world is being remapped in terms of connections…; there are less than 500,000 kilometres of borders across the world, but more than one million kilometres of internet cables. However, technology can never replace a journalist's primary role as an eyewitness.

This evidently indicates that new media technologies are essentially significant at every point of the communication process today. The assertion that technology can never replace a journalist's primary role as an eyewitness should, however, serve as a reminder of journalism role in society, though the emphasis should remain on effective utilization of new media potentials in broadcast media.

A fourth area that technological forces influence journalism and media is that it presents a central challenge to notions and models of news, media content and storytelling (Pavlik & Bridges, 2013). The significance of this content transformation is that it has the potential to engage journalism audiences and the media. Under this setup, the audiences become disengaged from traditional news, forms and turn to social media and mobile communications to get news and information about their world. They are called 'media users' and their influences remain pervasive and obvious in media practice today. Deuze (2006, p.450) in affirmation, describes the changes as media convergence based on the assumption that the global picture of journalism is greatly and constantly changing to such " an extent that one has to analyze and discuss the main attributes of such (potential) changes in order to successfully study, describe and explain contemporary journalism" (p. 450).

Broadcast media stations across the globe actively make use of the new media that are pertinent to news and programme production despite the impacts of convergence. From the newsroom down to the studio, we see the imprints of new media. It has actually altered the way news is gathered, broadcast and even the way programmes are shown on both radio and television. Castaneda (Deuze, 2006, p.450) argues that digital media and, more recently, multimedia newsrooms are even transforming the training and education of journalism worldwide. This requires media practitioners to become new media literate so that their journalistic role and media practice can be robustly enhanced. In fact, such training is very vital because the traditional media of the 21st century is engaged and even forced to employ multiplatform communication while the new media technologies continue to provide newer social platforms amidst more revolution. Emphasizing on new media technology use impact on radio, Cordeiro (2012, p. 503) argues:

> Radio today is multimedia, multi-platform and convergent. It differs from the "FM era": it has sound and image, is (more) interactive, (more) participatory, shareable, asynchronous, repeatable, reproducible, searchable, customizable, discontinuous, hypertextual, not linear, convergent, and on demand. All these, I believe, are strengthening the radio's capacity to create feelings of community among listeners, feelings which can only increase as radio increasingly bets on the cloud paradigm.

Cordeiro position further strengthens Castaneda (2003) and Deuze (2006) mindsets on the overwhelming influence of the new media technologies on news media. New media technology such as streaming technology has become crucial for radio's online development since it provides live audio transmissions (Cordeiro, 2012). Streaming is the access technology, making radio broadcasting available via digital devices (computers, mobile phones, tablets) and networks (spreading of radio content through the web using sharing tools).

Similarly, Castells (2003) position that the internet reaches supposedly around the whole world could have led media practitioners to approach the Internet in two different, though complementary, ways:

using it as a process (of creating intranets for content production and management and as a working tool, for source of information and news gathering); and as a distribution platform. Research (Cordeiro, 2012; Deuze, 2006) has shown that the use of new media technology in broadcast newsgathering remains on the increase by reporters and editors and its benefits are recognized at every point of the entire supply chain of news.

Several studies, (Ganiyu, 2011; Nyekere, 2009; Olley, 2009; Gurumnaan, 2009) however, confirmed that some Nigerian broadcast stations have started applying the new media technologies in programme production although the usage patterns in newsrooms remain blurred. For instance, African Independent Television (AIT), Hot FM Owerri, Dream FM, Wazobia FM, NTA and Anambra Broadcasting Service radio (streams) live online and equally, publish their stories on AIT and ABS online news site. The opportunities of the new media technologies include a recording of news with high sophisticated editing database; photo imaging and data merging software have provided cutting-border facilities to broadcast industry. Likewise, the role of social media, podcasts, YouTube, websites, online database and blogs; online readers; and newsmakers facilities have made the cumbersome task of information collection and reporting easier than ever before.

Apparently, new media technology adoption calls for a new kind of journalist as evident in the growing popularity of blogs and YouTube channels globally. Hansen (2013, p. 679) notes that blogs constituted a new platform where writers that are non-professionals reach out to a larger audience, thus "thrusting themselves into an attention space previously monopolized by the analogue mass media." He observes that the traditional (pre-Internet) journalistic institutions, after initially either ignoring or deprecating the blogosphere, have been trying to incorporate Internet platforms into their standard operating procedures (p. 679). Presently, major global journalistic institutions have web-based publication platforms – either alone or as an addendum to the print-based or broadcast programmes. This, Hansen believes, makes it possible for them to create content within interactive, multi-mediated and hyper-structured presentation forms.

Predictions from Chaffee & Metzger (2001) however, show that the internet serves as the best example (of new media technology) and would through digital convergence, form the backbone of most future mediated communication. This is because the Internet is designed to be decentralized; meaning that control is distributed to all users who have a relatively equal opportunity to contribute content. Evidently, the internet is one of the major technical innovations which have brought to reality the idea of a global village postulated by Marshal McLuhan as noted before.

The increased bandwidth of the Internet further enhances users' ability to become content producers and to produce materials that are fairly sophisticated at low cost. In addition, many of the new media

technologies are more portable and, hence, more convenient to use compared with older mass media (Chaffee & Metzger, 2001, p. 369). Accordingly, “the Internet… consolidated itself as a very powerful platform that has changed the way the world communicates. No other communication medium has given a globalized dimension to the world like the Internet" (Olakitan, 2012, para2). Today, more than half the population of the world accesses the internet because, it is the most technologically advanced media of communication (Agba, 2001). This is true as the internet connects people from different parts of the world in a virtual community, an innovation which was hardly imaginable about two decades ago.

It could be deduced from the foregoing that the expansion and potential of traditional and new media technologies are different as well as their contributions to society. These impacts occur both in the presentation of the media product itself, as aforementioned, and in the production of media contents. Production involves a series of processes: acquiring, processing, distributing, and storing news, information and new media technology is used in each of these processes regardless of the media of the finished product. The new media technologies are profoundly utilized in forming public opinion, perceptions, and awareness of issues in the world as they open. Besides, new media technologies have gained a wonderful impact on the scope and perceptions of news and information across the globe as members of the public can immediately transport and obtain information on public issues using the social networking sites, thereby increasing the volume of news and information being made available to the general public through an online based media organizations (Hudson & Oboh, 2012).

In essence, with new media technologies, the news is presently becoming a lot more fluid. In the old world of analogue media technologies, a story will typically be published in a newspaper or covered on the evening television news and then perhaps updated the next day. Today, the news is in a perpetual state of flux. Updates are made continuously throughout the day. When visiting a Web site, one of the first things a user usually checks is when the site was last updated and, if this has not occurred recently, he or she moves on to another site. Likewise, digital Apps automatically alert ‘netizens' (citizens of the Internet) when a favourite news site or story has been updated. Ekhareafo, Asemah & Edegoh (2013) observe, for instance, that, one visible impact of ICTs in Nigerian print media industry is the quality of print run. The problem of blurred picture and graphics, which characterized the pre-ICTs age, has finally given way to high-quality print, occasioned by digital equipment. Colour separation is incomparable to the past and advertisement copies are at once distinct and enticing. This also is applicable to the broadcast media where sound and video has become clearer and brighter.

In addition to supporting newscasts, many local TV stations (BBC, CNN, Channel, NTA) have become a major online sources of news. They broadcast in high definition on their primary channel,

where they typically have several additional, multicast channels available to programme productions. Some stations also use their new digital channels to broadcast less expensive programmes, or as a way to rebroadcast existing news and programme contents; while some use them for weather reports or live breaking news reporting when an emergency in the station's community calls for around-the-clock reporting. Rather than adding staff to sustain this increase in the news, TV stations on average have actually cut personnel—"with the median full-time staff dropping from 32 in 2006 to 29 in 2009," (Pew's State of the News Media, 2011*)* report. Indeed, the new media technology impact is overwhelming as Danaan (2006) also pointed out that it has increasingly brought many changes to the mass media, which the likes of Marshall McLuhan, Daniel Bells, and Joseph Licklider predicted many decades ago. He goes on to state that this growth has widened the media horizon as both the electronic media and the print media are combining with new digital technologies to create a new age of new media. No wonder Asemah (2012) surmises that "new media… encompass the amalgamation of traditional media such as film, images, music, spoken and written words with the interactive power of the computer and communications technology, computer-enabled consumer devices and most importantly the internet" (p. 67).

Considering the fact that new media technologies took many years to pass through the stages of development, introduction, adoption, and broad acceptance as noted earlier, theoreticians and practitioners alike are still predicting the direction of the technology or its effects. Even though the new media compared with the old media is nonetheless in its infancy in line with the foregoing literature, it has come forth as a communication medium which has large impacts on society, commerce, and the government which is already phenomenal. The new media pervasiveness in relation to the overwhelming popularity of social networking sites among Nigerians has made it necessary for media organizations to establish their presence on the Internet to avoid being overtaken or wiped out by competing platforms. The potentials of social media, especially in Africa have also been well demonstrated as Anim (2013) argues that just like the global nature of the digital age, "the social media phenomenon has no boundaries. As in Australia so it is in Egypt, or Nigeria or Poland or the United States. The scope and spread in each territorial space might differ, but the phenomenon and its effects are universal" (p. 13).

Scholars hold different views in terms of the usage of new media platforms and the ways journalists do their work. For example, O'Sullivan & Heinonen (2008) found that journalists from 11 different European countries used online platforms as their primary research tool, a positive development in a profession that is time poor. There are also some studies which contend that new media has changed work practices for the worse. For example, Reinardy (2010) suggested that the speed required in filling

in stories for online platforms, rather than a later newspaper deadline, clashes with traditional journalistic values.

Since the interactivity and immediacy inherent in new media technology has generally modified the models of media production and business; users of traditional and new media technology should, therefore, incorporate characteristics of each other which influence each technology type as media convergence. As such, it is important that media practitioners understand new media technology and the changes it brings to the media industry as the new technological evolution and its assimilation in the broadcast industry to improve the promotion of news as shown in the literature. Although broadcasting organizations in Nigeria apparently use new media technologies in their productions, the extent and pattern of this utility need to be adequately investigated. Established in the foregoing, new media literacy and adoptions might pose as essential prerequisites for the existence of a vibrant and development-focused broadcast media in the 21 century.

2.1.4 Social Media Technology

Social media belong to the recent innovation in new media technology. This is a term coined in 2003 and popularized by the media consultant Tim O'Reilly. The idea of Web 2.0 is that a particular assemblage of software, hardware and sociality has brought about 'the widespread sense that there's something qualitatively different about today's web' (O'Reilly 2005). This shift is allegedly characterized by co-creativity, participation, and openness, represented by software that supports, for example, wiki-based ways of creating and accessing knowledge, social networking sites, sharing, blogging, tagging and 'mash-ups'. Though social media began with blogs and has been in existence for about fourteen years on, it now also includes social networking sites such as Facebook, Twitter, and LinkedIn, Internet forums, wikis, podcasts, and video (Wright & Hinson, 2009). Social media really began with the launch of the social networking sites MySpace in 2003 and Facebook in 2004 (Kaplan & Haenlein, 2010).

Social media use in Nigeria is all-encompassing and accelerating as people use it for various purposes. The concept of social media can originally be traced back to the use of the analogue telephone for social interaction, though the foundation for social media use in Nigeria was laid in 2001 when mobile telephony became popular during the regime of Olusegun Obasanjo following the introduction of Global System of Mobile (GSM) telecommunication. Actually, the adoption of the GSM opened up new vistas of communication on an unprecedented level since it arrived at a time when the country had just come out of prolonged periods of military dictatorship and was newly experimenting with democracy as earlier stated.

Increasing from less than 100,000 internet users in 1999, when the country reverted to civilian rule; a recent report at internetworldstats.com shows that Nigeria Internet users as on June 30, 2015, were found to be 92,699,924 which equals 51.1% of the country's 2015 population given as 181,562,056. Hence, with a cell phone in the hands of the most Nigerians and with 154.1 million active mobile lines as at February 2017 (Okonji, 2017), there are increased civic and political participation through the social media. This might have pushed some mass media outlets to join the bandwagon of social networks so as to co-exist in today's highly competitive media world. Social media allow users to not just wait for information, but also interact with others through online expression such as posting political commentaries on blogs and social network sites and sharing multimedia commentary.

There are also increasing research works that explored the use of social media in facilitating new forms of civic engagement and political participation in the mass media (Nwafor, Odoemelam, Orji-Egwu, Nwankwo & Nweze, 2013; Bennett & Segerberg, 2013; Carpentier, 2011; Dahlgren, 2013). Evidently, the quick expansions of new media technology; the universal access to the Internet; and the continuous online presence in the social media are fundamental, changing the political culture and experience, especially in Africa, where the new media technologies have ushered in a new era of freedom of expression to boost democracy. Concerning this revolution, ITU reported that globally 3.2 billion people were using the Internet by the end of 2015, of which 2 billion are from developing countries and “for every Internet user in the developed world, there are 2 in the developing while 4 billion people from developing countries remain offline representing two-third of the population residing in developing countries” the report found that, out of about the 940 million people living in the least developed countries (LDCs), only 89 million use the internet, “corresponding to a 9.5% penetration rate; in Africa, one in 5 people use the internet today, compared to almost 2 in 5 people in Asia & pacific, and 3 in 5 people in the CIS” (www.itu.int).

There are, however, different perspectives and definitions of social media offered by different scholars. Kaplan and Haenlein define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content" (Kaplan & Haenlein, 2010 cited in Arceneaux & Schmitz Weiss, 2010). This shows that social media are digital media or Internet websites that allow users to connect and communicate with each other, as well as exchange and share information. Social media also, help the media to effectively report issues as politic, health, economic and social which are all indices of growth.

On the efficacy of social media in political growth, Štětka & Mazák (2014) corroborates (John, 2013; Castells, 2012; Shirky, 2008) opinions that though claims about the civic and democratic potential of

these technologies have been realized since the 1990s; the contemporary explosion of social webs and other Web 2.0 applications has renewed and significantly intensified these (cyber) optimistic perspectives. For Ajayi &Adesote (2015) the use of social media networks in deepening the democratization of Nigeria are huge, even as in 2011 there was increased use of mobile phones' SMS, Facebook, and Twitter during the general elections. During the November 18, 2017 Anambra state gubernatorial elections, social media also played an active role in sensitizing the people and mobilizing the polity. The prospective candidates used the social media as part of their campaign tools. In a 2009 article by The Guardian.com titled, **'***How social networking is changing journalism',* Richard Sambrook, Director of the BBC's Global News division observes that "the impact of social media was overestimated in the short term and underestimated in the long term. Mainstream media are adopting social media, especially with blogging and Twitter, he admitted, but nobody discusses the effects on the long term." Sambrook was, however, convinced that "news organizations don't own the news anymore" and 'there is a transformation for the journalist from being the gatekeeper of information to sharing it in a public space." Therefore, citizen journalism is something that has to be taken into account (theguardian.com/media). For him, objectivity was once 'designed to deliver journalism that people can trust. But in the new media age, transparency is what delivers trust.' He stressed that news today still has to be accurate and fair, "but it is as important for the readers, listeners, and viewers to see how the news is produced, where the information comes from, and how it works." Therefore, the emergence of news remains as important as the delivering of news itself (theguardian.com/media).

John Kelly, a columnist for the Washington Post in a report on the rise, challenges and the value of citizen journalism for the Reuters Institute for the Study of Journalism, explains that today the Huffington Post competes with the Washington Post not in terms of journalism, but in terms of its readers. Social media for Kelly is not only important for citizen journalism, but also for reaching out to the readers as well. Mainstream media were found to explore social media in driving traffic and 8% of the Daily Telegraph web traffic has already come from social media. Kelly regrets that the Washington Post was slow in using the work of citizen journalists in their publications as "the section it is mostly used is sports, where they aggregate Twitter feeds of American Football players and display it" (theguardian.com/media).

Social media has also made possible a new level of customization never possible before in journalism. Journalists have over the years always strived to make their stories relevant. That is why whenever news stories break on a national, regional or even international stage, good journalists have always tried to localize them by finding a local connection, a person, place or consequence for the hometown, state or country. But, new media technologies make it possible to take this journalistic ideal of

localization to the ultimate level of the individual. Every story can be potentially made relevant to each individual person. This is impossible in traditional media. Reporters' and editors' use of the Internet to search stories, find new sources, receive press releases and information, update breaking news, interview sources and engage in dialogue with readers has reached record levels (Deuze, 2001).

The social media usefulness prompted media scholars to realize that traditional model of media communication is no longer adequate to represent online media; and merging the traditional media model and online communication model may serve as an increasingly more accurate representation (Perry, 2002). Audience media consumption is purposive and involves active behaviour in which consumers seek media content based on their internal motivations (Eastin and Daugherty, 2005). The internal motivations should basically meet audience-specific needs and serve as the basis of attitude formation. However, social media can assume many different phases and; using a set of theories in the area of media research (social presence, media richness) and social processes (self-presentation, self-disclosure) Kaplan and Haenlein created a categorization schema for different social media types in their *Business Horizons* article published in 2010. According to them, there are six different types of social media: collaborative projects, blogs and microblogs, content communities, social networking sites, virtual game worlds, and virtual social worlds.

Social media is also useful in business field globally as an affordable marketing tool and contributes to the socialization process by giving access to customers, old friends, new friends, and relatives. It is used as learning tools in educational institutions and has proven to be of good use in assisting teaching techniques. Social media have also been used as vehicles for political and humanitarian causes where the progression in interaction aids the recruitment of supporters for a certain cause as shown in the Nigeria 2011 and 2015 election campaigns; American 2008 and 2012 presidential elections; and the 2011 uprisings in Egypt. Meanwhile, considering its vast potentials, today social media can be useful in the process of news production and management.

For the purpose of this study, social media networks, a subset of new media technology, is defined as online technologies that allow interactive communication of information online, participation and collaboration among media practitioners in newsrooms. It is this nature of social networks that are equally central to this argument, and the role they played in the broadcast station news production. The next sections examined some popularly used social media platforms such as Facebook, Twitter, YouTube, Whatsapp and blogs that are central to the objectives of this study.

2.1.4.1 Facebook

Founded in 2004 as a social networking website exclusively for Harvard students, Facebook has roughly 2.07 billion active users, as of the third quarter of 2017 (Statista, 2017). Facebook is a social networking service and website launched in February 2004 and founded by Mark Zuckerberg with Eduardo Saverin, Andrew McCollum, Dustin Moskovitz and Chris Hughes. On this network, users can produce profiles with pictures; create lists of personal interests; find contact information and other personal information. Users may also join common-interest user groups, and categorize their friends into lists such as "*People from Work" or "Close Friends*". Facebook users can also interact with other users or "Facebook friends" by updating their "status"; writing with other members "walls" or sending direct personal messages, photographs, sounds, and pictures. Users are able to "create and join interest groups, 'like' pages, import and search for contacts, and upload pictures and videos.

According to facebook.com, using Facebook requires that users give their true identity and has a number of features for user's interactivity such as the *Wall, Pokes, Photos, Status*, which allows users to inform their friends of their whereabouts and actions; and recently, live broadcast. In July 2007, Facebook began allowing users to post attachments to the *Wall*, whereas the *Wall* was previously confined to textual content only. In essence, this made it possible for the mass media to post contents on Facebook. It allows users to upload an unlimited number of photos, compared with other image hosting services such as Photobucket and Flickr, which limits the number of photos that a user is permitted to upload. As of May 2009, the 60 photo limit has been increased to 200 photos per album; and has even increased today. Broadcast media reporters can now snap more photos for news stories in addition to instant video streaming options.

Facebook Notes, a blogging feature introduced on August 22, 2006, that allows tags and Embeddable images is also invaluable to journalism. Users are able to import blogs from Xanga, LiveJournal, Blogger, and other blogging services (Abram, 2006). On April 7, 2008, Facebook released a Comet-based instant messaging application called "Chat" to several networks; this permits users to communicate with friends and is similar in functionality to desktop-based instant messengers. As from April 2011 Facebook users, however, began to make live voice calls via Facebook Chat, allowing users to chat with others from all over the globe. On July 6, 2011, Facebook launched its video calling services using Skype as its technology partner. It allows one to one calling using a Skype Rest API (Facebook, 2011) and has currently been replaced with Facebook Messenger app. On September 14, 2011, Facebook launched a subscribe button (Peters, 2011) which allow users to follow public updates, and people most often use this in broadcasting their ideas. This technological chronicle is a viral and veritable opportunity to the media practitioner who should be web 2.0 compliant to tap the potentials of using new media technologies.

2.1.4. 2. Twitter

Twitter, launched in 2006, is a "real-time information network that connects you to the latest information about what you find interesting" (twitter.com). Users initially communicate via tweets which are short posts limited to 140 characters, that allows for embedded media links. The character limit has improved today. Twitter is a Web 2.0 phenomenon that merges elements of blogging, text messaging and broadcasting. Users write short messages of about 280 characters or less, known as 'tweets', which are distributed to everyone who has subscribed to receive them. Twitter was founded in March 2006 in San Francisco, California and became public by August 2006 (Radwanick, 2009). The number of users has grown dramatically for as of July 2009, Twitter reached over 50 million unique visitors worldwide (Rao, 2009).

Twitter became a major player in the social media industry in 2008. It was the first source to provide information on the terrorist attacks in Mumbai, India on November 2008 and to provide video of the US Airways flight that landed in the Hudson River on January 2009 (Wright & Drifka Hinson, 2009, p. 6). Twitter can be accessed from any device with internet access, including laptop and desktop computers, though the brevity of tweets makes the application, particularly suited to mobile devices, with users providing a running commentary on their daily routines. Tweets can include links to blogs, newspapers, magazine, radio station, TV stations, web pages, images, videos and all other material online. You can start tweeting in 10 minutes, anytime, from your computer, laptop, smartphone or tablet and if you follow other people and sources you build up an instant, personalized profile.

Arceneaux and Weiss (2010) on the usefulness of twitter observe that despite the scepticism that surrounds Twitter, evidenced by comical online videos and sneers from comedians, the application has attracted a significant number of users and the attention of major media outlets. Even many companies and government agencies have embraced the technology, using it for various marketing, publicity and customer service tasks. Twitter users can also "follow" or essentially subscribe to the updates of other users, some of which include conventional media sources, such as AIT, Reuters, NTA, CNN, BBC, VOA, AP, NBC or Al-Jazeera, celebrities, and friends. It can be categorized using "hashtags" which group posts together by topic or type.

However, its usefulness extends to the mass media as it is nowadays used as a participatory and collaborative medium to further interact with and gets feedback from media audience. By following other people and sources one is "able to build up an instant, personalized Twitter feed that meets your full range of interests, both academic and personal" (Mollett, Moran& Dunleavy, 2011, p. 1). In addition, the authors attest that thousands of academics and researchers at all levels of experience and

across all disciplines use Twitter daily. This means that a station who owns a twitter account could be able to groom more users to patronize their station if twitter potentials are properly harnessed.

Similarly, Twitter could be used for media research or by individual researchers. A Twitter operation can add extra value to almost any research project when you tweet about each new publication, website update or a new blog that the project completes. To gauge feedback, you could send a tweet that links to your research blog and asks your followers for their feedback and comments. Tweeting will be more effective when an open-web full version or summary of every publication, conference presentation or talk at an event is available online. Summaries of the published article are a closed-web journal on a blog, or on the university's online research repository. In addition, sites like www.scribd.com are useful for depositing open web versions. There could be tweeting about new developments of interest from the project's point of view, for instance, relevant government policy changes, think tank reports, or journal articles (Mollett, Moran & Dunleavy, 2011). With this, media audience research will be made easier.

Twitter has also attracted press attention for news coverage of catastrophes, such as the massive earthquake that rocked the Sichuan province of China in May 2008; the terrorist attacks in Mumbai in November 2008; the crash of US Airways Flight 1549 on the Hudson River in January 2009 and the volatile protests after the Iranian election in June 2009 (BBC News, 2008; Beaumont, 2009; Grossman, 2009; Shachtman, 2008; Spencer and Moore, 2008) as cited in Arceneaux and Schmitz Weiss (2010).

Twitter can be used by a broadcast station (radio) in two main ways and each requires its own Twitter account (twitter.com). The first account will contain a stream of '*now playing'* song titles that will update as the songs change in the broadcast. The other account is a more custom news stream from the station that will allow a station manager to promote station artists, events, and contests. Few twitter followers will want to be updated with every song being played and will sometimes ***'unfollow you'*** as the song stream data can be annoying and clog their stream. By having this second account set up – a follower can still get news and updates from their favourite stations without having to get a song- by-song updates as well. By splitting these up it ensures that news, retweets and recommendations do not get lost in the ever-updating stream of now playing song title tweets. One can set up multiple accounts on each and easily manage them on the same screen. One can also re-tweet one's news so that tweets will go out on one's schedule. "You can even set up searches for keywords relevant to your station and easily retweet and follow other users"(twitter.com). This invariably portrays the usefulness of Twitter in broadcasting, especially in the area of news management.

High profile moments for Twitter over the past few years also include the moment when James Karl Buck, a US graduate student, was arrested while protesting in Egypt in 2008. While in transit to the police station, he used his mobile device to send a tweet about his plight; his followers initiated a successful effort to win his release from jail (Simon, 2008). Many stories made national and international headlines with several users on Twitter providing first-hand accounts, maps, pictures and other relevant bits of information, utilizing the service as a form of citizen journalism (Beaumont, 2009). This actually indicates that Twitter is a veritable tool for journalistic work especially investigative reporting.

Bloggers also see Twitter as a new veritable form of communication with its own sensibility and distinct benefits. On this same line of reasoning, Mark Evans did not believe that micro-blogging would replace traditional blogging as "it complements..., by providing a forum for blog bursts as opposed to blog thoughts" (Evans, 2008). To this end, blogger Seth Godin opines that:

> the medium has to be appropriate for the message. Using microblogging. . . to share your quarterly review or to fire someone or to make an important, nuanced announcement is just sort of dumb. Using it for keeping in contact with an ever-widening circle of friends and colleagues is brilliant (Seth's Blog, 2008).

The brevity of tweets makes it valuable for the broadcast media. Several writers used the character limit as an opportunity for humour. Writing in the *Atlanta Journal-Constitution*, Jim Auchmutey (Arceneaux & Schmitz Weiss, 2010) defined tweets as 'short blog entries limited to 140 characters, which this entry just exceeded.' In a story about the growing use of Twitter by businesses, a young woman who had just landed a PR job remarked that 'the new resume is 140 characters' (Baker and Green, 2008). Yet for some writers, the extreme brevity of posts was a drawback before 2018, as the format encourages the kind of cryptic, condensed language associated with text messaging in general. Blogger Seth Godin, for example, states 'if you've got 140 characters to make your point, the odds are you are going to be misunderstood (a lot)' (Seth's Blog, 2008). In this perspective, Twitter actually improves one's brevity writing ability in journalism, which is good.

Another feature of Twitter is the near-instantaneous speed of information dissemination, especially on twitter. Recalling the amazement that was bestowed upon the telegraph, which was said to deliver news at the speed of lightning, Twitter proponents boasted of its superiority to traditional news outlets. One blogger stated that news of a bomb blast in Manila was circulated via Twitter even before the local news got the story, while a writer at *PC Magazine* emphasized that the first news of the Chinese earthquake came via Twitter (A Feed is Born, 2008). Associated Press writer Dolnick (2008) made the same observation in relation to the terror attacks in Mumbai (and even made the same lightning analogy): The lightning-quick updates of the attacks that killed 174 people read like a sketchy but

urgent blow-by-blow accounts of the siege, providing further evidence of the profound change in how people gather their information in an increasingly new media age.

Similarly, in Nigeria it was observed that most broadcast stations, especially FM radios who has provided a web version of their broadcast and editions such as AIT, NTA International, Channels TV, ABS FM, Dream FM and even some newspapers, for instance, *Thisday*, *Vanguard*, Punch, Tribune, and Sun newspapers with online versions equally run active Twitter accounts. Oloja, et al (Adelabu, 2011, p.19-20) observed that "online journalism practice and online newspaper publication emerged in Nigeria in 1997, when the defunct Post Express started Post Express Wired…, as a response to the growing decline in readership among youths and fall in adverting." The foregoing has truly x-rayed that Twitter is significant to the work of media practitioners and broadcast journalists.

2.1.4.3 YouTube: A Digital Video Site

Launched in 2005 as a video-sharing website, YouTube has over the years become a proactive social media for participatory culture in the new public sphere. A fundamental feature of YouTube is the dazzling number of derivative videos, uploaded daily in their thousands. It was started as a user-friendly video-sharing website by three former PayPal employees and bought a year and a half later by Google for the sum of US$1.65 billion; the platform has now become a symbol of contemporary participatory media culture (Van Dijk, 2009). YouTube was, apparently, the first website dedicated solely to uploading and sharing personal videos as over 3 billion videos were viewed each day on YouTube, reaching 700 billion playbacks in 2010 (youtube.com). In addition to being an uploading and viewing media, with YouTube, users can leave comments on videos. In fact, it is the third most frequented website online (alexia.com).

Research has shown that YouTube is a social media site and not a mere video repository. The site holds a number of social networking features which enables various forms of interactions, including possibilities to comment and rate videos (Ellison & Boyd, 2007). It also supports interaction and subscription which serve as an asset to broadcast journalism. Rotman and Preece (2010, p.330) succinctly put it that, YouTube is more like a community than a broadcasting platform, though it "may be seen as an obstacle to the establishment of an intimate community. However… subgroups of smaller communities are created within the larger scope of the larger site, enabling users to find kinship and cultivate close relationships."

Comprising somewhere around 20 percent of all HTTP traffic, and almost 10 percent of all internet traffic (Cheng, Dale & Liu, 2008), YouTube is apparently at the centre of the social media revolution. The comments to videos are an amenable data source that can generate information about the

interaction between users and the cultural and linguistic codes governing this social space. The understanding of the social arena of YouTube comment is double-sided, based on coexisting notions of ‘socialized' versus ‘alienated cyberculture'. Scholars (Fuchs, 2008, p.327–334; Jenkins, 2006; Lévy, 1999; Varnelis, 2008) claimed that YouTube is marked by high levels of engagement in the creations of others, of strong peer support and of the passing along of knowledge from the experienced to the newcomers. Such Web 2.0 developments also subvert the ‘vertical, top-down, passive, one-way flow of information’ (Birdsall, 2007, p.92) that is characteristic of conventional media, allowing for alternative discourses to manifest through blogs, podcasts, virtual reality (e.g. Second Life), collaborative technology (e.g. Wikipedia), social networking sites (e.g. Facebook, Twitter, MySpace) and video-sharing sites (e.g. YouTube, Netflix). The viewer is thus simultaneously a user and a producer of media content.

The aftermath of these technological developments in traditional broadcast news media and the corresponding opportunities that they provide for various publics remain interesting. One area of interest is participatory journalism, which Bowman and Willis (2003) described as the act of a citizen or a group of citizens playing an active role in news gathering and dissemination. Other researchers claim that traditional and elitist conceptions of authorship, public interest and aesthetics work as a sort of conservative power among users of YouTube. Jones and Schieffelin (2009, p.1062) pinpoint that while some regarded this internet forum of possessing the potential to provide a positive multimedia participatory environment, "others claim that YouTube's comment forums are the most "loud "and "dumb" corner of the Internet."

Today, YouTube has become a platform for open exchange, peer support, and creativity between the media and its audience. Individuals publish video clips of news incidents like accidents, fire incidents, and protests on YouTube, which may serve as news clues to journalists and lead to further investigations. In addition, YouTube might not have the same cultural weight as many other new media platforms, but it is nonetheless interesting in its own right. Jones and Schieffelin (2009, p. 1062–1063) write:

> Much like bathroom graffiti..., the potential for anonymity that YouTube affords opens the commenting forums to a wide array of voices, but participants carefully scrutinize the style of their own comments and each other. Unlike graffiti, YouTube comments tend to retain a high degree of topical coherence, if not a cumulative progression or structure of responsive turn-taking.

The authors pointed out that the relatively disinherited climate in the threads allows for extreme discourse, the negotiation of social rules, as well as the formation of coherent discursive patterns. YouTube has also been identified as revolutionizing foreign policy by providing human rights groups, terrorists and others a place to air their version of reality to a potential global audience of millions

(Naim, 2007). Therefore, it is widely used in alternative and citizen journalism. YouTube content perceived to threaten regimes has resulted in the site being temporarily blocked in countries such as Turkey and Thailand. Studies on such technological changes fail to systematically question the popular claims that traditional barriers and hierarchies are universally disappearing. Some enthusiasts claim that these changes mean the world is now ‘flat' with previous hierarchies disappearing around the globe (Friedman, 2006, p. 7). Others proclaim the emergence of a new era, the ‘Connected Age', for example, in which institutions lose power to individuals, and civic life blooms owing to the spread of technological changes (Benkler, 2006; Fine, 2006). In line with these claims, the arrival of citizen media is said to have enabled ordinary people to create and share narratives, as well as to become politically empowered (Garfield, 2006).

YouTube videos are impactful in Nigeria. For instance, they helped in arresting those involved in the *Aluu Four* killings and the Ejigbo Pepper Sodomy. The *Aluu Four* was a mob action in which four students of the University of Port Harcourt were set ablaze on October 5, 2012, after being accused of stealing. This incidence was recorded and transmitted live on YouTube. Also, the September 2012 Lokoja and Anambra flood disasters were transmitted on YouTube and generated global reactions and comment which propelled government and public interventions. These are just a few examples. So many stations now have accounts on this platform where they broadcast media content and video. Videos with Nigerian contents are also uploaded on YouTube as commercials, religious sermons, aid work, news and reports, entertainment, training and education materials and so on.

2.1.4.4 WebBlogs

The next social media platform addressed in this section is the weblogs. Briefly defined, weblogs, more commonly referred to as blogs, are “an easy-to-use content management tool. When you ‘blog’, you are instantly adding new content to your site via a web interface. No technical or programming skills are necessary” Wyld (2007, p. 49). Blogging requires just Internet access and typing skills, and these low-cost barriers have led to personal blogs proliferating worldwide. For instance, there were 35,000 active blogs in the Arab region in 2009; 40,000 by 2010, and 600,000 blogs since the 2011 uprisings according to the Arabic Network for Human Rights Information.

A weblog, or blog, therefore, is a type of website where entries are made providing commentary or news and information on a particular subject. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. According to Edublog “A blog (a blend of the term “web log") is a type of website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video with entries commonly displayed in reverse-chronological order. Most blogs are interactive, allowing visitors to

leave comments and even message each other via widgets on the blogs and it is this interactivity that distinguishes them from other states. The appearance of the blogs, with their new standards of reporting, has accentuated that debate on the role of journalism in the 21st century. For example, the blogosphere has altered somewhat the role of the journalists as a gatekeeper. Through links on blogs, readers now have access to original documents and other sources. They also have access to information that journalists do not regard newsworthy.

In addition, journalists still see themselves helping the average reader make sense of events and developments. Not only does that come in the form of filtering out what journalists believe is unimportant, but also placing that news in context for the reader. For the vast majority of readers who are not interested in searching the Internet for additional information, that journalistic function is critical. Today, some journalists and media practitioners have their own blog where they reach out to their audience and publish news contents.

2.1.4.5 Whatsapp

WhatsApp is a social messenger created by Brian Acton and Jan Koum in 2009 to make communication and the distribution of multimedia messaging easier and faster (Jisha &Jebakumar, 2014, p. 2). WhatsApp Messenger which helps create groups contains live chats, audio, and video call features that are creating an enabling environment for information and communication development, especially in Africa. Studies have even shown that WhatsApp is the most popular instant messenger app used by young people today (Ekwenchi, Morah & Adum, 2015).

Around the world, media outlets and journalists are using chat apps to disseminate and generate news and information. The BBC was the first media organization to integrate news reporting through WhatsApp with their coverage of the 2014 Indian elections. Presently, the BBC is on WhatsApp, WeChat, BBM, and Mxit, doing reporting and reaching new audiences. Trushar Barot of the BBC's WhatsApp initiative who developed an interest in experimenting with chat apps for news during the London riots of 2011 argues that "on WhatsApp, effectively you have 100 percent hit rate for your audience, because it pings straight onto their phone and comes up as a popup, and they will usually read it within seconds or minutes of you posting it" (O'Donovan, 2014, para, 15). The fact that Whatsapp has the capability of being used to record downloadable voice, video plus photographs equally makes it invaluable to journalism practice.

2.1.5 Mobile Media Technology

Mobile media technology is another new media technology used in news production that is globally prevalent, today. The emergence of mobile phones was as a result of the need to devise a means

through which one can engage in a point to point communication comfortably without the use of wires. An Ofcom 2016 media report found that:

> There is an increasing preference for mobile phones above more traditional media devices. From 2005 - 2014, adults were most likely to say they would miss their TV set the most. Now mobile phones are the most-missed media device. The smartphone is also the device mostly used for social media and is the preferred device for the majority of online activities (p.6).

This is evident in the increasing use of mobile phones for immediate communication. The beginning of the third millennium notably came with a technological revolution with the digital sphere immersed in the everyday life of society. "In 2015 there are more than 7 billion mobile cellular subscriptions worldwide, up from less than 1 billion in 2000" pinpoints Brahima Sanou, director of the International Telecommunication Union (ITU), Telecommunication Development Bureau in his recent assessment report on ICT Facts and figures 2015 (www.itu.int). Indeed, this revolution is progressing at an accelerating speed and penetrating every facet of human development as shown in the ITU report on 15 years of global ICT growth.

Over time, multimedia handsets have been developed which are equipped with different applications that enable one to achieve audio or video recording. With these qualities, journalists can easily cover stories as well as reaffirm their authenticity with the recorded materials. They are also used by the journalists in news reporting from far distances through email, SMS, and MMS. The development of mobile internet also enables journalists to send in reports in the form of emails or through social media like BBM, Whatsapp, and Facebook. Reporters also use the mobile phone to voice- over their reports from the scene of the event. One significant thing about the use of mobile phones is that it does not require an additional training by users. Agu (2011) notes that mobile telephony has actually altered the broadcast media modus operandi, in terms of its portability and ease of use.

The smartphone, which is a recent development in mobile technology, has been in existence for more than a decade in the forms of PDAs, Blackberry devices and iPhone, unveiled by Apple in 2007. Smartphones are specially designed for camera functions and social photography sites which makes it apt as a journalistic tool. In Nigeria, the revolution in mobile technology began in 2001 with the introduction of the Global System for Mobile (GSM) services as stated earlier. Prior to this date, Nigeria had only 450,000 telephone lines that served the then estimated 120 million population; and was thus ranked third on the list of countries with the lowest teledensity in the world. From about 0.73 percent in 2001, Nigeria's teledensity increased to 68.13 percent in November 2011(ITU, 2011) and doubled to 110.9% in 2017(Okonji, 2017).

Latest statistics from the Nigerian Communications Commission (NCC) indicated that the number of fixed and mobile telephone subscribers in the country increased to over 107.36 million as of 30 September 2012 from 102.36 million three months earlier and 95.88 million at the end of 2011. GSM mobile operators accounted for 96.54 percent, or 103.65 million, of Nigeria's total telephony user base at the end of the third quarter of 2012 (up from 90.56 million users nine months earlier); followed by CDMA mobile networks with 3.02 percent or 3.24 million, (down from 4.6 million); while fixed and fixed-wireless operators claimed just 0.44 percent, or 474,345, of the total, compared to 719,406 users at end-2011. Meanwhile, the largest mobile operator by subscribers remains South Africa-based MTN, with around 45.64 million users on its GSM network at the end of September 2012, up 5.7% quarter-on-quarter and accounting for 42.7 percent of Nigeria's total wireless subscribers (*www.itu.int/ITU.../CategoryView,, category, Africa.aspx*). Today, more than 154 million Nigerians have a mobile phone (Okonji, 2017). This implies that most Nigerians use mobile devices which might induce them to access the news on their phones. So, broadcast media should tap the mobile technology potentials for efficiency and good delivery

In essence, the mobile phone is one of the fastest-spreading new media technologies in recent times. Over the past two decades, technology devices have become mobile, portable and networked to the point that they have become pervasive in everyday life. The use of mobile devices became common among a wide range of age groups due to affordability and availability (Newhouse, Williams, & Pearson, 2006). Beyond regular phone calls and short message service (SMS) exchanges, the smartphone is now a personal multimedia device (Westlund, 2008). Cameron and Sturt (2009) also argue that the new form of convergence based on wireless networking, mobile telephony and digital photography sustains mobile journalism. This implies that mobile technology has generated new forms of convergence which is greatly affecting the spread of information. Bosomworth (Drulă, 2014, p.48) assert that increasingly, more people use their mobile phone or other mobile devices to access sites and to read the news, as shown in an analysis of the mobile market for 2013. This technology makes it easier and quicker for news to reach users (Drulă, 2014). This entails that the ubiquity of smartphones and the popularity of the new media technologies are signifiers of a new social order in which anyone and almost everyone can make their presence known, by sending messages, photos, audio and videos that potentially can be accessed by a huge number of people. This had the effect of breaking the monopoly on sending messages in the mass media that was held by traditional media such as radio and television.

It should also be recalled that the revolutions in 2011 in Tunisia, Egypt, and Libya were facilitated by youth using cell phones and the Internet. The smartphone represents the current pinnacle of mobile phone development, coupling phone capabilities with the additional functionalities of a personal

digital assistant (PDA). The smartphone's evolution of the mobile phone influences how users tend to think of these devices, as reflected in the handset design. The connection between mobile technology and the media industry has generated mobile news and mobile media. Studies by Westlund (2013) and Quinn (2009) cited in Drulă (2014, p.50) show that in recent years, mobile media and news has gained more popularity, and journalistic practices constantly use this technology for news publishing or for gathering information. Erjavec and Polar Kovacic (2009) in Drulă (2014, p. 53) also show that audiences have a participatory role in news production for mobile devices; that journalists create the structure and the content of the mobile news, but audience produces mobile news items as a 'denunciatory participatory practice'. This means that audience is more preoccupied to browse news, and then, to react in a denunciative way.

Still, another benefit of using mobile devices is the development of third-party applications (or apps). Mobile phone applications are one area of technological innovation, which is an enhancing factor in the use of mobile for broadcast communication. Prentice & Dobson (2014, p. 282) note that apps are mobile device software applications that allow users to access the app's information from their smartphone, tablet, or personal computing device. Today, there is a proliferation of apps for a wide variety of purposes, including education, entertainment, personal health, coaching, and much more (p. 282).

News organizations, including NTA 24, Naija news, Tell magazine, BBC, AP, Reuters, AIT, Channels Television, and Sahara TV have their apps on Google Store for use by mobile subscribers globally. This increase online visibility as well as enhance audience expansion for a media station making the smartphone a must-have for today's journalists. On the other hand, smartphone technology helps the editorial staff speed up on mobile journalism aptly termed "smart journalism". It helps reporters extend the capabilities of editing, note-taking, and live-streaming. The most common mobile operating systems (OS) used by modern smartphones include Apple's iOS, Google's Android, Microsoft's Windows Phone, Nokia's Symbian, RIM's BlackBerry OS, and embedded Linux distributions such as Maemo and MeeGo. These operating systems can be installed on different phone models, and typically each device can receive multiple OS software updates over its lifetime. Therefore, as smartphones enable easy access to the internet, it makes the journalist adapt quickly to the changing globalizing world (Wikipedia).

The advancement in mobile technology, smartphones, in particular, has changed our sense of time in relation to the news. The old media practice of waiting 24 hours for a news update now seems like an eternity. Even social media platforms commonly assessed on smartphones have also given users more control over time. Smartphones enable place shifting and enable users to access media content

anywhere as well as any time. It also enhances media convergence and multimedia (Drula, 2014). Basically, the mobile Internet provides various information about the world easily and when combined with the apps, a journalist can report from anywhere in the world. If you want to get work done there are all kinds of available apps to do that. Apps transformed mobile phones into highly productive work and entertainment devices. Apparently, with smartphones, journalism practices are interesting and faster and even the Ofcom 2016 report confirms the pervasiveness of smartphone adoption in the UK:

> Smartphones are replacing computers for internet use. Two-thirds (65%) of all adults use a smartphone to go online; up by four percentage points since 2014. Of those who only use devices other than computers to go online, 78% use a smartphone, while 6% of all adults *only* use a smartphone, and no other device, to go online (up by three percentage points since 2014). Smartphones are the only device used to go online, at home and elsewhere, by a majority of adults (p.8).

The Ofcom report holds firm support as many people use smartphones the way PC were used many years ago. For instance, a Smartphone that can double as (or at least control) a set-top box, or a tablet that can perform many of the functions of a laptop or PC, are both instances of different technologies converging in a single form factor. Given their origins, smartphones clearly support human interaction and intensify the communication flow. In a pervasive environment, phones exist in a social setting where the focus is communication, not computation. Therefore, like personal computers, smartphones perform computations, store information, support other typically computing-related tasks, and do other things aimed at augmenting communication. Considering its functions, smartphones are apparently veritable tools for effective journalism, but the question is: how are journalists adopting new media technologies in newsrooms.

2.1.6 New Media Technology: A Catalyst for Media Development

This section examined some of the potentials of new media technologies that made it a veritable tool for broadcast media practice. New media technology opportunities such as convergence in general and cross-media production in particular, occur in all areas of the news industry and have implications for the majority of new workers. The phenomenon affects, for example, the everyday news-work conditions; journalistic hierarchies; the question of authorship and journalists' control over their news stories; and the development of public service broadcasting towards public service (multi)media (Erdal, 2011, p. 214).

2.1.6.1 Videoconferencing

This modern media technology enables a live discussion between a group of people in situated diverse space through the application of connected telephones and video screen. Video conferencing enables media practitioners to get linked with reporters and other media gatekeepers, to see and talk to each other from the convenience of their own conference centres or from meeting spaces, hotels, offices and

other venues with the requisite video and telephone facilities. This process is suitable for news production and newsgathering. Video conferencing in media as was first used in 1982, by John and Johns to reach hundreds of reporters in thirty cities breaking news and information about the Tylenol product tampering episode, which cost the lives of seven people who ingested the tampered over- the counter medication (Straubhaar & LaRose, 2004).

2.1.6.2 Webcasting

Webcasting is a form of broadcast production that incorporates streaming video and audio on the Internet. It is used to deliver a live press conference or event to the computer screen of the target audience. In the case of media production, a reporter or producer can watch from his or her desktop, laptop, phone amongst others viewing not only video, but text and photos, as well as participate in interviews if they are part of the package. They can even "download the Internet feed or run a tape to get excerpts for use in the on-air coverage," (Straubhaar and LaRose 2004) and might even be the first source of information for a media station about an organization, event or idea.

Hanson (2005) however, states that a major limitation on webcasting is "the need to obtain permission to transmit materials on the web." This might no longer be a limitation today, especially when one considers the proliferation of computer experts as well as Internet hackers which has led to the easy access and posting of information on the net without seeking permission. For instance, during the 2017 Anambra November 18 election, citizen reporters used many social media platforms to report the election situations live both in audio, video and text forms from their points of locations. The mainstreams like NTA and FRCN were observed to be using only phone reports and text messages, especially from their correspondents; with the exception of those with social media accounts comprising mainly the private FMs like Dream Fm, Blaze FM, and Hot FM. Another good example such as the case of last British parliamentary election in the United Kingdom depicts the level of new media development; a situation when on the 29th April 2010 Prime Minister Gordon Brown while out of an election campaign on TV and was driving home, called Gillian Duffy, a 65 year old lady who had earlier asked him a question about the immigration status of the UK. Gillian Duffy had heckled the prime minister as he was interviewed live on TV in Rochdale. As soon as he got into his car with his aid, he went off and called her ‘a bigotry' forgetting that the car digital camera was on and online; and that he was still wearing the microphone from the TV studio. Consequently, this news went viral and he instantly saw the news on the TV on his car dashboard (theguardian.com/politics).

Since radio and television stations are unquestionably limited by geographical and channel capacity, reception becomes practically impossible at a certain distance, unlike webcasting that is free of geography and channel capacity issues offering faster speed, enhancing video and audio quality. New

media technologies also enable media stations to reach as many people as possible. For instance, with the use of satellite and cable technologies, broadcast stations like BBC, CNN are able to reach different parts of the world with their signals. Also, most media stations have developed websites through where programmes are made available to their audience who might not be within the sphere of coverage of the particular media house.

2.1.6.3 Podcasting

This is a technology that involves live streaming and sharing of radio programmes over the internet. Radio was developed in the late 1890s as a point-to-point communication system, but set owners began 'listening in' gradually. Slowly, the medium developed from a means of talking to each other as a means to talk to the masses, with broadcast organizations such as the BBC emerging in the 1920s. Brecht(1993) had argued that radio would be the finest possible communication apparatus in public life, and that " it would be, if it knew how to receive as well as to transmit, how to let the listener speak as well as hear, how to bring him into a relationship not isolating him"(p.15). This equates with what podcasting does today, as one can listen or transmit without any gatekeeper controlling who can and who cannot transmit in this space. The term 'podcast' is used as an over-arching term for any audio-content downloaded from the internet either manually from a website or automatically via software applications.

Radio's essential qualities are, however, somehow related to those of podcasting. Radio by its nature is an intimate medium – users rarely listen to it as a collective and often listeners are alone in the car or on the bus, all places that portable media devices now also go. It is probably because radio invades these personal spaces that it is viewed more fondly than other media. We trust it more and often rely on it more. We also engage with the radio more because it a 'blind' medium (Crisell, 1986). The listener paints the pictures and as such is more active in the process of consumption. These characteristics of intimacy and blindness shared with Podcasts enable Podcasting to reach individuals and groups not normally found on mainstream radio, as the listener may feel that the producer is 'one of them', a member of their community, whether defined by geography, ethnicity, culture or social group. One major advantage audio has on the web is that audio files are smaller than video files and so are more easily downloaded from the internet.

However, when a new medium arrives and is named, one often wonders where the title came from. The term, 'Podcasting' origins can be traced back to early 2004 when the *Guardian* journalist Ben Hammersley forecasted that with MP3 players like Apple's iPod in many pockets, "audio production software cheap or free, and Weblogging an established part of the internet; all the ingredients was

there for a new boom in amateur radio." (Hammersley, 2004) notes with the growth of audio content created in an MP3 format user could download and playback on the expanding range of MP3 players.

Whilst Audible was established to provide speech content for these devices, the automation, free access and the radio-like nature of Podcasts contribute to the disruptive nature of the new medium. Berry (2006) observes that a podcast is an application of technology that was not developed, planned or marketed; and yet its arrival does challenge established practices in a way that is not only unprecedented but also unpredictable. Still, there are other potential implications for medium businesses wanting to join the podcast as "it requires companies to rethink old assumptions…. If old consumers were predictable and stationary, then new consumers are migratory, showing a declining loyalty to networks or even media" (Jenkins, 2004). This is the real challenge for radio when attempting to communicate with the 'wire-free' generation in the converged 21st century age. It is, therefore, time for media practitioners to rethink not only established practices, but also their notions of what audiences really want.

In essence, Podcasting works like a subscription except it is audio files delivered to the home or office computer rather than printed matter dropping through the door. The audio is (usually) recorded in the MP3 audio format, a generic format used by portable audio devices, such as the Apple iPod. Once on a player, listeners can mix various Podcasts with their own music to create their own playlist of content. The listener will be in charge of the broadcast schedule, choosing what to listen to, when, in what order and– perhaps most significantly – where. Effectively, there is a move in power from programmers to listeners. Although the producers still maintain control over content the listeners make decisions over scheduling and the listening environment and that is a fundamental change for producers of radio content. Anyone can, therefore, create a Podcast as there is no need for a license or for a radio studio. "To many Podcasters, it is about reclaiming the radio and using the powerful and easy technology many now have, to do what they want" (Twist, 2005). What Podcasting does is to combine portable devices such as iPod devices with online audio content (such as the material already offered by Audible) and RSS feeds as a distribution system. A podcast could thus, be employed in news dissemination in Nigeria broadcast stations if its potentials are properly harnessed.

2.1.7 New Media Technology Use and Broadcast Newsrooms

Newsrooms around the world are gradually moving into the stage of new media productions (Deuze, 2006) with some of the changes in the area of technologies. That is the reason why new media technologies such as digital camera, digital microphone, digital mixers, digital console, digital recorders, digital transmitters, digital smart television, computers/ laptops, digital radio receivers and digital transmitters are suddenly replacing the old analogue technologies. Globally, the current

emphasis is on Digital Switch Over (DSO) and even the June 17, 2017, deadline given to Nigeria to have attained full DSO has passed. It was thus important to examine some of the advantages of using new media technologies in broadcast media.

2.1.7.1 Enabling Time Shifting

New media technologies have given users more control over time. To watch or listen to a particular program, traditional broadcast media required audience members to tune in at a time determined by the broadcaster. Time shifting refers to the practice of recording or downloading media content to watch or listen at a later time that is more convenient for the audience. According to Baran (2009), VCR and audio cassette tape player were the first widely available technologies to enable time shifting. Later digital technologies such as the DVR and the MP3 player made time shifting much easier and more popular. Now, viewers can record television programmes for later viewing or watch them from a website at times of their choosing. They can also download podcasts for later listening at their convenience. Portable laptops and mobile devices such as smartphones and MP3 players also enable place shifting— enabling users to access media content anywhere as well as any time.

2.1.7.2 Enabling Information Super Abundance

In the new media age, there is a super information overload, also called an information explosion or saturation which as conceptualized by Beaudoin (2008) means a situation where one is unable to process the deluge of information, and communication available to the point that it renders the communication effort irrelevant. Reiner (2009) referred to information overload metaphorically as ― a tsunami of information (p. 69) confronting citizens from social networks such as Facebook, Twitter, websites, and too many individual reporters. Thatcher (2007) described the present information environment as chaotic and a consequence of electronic communication. Pye (2004) was convinced that the information overload is a consequence of the phenomenal growth of mass media, which in turn makes it hard for audience members to decipher serious messages from the vast information the media disseminate.

Although a product of the information age, information overload makes information meaningless, confounds media audiences, and potentially dangerous for democracy (Nordenson, 2009). This underscores Reiner‘s (2009) emphasis on news literacy, which he insisted should form the basis of literacy in the information age. To cope with information overload, Thatcher (2007) suggested that communicators should encode communication in a way that potential consumers will select beneficial information without mentally rejecting messages that leaders want them to receive. This will ensure abundant information is utilized for development.

DiRienzo, Das, Cort, and Burbridge (2007) argued that access to digital information increases information flow in such a way that creates a more open and free society. According to Yin (2008), the Internet‘s potential to generate discussions on issues overlooked by the traditional media is producing a better informed, more vocal public and a more open society. In an analytical study of proposed reforms in the communist Chinese press, Yin noted that the acceptance of the Internet in China itself meant the collapse of the rigid communist media system in China because the unique character of the Internet makes it impossible for the regime to have absolute control of content and dissemination. The Nigerian public sphere has become freer and vocal as anything that happens today is sent to the social media either through Facebook, Twitter, Whatsapp or YouTube.

Taplin (2005) however, believes that the realization of a transition from the world of bandwidth scarcity to a new world of media abundance could not have happened without the seminal transition from analogue to digital (p. 241). Pavlik & McIntosh (2013) argue that digitization is transforming both how and when a media organization distributes their content. So, digitization, as portrayed, is vital to media development and democracy. Castells (2005) concludes, "this is why… governments are ambiguous vis-a-vis the uses of the Internet and new technologies. They praise their benefits, yet they fear to lose the control of information and communication in which power has always been rooted" (p. 20). There has always been a link between communication and democracy, thus, "accepting democracy of communication is accepting direct democracy, something no state has accepted in history. Accepting a debate to redefine property rights goes to the heart of the legitimacy of capitalism. Accepting that the users are the producers of technology challenges the power of the expert” (Castells, 2005, p.20).

New media technology has also changed the flow of communication from a linear to a three dimensional form of information called hypertext, which is a method of organizing and presenting information on a computer in an order at least partially determined by electronic links (hyperlinks) the user chooses to follow (Bolter & Grusin, 1999). New media technologies also introduced two major differences in media access. Time and geographic distance are insignificant with satellite and computer networks that also offer limitless channels of distribution that come without centralized control. These technological changes initiated a new culture as described by McLuhan in the global village concept (Fidler, 1997, p. 99). Supporting McLuhan's viewpoint, Bolter and Grusin explain that we define ourselves through our media. In traditional media, the audience understands the content from the producer's point of view. Interactivity allows the user to have control over how and what content is viewed as the role of the audience has equally changed as reflected by the term "user." This operational freedom is significant to our culture because it corresponds, "to various attitudes about the role and value of the individual" (Bolter and Grusin, 1999, p. 244). While the media do not determine

cultural or individual identity, the new media technology influences how we see ourselves and the world we live in.

2.1.7.3 Localism and Provision of Virtual Communities

New media technologies have equally altered our sense of space and place in other ways as well. For example, traditional media tended to be rooted in a particular physical location. Newspapers were grounded in particular cities, and radio stations produced their programs locally. Today, with satellites and the Internet many forms of media are placeless. For instance, in America, *USA Today,* ungrounded in any particular city, is the nation's most-read newspaper, while the *New York Times* website is among the most popular sites anywhere in that country. Meanwhile, radio stations that are programmed remotely from corporate headquarters, satellite radio, and Internet radio streaming have largely displaced "local" radio. Some radio and television stations in Nigeria such as SharaTV, GuardianTV and Emmanuel TV, maintain only online broadcasting without necessarily operating from any location. By affecting our sense of place, media technologies have also altered our sense of community. New media technologies created an entirely new social space, cyberspace, which allows for new forms of interaction with little connection to the physical world (Birkerts, 1994). People can take on new identities in cyberspace, transcending the limits and the responsibilities of their physical environments, at least temporarily.

The concept of virtual community (Rheingold 2000, Ojebode, 2013) implies that communities no longer need to be geographically based as people all over the globe can become "virtual" neighbours through the space-bridging technology of the Internet. By "friending" others on Facebook, joining discussions in chat rooms or online forums, and playing in virtual worlds, users can employ the Internet to connect with others.

The loss of media rooted in distinct physical places has also been accompanied by the loss of media content that is located in distinct social spaces under the new media dispensation. For example, with the Internet and mobile media, distinctions between public and private have become blurred. This process is intensified by intrudes from new forms of mobile media. Issues and topics once thought to be private and belonging to a separate, backstage personal sphere of social life are increasingly discussed in and displayed on the public front stage of media. This shift of social space ranges from the spectacle of television talk shows that expose the intimacies of dysfunctional families to Facebook pages, tweets, Whatsapp and Tumblr posts through which individuals reveal the often mundane details of their daily lives.

2.1.7.4 Ease of Production

New media technology has also increased the ease of producing media contents. The journalistic field is an ever-evolving field and journalism has changed in many ways in the last few decades (Deuze, 2015). Technology is a major factor fuelling a lot of these changes (Shoemaker & Reese, 2014). Not only did the internet allow new forms of interactions between journalists and the "people formerly known as the audience" (Rosen, 2006) who can now produce and disseminate their own content (Bruns, 2003), but it also accord journalists to understand the audience and what the audience does with news. News stories are now being investigated and produced on smart devices at the cheap cost courtesy of new media technologies.

2.1.7.5 Interactivity

Another ubiquitous feature of the new media technology is its potential of been interactivity. Just like the Rosen's (2006) argument about the people formerly known as the audience, the interactivity of the new media has revolutionized media practice. Any broadcast programmes that do not involve audience participation through mobile devices or a social network is considered boring in our society today especially among the Millennial. In addition to dramatically changing the news media ecosystem, new media technologies have empowered the audience in two ways. First, these innovations now allow practically anyone with internet access to create and disseminate messages without having to go through the media gates, giving rise to what Castells (2007) called "mass self-communication" as earlier mentioned. Secondly, while traditional journalists remain protective of their once clearly dominant position in the flow of information, these innovations have increased the influence of the audience on journalistic decisions.

2.1.7.6 New Media Convergence

Media convergence is another major invaluable change initiated by the new media technologies to the process of media communication in the 21st century. The concept of convergence is used both in the academic field and within the media industry to denote the ongoing restructuring of media companies as well as to describe the latest developments in media forms, distribution, and consumption. However, there is currently no generally accepted definition of the concept. Depending on the context, the meaning and connotations vary. Scholars have conceptualized convergence from different perspectives and several models of convergence have been presented, often involving other similar concepts such as cooperation, cross-promotion, content sharing, integration or combination.

Domingo, Salaverrias, Aguado, Cabreras, Edo, Masip …et al. (2007, para. 2) in their description of media convergence argue that "the common ground for any process labelled as journalistic convergence is the blurring of the limits between different media –professional skills, formats,

production strategies". The scholars categorized convergence into four dimensions covering different phases of the communication process as integrated production, multi-skilled professionals, multiplatform delivery and active audience (para 2). Their categorization falls in line with Pavlik & McIntosh (2013) idea of technological convergence that concerns media practice. Domingo et al, (2007, para 1) mindset that development of the Internet as news medium; audiovisual media digitalization; corporate concentration plus declining circulation of traditional media actually persuaded academics and professionals to argue that media convergence might be the saviour of journalism in the 21st century.

There are four classifications of media convergence as content convergence, form convergence or technological convergence, corporate convergence and role convergence (Huang, Davison, Shreve, Davis, Bettendorf & Nair, 2006). By content convergence, Huang et al refer to the sharing of news content or advertisements by rival media organizations; while role convergence involves the integration of different functions performed by media professionals in such a way to maximize employee potentials. The authors argue that the news media industry began to merge different media; newspapers, radio, television, magazines, and online journalism sites at the start of the 21st century to distribute news across different media outlets with media convergence. This means that media convergence is an area of new media intrusion that should not be overlooked by any media organization.

For Erdal (2007), the convergence concept is the fusion of or melting together of information systems, telecommunications, and media technologies. Erdal (2009) describes the convergence within and between media organizations as one of the newest catalysts for change experienced by the 21st-century journalists. He notes that radio, television, mobile phones, and the internet has fused into a multiple media platform that offers integrated news delivery to media consumers. This means that the previous boundaries between various media organizations in the way they do business are almost eliminated because technology now enables different operations to overlap. Erdal (2011, p. 213) on point affirms that a significant development in recent times is “the growth in the number of convergent ‘media houses’ at all levels of news journalism, from (inter)national media to regional and local media. Today, few modern media organizations publish on only one platform.”

Pavlik &McIntosh (2013) however, examined three categories of convergence, which includes technological convergence, economic convergence and cultural convergence (p. 8). They assert that with convergence, a growing number of print and radio reporters have been trained in digital video shooting and editing and can now be "VJs", or video journalists, webcasting their stories visually as well as through audio"(p. 13). This is one edge of media convergence over all other mediums in the

communication process. In spite of its vast potentials, Himelboim & McCreery (2012) warn that new media technologies pose a challenge to conventional media practice as many new media technology features breaks the historical one-way communication flow, and allow audiences to influence media content which conflict "with journalistic normative, professional, social, and economic positions, particularly the interest for exclusivity and credibility." (p. 2).

Pavlik and McIntosh (2013, p. 12) categorized the implications of media convergence on traditional media into eight areas of change: media organization changes; media type changes; media content changes; media use changes; media distribution changes; media audience changes; media profession changes; and attitude and value changes (p. 12). The authors noted that many of the ramifications of the changes taking place today through convergence will likely not be realized or fully known for years to come, while others seem to have to have immediate and dramatic effects (p. 31). Pavlik & McIntosh's position shows that media convergence will have an overwhelming influence on any station that adopts it in practice considering its high potentials. Still, on the import of media convergence in media practice, Erdal (2008) adds:

> Convergence in general and cross-media production, in particular, occurs in all areas of the news industry and has implications for the majority of journalists. The phenomenon affects, for example, everyday news work conditions, journalistic hierarchies, the question of authorship and journalists' control over their news stories, the development of public service broadcasting towards public service (multi) media (p. 4).

Pavlik & McIntosh (2013) and Erdal's mindsets on the role of media convergence in media practice are similar and point to the indispensable and the veritable role that new media convergence will offer in developing a media system. Basically, some media organizations of the 21th century are more technologically equipped with their resolve to using smart new media technologies like smartphones, iPad, tablets, laptops and digital technologies in assessing and creating internet websites with social networking sites, blogs, mobile social media sites and many other new media platforms in order to make their presence more pronounced as discovered during the pilot study for this research.

Kur and Essien (2014) noted that journalism practice is now better and more significant in its social role with the adoption of the new media convergence. The authors emphasize the idea of the new media technologies initiating convergence is aimed at improving journalism practice. "Integration, interactivity, and multiplicity of use and open-ended character are other features of the new media, which have impacted positively on journalism practice for the better" (Kur & Essien, 2014 p.60)

Baran, (2009, p. 52) singled out three elements that unite simultaneously to fuel media convergence today as digitization of nearly all information which provided a common means to represent all forms of communication; high speed connectivity where networks are becoming faster and more pervasive-

wired and wireless and; “seemingly endless advance in technology in which speed, memory and power improvements allow a device to do more” which ultimately ‘redefines the limits of what is possible’ (p. 52). Baran’s stand is a truism considering the expansions in social networks and mobile technologies penetrations as noted earlier.

Cordeiro (2012) describing convergence in ‘*Radio Becoming R@Dio: Convergence, Interactivity and Broadcasting Trends in Perspective*’ corroborates that media convergence results from dynamics in technology; synergies of media, computing and telecommunications; adding value to existing processes; and creating new ones. This established a digital culture in which every device and content is re-conceptualized as digital. She goes on to assert that alongside traditional media companies, the new player approaches to consumers, as content producers and distributors.

> Changes in communicative processes within the media and new media ecology analysis are enriched by examples that display common features in interactivity and participation: convergence and cloud computing about radio. The new media environment challenges traditional radio broadcasters who are online to improve their traditional broadcasting, towards multimedia content and distribution (p. 493).

Cordeiro argues that media convergence is causing a paradigm effect on radio and reemphasizes that today “although terrestrial radio broadcasting is still the most important distribution platform, figures show that online is no longer just a complement to FM. Rather, it is replacing it in some cases: immigrants and young people, most particularly”(Cordeiro 2012, p.494).

Jenkins (2006) similarly describes convergence as a cultural shift that encourages news consumers to be more active and curious seekers of new information and build alliances across different media content. In what he described as the migratory behaviour of media audiences, convergence enables audience members to search for information or entertainment in any medium and from any source (p.19). Jenkins distinguishing the distinctiveness of the old and new consumers of media content notes “whereas the traditional consumers are passive in character the modern consumers are active.” The author believes the “conventional attitude of old consumers, made it easier to control them, unlike the unpredictable behaviour of new consumers that make them wander from one medium to another” (p.19). Jenkins argues this happens because, former audience members who consumed information alone are more socially connected now and “if the activities of media audience were once unrecognized, the new consumers are now vocal and attracts attention” (Jenkins, 2006, p. 19).

Jenkins’s assertion actually falls in line with Rosen (2012) and Cordeiro (2012) mindsets on the emergence of a new audience in the new media era. Therefore, with digitization and the internet "radio listeners have access to an increasing amount of content: news, information, and entertainment in different platforms and formats, competing with radio… a new audience emerges that is non-

traditional, non-passive, but participative and independent" (Cordeiro, 2012, p. 493). The new influence gained by the masses in a converged media environment can be translated into sociopolitical energy, thereby precipitating a new sociopolitical culture where power truly belongs to the people.

Cordeiro also notes that education and information roles are performed better today with convergence, as listener participation in radio is an online participation that is characterized by written posts, such as email, blog comments, or online social network posts; images (pictures); video and audio. She argues that radio broadcasters are creating multimedia content that is multiplatform, establishing different narratives or a continuous narrative available in multiple forms, and in most cases, the contents are quite similar to those that characterize listener participation. Under this dispensation as described by Cordeiro, radio stations commonly have live streaming, posts in online social networks or blogs, on-demand videos, and audio podcasts. Yet, these new conditions might not be actually new to the medium for "in radio, interactivity has long been closely related to different forms of participation: for example listener panels, letters, contests or call-ins." (Cordeiro, 2012, p.497). Cordeiro's view in effect, also crystallizes Rosen (2012), Jenkins (2006) and Chafee & Metzger (2001) mindsets on audience transformation with the new media technologies.

Deuze (2007,p.148) argues that the structure of convergent multimedia news organizations started in the mid-1990s with global companies selecting at least some form of cross-media cooperation or synergy between formerly separated staffers, newsrooms, and departments. Erdal (2011) 'cross-media' concept is, therefore, one converging development of the media occasioned by the new media technology. The cross-media concept is as "communication or production where two or more media platforms are involved in an integrated way" (p. 214). The trend is equally significant to broadcast media, according to Erdal since convergence in general and cross-media productions in particular, occur in all areas of the news industry and have implications for the majority of news-workers. Cross-media influences "the everyday news work conditions, journalistic hierarchies, the question of authorship and journalists' control over their news stories, the development of public service broadcasting towards public service (multi) media" (Erdal 2011, p. 214).

Media convergence is as well associated with many changes in journalism practice, especially in practice of multimedia journalism that presupposes teamwork and sharing expertise to produce story packages that can be delivered across media, including (but not limited to) interactive components (Deuze, 2004a in Deuze, 2005 p. 455). In their description of the relevance of media convergence in journalism practice in Nigeria, Ukonu, Okoro & Agbo (2013) note, "with various conventional media establishing websites, there is hardly any distinction in the ways news is packaged because the web platform allows each medium to use words and graphics to present information" (p. 14). They added

that the new media approach to content delivery equally enables collaboration among media organizations and media consumer. The audience consequently gets increasingly involved in "generating content and hosting, web pages where they discuss social issues in the form of blogs or what has become popularly known as citizen journalism" (p. 14).

Brooks, Kennedy, Moen and Ranly (2004) on their part argued that media convergence has altered the relationship between news organizations and their audience. They pointed out that traditional journalism gave the editors the gatekeeper function of deciding for audience members what information is available to them, but in a converged media environment, (mostly Internet-based) the audience is at liberty to choose from a variety of information sources. Erdal (2011) on point argues that radio and television production are now produced digitally for a digital media sphere. He emphasizes that under media convergence, radio and television reporters are now working together and cooperating across media boundaries unlike before. (Erdal, 2008 p. 214).

Vobic (2009) corroborating (Majoribanks; Singer; Klinenberg; Deuze; Avilés& Carvajal), in his work on newsroom convergence in Slovenia, divulges that newsroom convergence challenges the traditional aspects of journalistic work in order to increase the productivity, efficiency, and profitability of news media organizations in three ways. First, newsroom convergence advocates multiskilling and multitasking; that is gathering, selecting and producing content via several platforms. Secondly, it speeds up the news production process and tightens deadlines in the almost around-the-clock news cycle. Thirdly, it challenges journalistic routines and the practices of the newspaper, radio, television and online journalism culture (p. 10).

So far, we can deduce that digitization and the rise of the Internet have blurred the boundaries between types of media and changed the broad parameters that used to be associated with all mass media as earlier stated. As a result, it makes more sense to speak of new media technologies as breaking significantly with many of the features that characterize traditional mass media. Unlike the passive audience of the past, today's media consumers are more active and wander from one gateway of information to another, either out of necessity or by habit (Cheffer & Metzger, 2001). It is, therefore, imperative to track the taste and desires of the audience by providing developmental based- contents in ubiquitous channels such as the Internet, social networks, smartphones, internet televisions and radios, podcasts, blogs and so on. Storm (2005) even examined the prospects of involving members of the public in the production and processing of new materials as a major attraction to media practices because it is a source of information empowerment to the audience. Storm (2005) argues that blogs enable members of the public to function as journalists or news professionals, thereby making them the gatekeepers of news and current affairs. This trend is truly an indication that in most contemporary

democracies, audience members are no longer passive participants in the media communication process. A new paradigm that takes into account the audience‘s unpredictable choices is imperative, likewise that of having industry professionals ready to literally pursue the audience wherever they go.

2.1.8 New Media Technology and the Paradigm Shift in Journalism Practice

In McLuhan’s works, we learn that every medium presents a different sensory experience to extend the self into the world. It comes as no surprise then that journalism’s foundation has begun to change with the Internet and new media technologies culminating in new changes in journalism practices. The unique new media technology attributes of interactivity and multimedia are facing significant evolutions in journalistic culture as the basic mission of the reporter has evolved in the digital world. Web technology, therefore, provides opportunities for sources and audiences to participate in the process of news production. Scholars are calling reporters “gatewatchers” (Bruns, 2005) and information “monitors” (Deuze, 2003), insisting that they share authority willingly and embrace “citizen media” (Gillmor, 2004). Buzzwords such as “networked journalism” (Jarvis, 2006) and “communal media” (Jenkins, 2006) demonstrate how some people are thinking about the new media technology as an opportunity for a journalistic revolution where citizens have a responsibility to speak up, create content, and counter mainstream media in virtual places.

The digital revolution in new media technologies observed by Deuze (2003, p. 218) has created the platform for a free flow of information as ideas and knowledge across the globe and the myriad ways in which changes and challenges are brought to the purveyors and the consumers of the news. Hence, there is a general assumption “that the journalist is not an endangered species, but one whose functions and routines are being altered drastically. Now a website can operate as a platform upon which citizens may voice their opinions and questions regarding relevant issues (Deuze, 2003, p.218). Deuze (2003) called this ‘dialogic journalism’, which is a more liberating notion of news creation where “the content of a new medium is fully maintained by journalists interacting with citizens” (p.219). Under the dialogic journalism, the audience member (or the receiver) takes an active role in journalism.

Research has shown that the audience plays an important role in the news construction process as earlier stated and is considered by media theorists as among those that exert influence on news content (Baker, 2002; Gans, 1979; Shoemaker & Vos, 2009). Yet, for the longest time journalists had the excuse of not knowing who exactly their audience was and what it wanted (Gans, 1979). Newspapers relied on readership surveys while broadcast news relied on rating systems—forms of audience research that provided limited clues about their actual audiences (Gans, 1979; Schlesinger, 1978). But the arrival of online news is changing not only how users interact with the news, for it has also provided journalists with a new way of learning more about their audiences (Napoli, 2011). Through

web analytics, news organizations can collect and analyze the footprints that new users leave behind, offering immediate access to an unprecedented wealth of information about the audience. No longer do journalists second-guess which issues, audiences are following. Such information is now usually displayed on their websites' homepages, including the most popular stories of the day; or even on the hour or the minute; is listed automatically based on users' actual clicks to guide subsequent resolution and influence editorial decision.

Indeed, the era of traditional mass media is believed to be giving way to an age of personal and participatory media which could intensely change both the media industry and society as a whole. Marshall McLuhan had first associated technology with content and outlined four different media cultures. The first was the ancient culture of oral communication, exemplified by many of the old Sanskrit texts followed by a literature, culture using the phonetic alphabet and a handwritten script which coexisted with the oral culture. The third progression, according to McLuhan (1964) described as 'The Gutenberg Galaxy' was that of mass-produced mechanical printing. Finally, we are in the midst of what is known as the culture of the 'electric media' with radio, television, and computers all fused into a new medium (of convergence) which provides a separate media culture altogether.

The explosion in forms of new media technologies has equally grabbed the attention of communication scholars for two decades and the number of studies is burgeoning while new ones appear at a steadily accelerating pace (Singer, 1998). This new revolution is marked by neologisms. "Blog" became part of the Webster dictionary in 2004, the New Oxford American Dictionary adopted "podcast" in 2005. "Wikis", "Vlogs", "Metaverse" and "folksonomies" followed suit. Another qualitative aspect is the unique possibility of the new media technologies (internet) to supply links to story sources (Deuze, 2006). According to Newman (2009), in third-party networks another new media option, social recommendations play a role in driving traffic to news content. From a professional standpoint, these types of features allow news organizations to harness some of the more popular activities on the internet to reach new audiences, keep their own audiences connected (even if not on the site), and allow them to interact about the news (via Facebook, for example) without affecting their own platforms.

Broadcast stations are being influenced by this convergence trend in the South East, Nigeria. The broadcast media makes use of the new media technologies, which is eminent in both their news and programme production and contents. From the newsroom down to the studio, there are many imprints of new media. It has actually changed the way news is gathered, broadcast, as well as the way programmes, is presented on both radio and television. For instance, at Dream FM, 60% of their weekly schedules are interactive, allowing for audience participation in the radio programmes. In fact,

traditional media of the 21st century is engaged and forced to engage in multiplatform communication as the social media continues to provide newer platforms amidst more revolution which corroborates Cordeiro (2012, p. 503) earlier mentioned assertions that today, radio is a multimedia, multi-platform and convergent. She believes that the new features of radio are strengthening the radio's capacity to create feelings of community among listeners; "feelings which can only increase as radio increasingly bets on the cloud paradigm" (p. 503)

Some research has suggested that media convergence is, perhaps, having the most impact on newspaper journalists (Reinardy, 2011; Rowe, 2011; Young, 2010). For instance, in the traditional newspaper environment, the daily deadline and limited space define the jobs performed by reporters, editors, and production staff, but the situation has changed as today's news are being updated online at every minute. The change is argued to be same in broadcast organizations as attested to by Cordeiro (2012). The review continues on some new media platform potentials used by the broadcast media of communication.

2.1.8.1 Citizen Journalism

Citizen journalism is a common opportunity available in the use of new media technologies. Badran (2014, p. 2) noted that formerly, citizen journalism was mediated and limited to people writing newsletters, letters to the editor, or contacting news organizations. Local citizens then provided video or film, to news organizations. For instance, the famous Zapruder Film of the November 22nd, 1963, assassination of John F. Kennedy in Dallas was one of the first instances of citizen journalism that took a visual form rather than interpretative print comments. Citizen media (journalism) however, "bloomed at the birth of the Internet and into the 1990s as a response to traditional mass media's neglect of public interest and partisan portrayal of news and world event" (Adelabu, 2011, p. 143). Further, around the turn of this century, mobile phone usage gave individuals the "power of the palm" and the ability to write text messages that could be forwarded by the original senders thus, as the technology improved, people were able to use their mobile phones as cameras then video recorders (Badarn, 2014). According to Dreier (2012), an example of citizen journalism is the video Al Jazeera news channel got of the former Libyan leader, Moamer Gadhafi, was a citizen video. The final video that showed that Gadhafi was killed in October 2011 was recorded on a mobile device and sent to the channel. Another example is the video of the killing of the Iranian student, Neda Soltan in Tehran in the Iranian election protests on June 2009, which went viral on the Internet and reached mass audiences.

Citizen journalism is common in places where media access is unavailable or problematic like during the Arab Spring and civil war in Syria. In addition, YouTube has become a major platform for all

kinds of movement and citizen journalism. Badran (2014) opines that citizen journalism gives the normal citizen the opportunity to document their own version of reality and tell their own side and point of view of the story. This makes normal citizens become empowered and informed about happenings in the society. Collaborating to this (Nip in Badran, 2014, p.2) assumes that, "It gives people a voice and therefore, power. The people's participation itself and what they produce are regarded with the hope to contribute to an informed citizenry and democracy."

Blogging, streaming, Usenet or newsgroups, and e-mailing are practices associated with the new media and are facilitators of the citizen or public journalism that today is an improved version of professional journalism. Public journalism (with very few or no cases of gate-keeping) is arguably more professional than the traditional journalism because public journalism is arguably more autonomous; and autonomy in the exercise of skills is a yardstick for measuring professionalism (McQuail in Kur & Essien, 2014, p. 60). The immediacy of the internet and its centrality to the work of the media was thus established in Nigeria with the advent of the internet in early 1999. Also, the potential it held as a tool for social change, empowering the individual became quite obvious to millions of Nigerians subsequently.

Citizen journalism started barely two months after Nigeria's return to civil democracy in 1999 when Alhaji Salisu Buhari, then newly elected speaker of the House of Representatives became the first casualty on allegations of certificate forgery and perjury. His fall was aided by internet technology, which then was a new tool for journalists and Nigerians (http://news.bbc.co.uk/1/hi/world/africa/401123.stm). The News magazine, a leading Nigerian weekly, used the internet to conduct investigations into the speaker’s claims that he had been awarded a University degree from Toronto, Canada. His business dealings, his age which he had lied about and the dates of other schools he said he had attended were all published. Applying a combination of traditional investigative journalistic tools with searches on the internet and email communication, the magazine was able to publish a factual account that exposed Salisu Buhari as a liar. Even at that, Kur & Essien (2014, p.61) believe that being an aspect of new media, citizen journalism is another factor that stands against journalism as a profession: "with citizen journalism, there is no control of entry into journalism practice; local residents with no formal training in journalism report on news items of interest to a relatively small number of people. Citizen journalism has also made journalism to be less journalist-centred and more user-centred; and more significantly, it has made journalism to lose its clear frontier as a profession (Boczkowski in Kur & Essien, 2014).

There are different types of citizen journalism, according to research which is imperative for a proper understanding of the effectiveness of new media technology. Steve Outing of Poynter. Org (Badarn,

2014) outlined two different types of citizen journalism: semi-independent citizen journalism and independent citizen journalism. The first type, semi-independent citizen journalism includes the contribution of citizens to existing professional news sites. There are many examples of this type (Badarn, 2014, p.3): the first is the readers who post their own comments next to stories done by professional reporters. Currently, most of the news websites allow readers to post comments; however, in order to avoid objectionable messages, many websites require registration before posting comments. The second type involves the reader who adds their information to articles written by professional journalists. Badarn observes that the third type of semi-independent citizen journalism involves readers who keenly work with professional reporters in putting a story together. Here, "reporters might ask readers who have certain experience in a particular field to send information concerning this topic. This information is then, integrated into the final story" (p.3). The fourth is reader's blogs integrated into the professional news websites including blogs where readers actually critique the performance of the news organization, such as Lawrence Blog (p. 3). Nigeria is currently experiencing Bardan's two types of citizen journalism as shown in Kur & Essien (2014). The implication is that there is a kind of news overflow and credibility is often questioned as everybody is now 'reporting'.

2.1.8.2 Alternative Journalism

Alternative journalism is another offshoot of journalism of new media technologies. The production of alternative and participatory forms of media can be seen as an example of active citizenship (Harcup, 2011). Alternative media can provide 'a rich vein of journalism, which is simply invisible in journalism studies', Hartley (2009, p. 314). Similarly, Keeble (2009, p.60) points out that: 'despite the vast economic power of the mainstream press, a lively alternative print industry (ethnic minority/left-wing/peace movement/feminist/single-issue campaigning) survives against the odds – yet it tends to be ignored by both Fleet Street and academia.' Although the journalism of such alternative media may indeed be regarded as of marginal interest within much of journalism studies, it is neither completely invisible nor totally ignored. Such forms of media production can inform us not just about the alternatives themselves, but, it is argued, can also shed light upon more established media practices, because alternative journalism also proceeds from dissatisfaction with the epistemology of news (Atton & Hamilton,2008).

This apparently implies that it is the inability of traditional media to satisfy the audience felt needs that gives room to alternative journalism in most cases. Therefore, alternative journalism thrives on blogs while they also strongly advertise their stories on social media platforms. Harcup (2011) pinpoints the idea that the mainstream media do not provide a balanced account of social protest has been developed especially in the period from the 1960s to the early 1990s and help prepared the idea of alternative journalism. During this period, critical media theorists maintained that dominant political and

economic actors can set the terms of the news agenda because journalists tend to identify these actors as ‘authoritative sources’.

Such journalism type might instigate violence in society. Dahlgren (2006, p. 274–5) argues that all kinds of horizontal mini media such as organizational newsletters, neighbourhood bulletins, union newspapers and activist pamphlets as well as various online locations, can facilitate media audiences to become public as "citizens who interact with each other and with power-holders of various kinds” (275). The author observes further that when audiences coalesce into publics who talk about political issues they begin to enact their civic identities and build use of their civic competencies. This will move them from the private realm into the public one, making use of and further developing their cultures of citizenship (p. 275).

Rodriguez (2001) is particularly concerned with the ‘transformative processes’ involved in the production of such horizontal forms of media. She draws deeply on the work of Mouffe and other feminist scholars to place alternative media at the heart of democratic communication and active citizenship. Whilst doing so, she rejects the term ‘alternative media’ in favour of ‘citizens’ media’, explaining that:

> Referring to ‘citizens’ media’ implies first that a collectivity is enacting its citizenship by actively intervening and transforming the established mediascape; second, that these media are contesting social codes, legitimized identities, and institutionalized social relations; and third, that these communication practices are empowering the community involved, to the point where these transformations and changes are possible. (Rodriguez 2001, p.20)

She argues that the participation and ‘empowerment’ offered by such citizens’ media constitute citizenship in action for as defined by the theory of radical democracy, the concept of citizenship implies that social subjects claim a space for their public voices, “that these social subjects tenaciously intervene and shape their identities, altering circulating social discourses and cultural codes, and that, as a result of the above, these negotiations and re-negotiations empower the communities involved”(p. 158). She infers from a radical democratic perspective, that citizens’ media materialize as important sites where citizenship is forged. Communities are actively enacting citizenship by participating in these media experiences, reshaping their identities, reformulating established social definitions, and legitimizing local cultures and lifestyles on the personal as well as the local level (Rodriguez, 2001).
Evidently, in Nigeria, users are creating and using social media groups and forum for activism and advocacy. These forums often carry ethnic, social, religious and political traits. On the other hand, there are attempts to appropriate social media as platforms of alternative reporting, which take place against a long history of activists’ efforts to establish alternative channels of public communication. As activists have always had difficulty communicating their point of view through the mainstream press, they have tried to develop their own media (Atton & Hamilton, 2008; Hackett & Carroll, 2006).

Various theorists have suggested that social media indeed provide such powerful alternative platforms of public communication (Bruns, 2008; Castells, 2009; Jenkins, 2006; Shirky, 2008). Castells (2009) for example, as earlier mentioned, positions that “as people (the so-called users) have appropriated new forms of communication, they have built their own systems of mass communication, via SMS, blogs, Vlogs, podcasts, wikis, and the like” (p. 65). This development was tagged the rise of ‘mass self-communication'.

Vlogs mean a video log which is a journalistic video documentation on the web of a person's life, thoughts, opinions, and interests. A vlog can be topical and timeless, instructional and entertaining. In other words, vlogs are what was once referred to as an Internet television channel that consisted of programming created by an individual and posted online much like TV, is shortened as the vlog. The main purpose of the vlog concept is an effort to communicate on a personal level with your audience. In a similar vein, Shirky claims that now ‘everyone is a media outlet'. He contends that in the current process of mass amateurization, the profession of journalism is disappearing, just as the ‘scribe' has once disappeared (Shirky, 2008, p. 55–80). Shirky and Castell's viewpoints discern the reality of alternative journalism, the place of the audience and the position of the traditional journalist in the new media technology and information age.

2.1.8.3 Cross-Media Journalism

Erdal (2008) concept of cross-media journalism is another offshoot of new media journalism that is available in the newsroom. He addresses these developments from two perspectives, news work, and news texts, through the concept of ‘cross-media’. This concept describes communication or production where two or more media platforms are involved in an integrated way. The author argues that in order to be more precise for theoretical and analytical purposes, a distinction has to be made between cross-media communication and cross-media production processes. Under this dispensation, Erdal notes that:

> To various degrees, production for television and radio has been integrated with production for digital media. Radio and television reporters, who used to exist in separate worlds, are now working together, cooperating across media boundaries. The platforms of radio and television have been converging in terms of production processes, and, later, web and other platforms such as mobile phones have been added (Erdal in Erdal 2011, p.214).

He agrees that media theorists often describe convergence as a melting together of information systems, telecommunications, and media technologies, on the one hand, and social and cultural convergence, on the other (p.216). Erdal argues that convergence comes in a variety of forms. He cited Fagerjord & Storsul who distinguished between six forms of media convergence: convergence of networks, terminals, services, rhetoric, markets and regulatory regimes. He agrees with Quinns that definitions of convergence in a journalistic context, or convergence journalism, have a tendency to

strive towards an ideal of ‘full convergence', where ‘the key people, the multi-media editors, assess each news event on its merits and assign the most appropriate staff for the story' (p.216). Another definition of convergence related to cross-media were also given by Dailey et al. (in Erdal, 2011,p.216) as "hybrid teams of journalists... work together to plan, report, and produce a story, deciding along the way which parts of the story are told most effectively in print, broadcast, and digital forms'

Erdal’s (2011) adopts a more pragmatic definition of convergence journalism, similarly with Deuze, who defines it as the “(increasing) cooperation and collaboration between formerly distinct media newsrooms” (Deuze, 2004, p.140). Convergence journalism is happening in a variety of newsrooms, in a variety of manners and is the same thing with cross-media journalism described by Erdal (2011) and Deuze (2004). No other form of convergence journalism has risen to be the best template for doing convergence (Kolodzy in Erdal, 2011, p.217). Erdal goes on to explain further that in the vertical axis of journalism convergence, a multi-skilled reporter would perform several functions in the making of a news story, for example, interviewing, shooting video, taking photos, writing up the story, editing audio, and video.

> The horizontal axis of convergence journalism is, on the other hand, made up by the different media platforms on which a news story can be realized: print, radio, television, web and mobile media. It is likewise often associated with the ‘master of none' label. We can call this the cross-media axis of convergence journalism. (Erdal, 2011, p. 217)

Erdal’s assertions capture the benefit of convergence journalism that allows for multi productions. But this can only be possible when the journalists are skilled in the manipulation of the technology. On the other hand, Erdal (2011, p.217) observes that cross-media is often confused with multi-platform (production or publishing) therefore, the two concepts must be distinguished from each other. Thomasen regarded cross-media as an annex of multi-platform. Multi-platform involves the use of more than one media platform within the same ‘communicative situation’, but with no communicative relations or references between them. He argues that cross-media represent an extension of this, where these relations or references are present in the communication (as cited in Erdal 2011).

The essence here is whether the different media platforms ‘talk to each other'. If a media concept uses television and the web in a way that makes it impossible to remove one of them without severely altering the product; it can be described as a cross-media concept or text. An example of a cross-media production/product is Pop Idol (Kjus; Syvertsen & Ytreberg as cited in Erdal, 2011), where television is the main platform, integrated with the (mobile) phone platform for audience feedback, and supplemented by the web platform. Another cross-media concept is ‘SMS-television' (Enli, 2005), using mobile media content from the audience (SMS messages, MMS pictures) in a television

broadcast (as cited in Erdal, 2011,p. 217). This type of cross-media concept is embryonic though observable in media practice in Nigeria, especially in FM radios and television stations.

2.1.8.4 Participatory Journalism

Participatory journalism is adopted from the definitions given by Bowman & Willis (2003) and Singer et al.(2011). Participatory journalism is the 'act of a citizen, or group of citizens, playing an active role in the process of collecting, reporting, analyzing and disseminating news and information' (Bowman & Willis, 2003, p.9). Similarly, Singer et al. (2011, p.2) describe participatory journalism as a type that captures the idea of collaboration and collective which are not simply parallel action. "People inside and outside the newsroom is engaged in communicating not only wit*h* but also with, one another. In doing so, they are participating in the ongoing process of creating a news website and building a multifaceted community" (2011, p.2).

It is important to note that participatory journalism, according to Bowman & Willis (2003) and Singer et al. (2011) mindsets fit into what Jenkins (2006) (as earlier mentioned) describes as 'participatory culture'. Jenkins (2006) suggested that 'rather than talking about media producers and consumers as occupying separate roles, we might now see them as participants who interact with each other'(p. 3). It is, therefore, necessary to note that participatory journalism and culture are referred to as part of our discussion concerning new media technologies. In positioning participatory journalism within a greater discussion concerning convergence in media, Jenkins goes on to argue that the meaning of convergence, particularly within news media organizations, encapsulates scholarly concerns regarding responses to rapid technological change and innovations. He argues that "if the digital revolution paradigm presumed that new media would displace old media; the emerging convergence paradigm assumes that old and new media will interact in ever more complex ways" (p.6). The Digital revolution paradigm in line with the author claimed that new media was going to change everything and "more and more, industry leaders are returning to convergence as a way of making sense of a moment of disorienting change. Convergence here, implies an old concept taking on new meanings (Jenkins, 2006, p. 6). Media convergence has also altered the relationship between news organizations and their audience (Brooks, et al. 2004). They pointed out that traditional journalism gave the editors the gatekeeper function of deciding for audience members what information that will be available to them. In a converged media environment that is mostly web-based, however, the audience is at liberty to choose from a variety of information sources.

2.1.9 New Media Technologies and National Development in Nigeria

The role of new media technology cannot be valued without being set inside the context of internal growth in Nigeria. Over the last fifteen years, Nigeria has experienced increasing technology adoption,

especially in the areas of political communication, health, education, economic and social development. New media technologies are critical to national development as evidenced by the escalating number of Nigerians on the internet and on social networks as earlier stated. The transforming world of the new media technologies, particularly in the context of media convergence, access to information, free flow of information and citizen participation in information processing and distribution are considered important components that strengthen democratic culture (Jensen, 2005; Reiner, 2009).

Development as a concept is a victim of definitional pluralism; however, attempts have been made by erudite scholars to conceptualize development. Gboyega (2003) captures development as an idea that embodies all attempts to improve the conditions of human existence in all ramifications. It implies the improvement in material well being of all citizens, not the most powerful consumptions does not imperil the future; it also demands that poverty and inequality of access to the good things of life should be removed or drastically reduced. It seeks to improve personal physical security and livelihoods and expansion of life chances. Development involves not only economic growth, but also some notion of equitable distribution, provision of health care, education, housing and other essential services aimed at improving the individual and collective quality of life (Naomi, 1995).

New media technologies and other mass media play a vital role in human development as they generate a lot of information for the consumption of citizens, enabling them to participate in policy debates that affect their lives. What should be the right quantity of information to provide in a democracy remains unknown, but as Jensen (2005) pointed out, the important thing is the quality of information from the media and not the quantity. The quality of news in the context of the processing news by professionals and news consumers is related to what Reiner (2009) called media literacy. With him, democracy rests on a tripod of democratic institutions, unfettered press and a population that has the capacity to understand, evaluates, and makes smart choices from the information available to it. Reiner further argued that the survival of a nascent democracy and the media depends ultimately on the degree of citizens'news, media, and information literacy.

Emphasizing the import of information to the society, Schudson & Tifft (2005) noted that despite the avalanche of information available to Americans, most of them are surprisingly ignorant about the workings of a democracy and what goes on in other parts of the world. Nordenson (2008) employed a metaphor to demonstrate the ubiquity of news: ―news is part of the atmosphere now, as pervasive and in some ways as invasive – as advertising (p. 30). He observes that "everywhere—airports, cars, offices, homes, clubs, schools, roads, wireless devices and so on, information is beamed to various audiences in unprecedented levels anytime, anywhere, and on demand"(p.30). However, as new media

technologies provide information abundance which is perceived to promote transparency and good governance, it could even cause information overload (Nordenson, 2008; Beaudoin, 2008; Pye, 2004; Jenkins, 2005).

On the other hand, the extent to which the media is a factor for national development has been a subject of discourse in communication literature. The role of the media in the development process has received intensive attention among scholars and researchers since mid twenty centuries. The term development has been used interchangeably with modernization (Ogbondah, 1996). Nwosu (1990) takes an overview of the relationship between communication and rural/national development and strongly acknowledges the potency of the media in rural development. According to the Oxford Advanced Learner Dictionary of Current English, development means a new event or stage that is likely to affect what happens in a continuing situation (Hornby 2003). To develop is, therefore, to become more advanced. In the context of a nation, three major factors must be considered in any discussion on development – economic growth, self-reliance, and social justice (Eapen,1973). National development therefore, implies and involves political, economic, health and social development.

Wilson (2005) provided different perspectives on what constitutes development. Inayatullah (Wilson, 2005) asserts that development is the change towards patterns of society that allow better realization of human patterns of society greater control over its environment and over its political destiny, and that enables its individuals to gain increased control over themselves (p.124). Rogers (Wilson, 2005) also regarded development as a wide participatory process of social change in a society, intended to bring about social and material advancement (including greater equality, freedom and other valued qualities) for the majority of the people through their gaining greater control over their environment (p.125).Wilson corroborates Ekong to point out that development is for and about people and not about things; "that the people for whom development is planned need to be made aware of their needs and to participate in the process through a converted mass mobilization"(p.126). The overall object of national development is, therefore, human development, the purpose of which is to enlarge people's choices for greater access to knowledge; better nutrition and health services; more secure livelihoods; security against crime and physical violence; political and cultural freedoms; and a sense of participation in community activities (UNDP Human Development Reports, 2002),

National development, therefore, involves changes or progress in a nation aimed at amending the lives of the citizenry. More specifically, the media has grown historically to perform significant roles as the fourth estate, agenda setter, watchdog, force multiplier, and gate-keeper, all in an attempt to show their influence on society. Media activities should always facilitate social change and national development as "what the media do or do not do has mattered to societies, and this has been reflected in complex

systems of ideas about what they should or should not be doing" (McQuail, 2010, p. 218). In the same mindset, Pavlik & McIntosh (2013) appreciates the place of new media technologies in development, arguing that the public or audience may finally have some say in the new digital media environment for with communication tools that provide the public unprecedented power to share information "with each other and to' Talkback' to those in power, people are able to connect and organize on any number of issues that are important to them, affecting policy changes through online and offline means" (p. 31). With this, the targets of national growth should be the people, because it focuses on the human population. The internet allows news organizations to overcome major drawbacks of traditional media, including the primarily one-way flow of information of news and views from media to audiences and technological limitations of place and time (Himelboim&McCreery, 2012). Only the media remains at the heart and soul of every development program as the fulcrum on which the society revolves.

Research (Lawal & Oluwatoyin, 2011; Ogbondah, 1996; Golding, 1974; Wilson, 2005) indicates that all efforts to generate meaningful growth in Nigeria proved futile in spite of a series of development strategies, put in office by successive governments, and sometimes with serious designs. Still, regarding the function of the media in past developmental plans (Wilson, 2005; Ojebode, 2013), advised it is apt to use the media. The advent of the new media technology apparently seems to be the only available means of achieving all-round growth in the 21st century. New media technologies are interactive, participatory and mobile. More or less of the previous development plans failed because; there was little or no consultation of the general public through communication, preparation and good governance for without good organization, evolution becomes a mirage. Ojebode (2013) strongly insists that the "dominant paradigm of development, the figure was driven, west-oriented and top-down model of development had been declared a near-failure by mid-1970s" and the mainstreams was believed to be used "as tools for transferring information to the grassroots thus serving as voices of government and the elite"(p. 1). The model ignored local peculiarities, culture, and input of the grassroots and measured development in purely quantitative economic terms (Soola in Ojebode, 2013). At that point, Ojebode proposed a community and participatory media for development, because, "to midwife participation (rather than just support it,) a media system wholly in the hands of the grassroots was needed" (p. 2). He goes further to conceives virtual communities as community media (p.6) which is in consonance with previous studies and advocacy in community media.

Ayotunde (2012) on his part asserts that since technological changes which are obtainable in the developed societies have been put to good use in the development of the society, it is, therefore, recommended that media personnel capitalize on the importance of new media technologies by translating them into developing tools in the society. Ojebode and Ayotunde positions in a way reflect the horizon of this subject which sees new media technologies as veritable tools for development. It is

fair to recognize that development is not just an economic exercise, but also involves both socioeconomic and political issues and pervades all aspects of societal life. The inclusion of the effects of new media technologies for development in this subject area is situated on Wilson (2005) argument that “if development is understood to mean simply ‘a gradual growth or advancement through progressive change’, then there must be a channel for arriving at those changes” (p.121).

On this note, new media technology is invaluable for development; been a highly interactive and participatory technologies (blogs, micro-blogging, social networks, internet) with ample capacity to allowing a series of users scattered throughout offices and institutions that do not fit with the traditional journalistic field to sustain entree to public discourse. This substantiates Wilson (2005) view that a medium for development must be able to take the people along. Okorie and Oyedepo (2010) articulate the relevance of new media technologies as enablers of development that facilitate the flow of information, capital, ideas, people, and product. The authors believe such opportunities help countries to achieve a wide diffusion of benefits and contribute to both broad-based economic growth and specific developmental goals. They posit that, “information and communication technology can be regarded as the bedrock for sustainable development” as it facilitates human capacity development as well as the socioeconomic welfare of individuals in the society (Okorie & Oyedepo, 2010, p. 127).

Emetumah & Fab-Ukozor (2010) on their part believe that government’s responsibility is providing basic infrastructures for public interest and that ICT should be a regular technology for information distribution between the government and the governed. Regarding the government as "a process whereby elements in society wield power, authority, and influence and enact policies and decisions concerning public life and social upliftment" (p.134), the authors advocate government involvement in procuring new media technologies, especially in media stations to attain developmental goals. Hence, the government executes governance, which helps develop the society, considering that act of governance involves interaction between formal institutions and those in civil society.

Akpan (2011) in acknowledging the role of the media in development insists that the media constantly test the claims of the government through, ‘reality checks'. For him, this implies that when a government claims to have executed a project, journalists and civil society groups and other stakeholders should verify the claims and report with the realities on ground (p.121). A developed media can quickly do this by sending reporters to the scene of incidence who will instantly file in video or pictures of the said project using any smart new media technologies like their smartphones, iPad, laptops, digital recorders or camera, and tablets. In addition, readers’ comments and reactions on the story may possibly reveal the truth behind the claim. Audience members should also crosscheck facts on television from other information sources (social media and internet) as “this is very important

to national development as citizens can now ask questions about government policies and claims." Akpan believes that the process may disclose interesting revelations critical to the direction of national development (Akpan, 2011, p.121).

2.2 Review of Empirical Studies

Inquiry into the work of news production has been a coherent thread in new media studies from the 1950s onwards in the work of White (1950), Galtung &Ruge (1965), Tuchman (1978), Schelienger (1978) and Gans (1978). Online news production became a distinct focus for scholars, with surveys indicating that digital news media has been producing its own procedures, norms, and practices (Domingo & Paterson, 2008). Such works considered how the routines and values of journalism that were relatively consistent for almost a century are being challenged by changes in working practices, communication technologies, business models and the relationship with audiences.

The early literature on new media technologies was largely concentrated on investigating whether information retrieval was more efficient in digital programs, thereby taking into account a comparative increase in user's information consumption and news retention. In the late nineties, a group of Scandinavian researchers visited three news organizations over a period of three years. The researchers investigated structural changes in the production of news due to digital platforms and reported differences that set news websites apart from print media (Eriksen & Ihlstrom, 2000). Still, according to this early research, news websites focus on hard news and foster the continuous streaming of news similar to live reporting. During the same period, Dimitrova et al. (2003) looked at how online newspapers used hyperlinks to refer readers to outside websites and advised that the gatekeeping function of online editors had remained firm.

There is also a sizeable literature on the impact of online news to print newspapers. Filistrucchi (2005) looked into the effect of websites of daily papers in Italy and reported a negative impact on gross revenue of local papers. Gentzkow (2007) analyzed the Washington, DC market with a model that evaluates complement consumption instead of rivalry between existing products. Gentzkow found that print and online newspapers are strong complements, even though online newspaper reduced print readership by 27,000 per day. George (2008) examined the effects of the internet to the audience of traditional American newspapers and found evidence that the internet attracts younger and educated individuals away from daily newspapers and the opposite result (higher newspaper circulation) among African-Americans and Hispanics.

Messner et al. (2011) used content analysis to investigate the adoption of Twitter by American news outlets and reported that news organizations failed to utilize Twitter as a community-building tool.

Common to these recent studies is the focus on social media agency, with readers engaging in instantaneous responses to articles or events and imposing challenges to the scholarly division between studies of yield and consumption tied to the unidirectional information architecture. Hong (2012) studied the relationship between news organizations' adoption of social media and online readership and reported a positive correlation between the newspapers' adoption of social media and increase in online readership. As newsrooms become more hooked on networking technology, and as journalists increasingly use social media to make the public (RISJ, 2013), researchers have started to also investigate the impact social media to the news ecosystem.

In Nigeria, two recent studies by Olley (2009) titled "New Media Technologies and their Challenges in Broadcasting" and Gurumnaan (2009) titled: "Influence of Information and Communication Technologies in Broadcasting in Nigeria: A Study of NTA and AIT, Abuja" were reviewed. The survey finding showed that new media technologies are adopted by most Nigerian broadcast stations as they improve the feedback mechanisms, pave way for wider coverage, efficient editing, greater audience satisfaction, wider information reach and better signals. Nyekere (2009) corroborates this in her study of "Influence of New Media Technologies in Broadcasting: a Study of Television Stations in Port-Harcourt Metropolis" while adding that new media technologies are used as they save time and make delivery easy thereby cutting down the geographical barrier.

New media technologies have some shortcoming as Gurumnaan (2009) observed little improvement in the aspect of audience satisfaction. Olley (2009) pointed out that insecurity of the technologies, poor resonance, and fidelity; poor packaging of the channels and inaccuracy of the channels are some of the inherent shortcomings. This shows that using new media technologies have merits and demerits. These studies also revealed that the most adopted new media technologies include computers/laptops, handsets, internet, flash drives, mp3 and cable/satellite. But one striking discovery is that: the stations in Nyekere (2009) used more of computers, digital cameras and internet as indicated by 75% of the respondents. Those stations Olley (2009) focused on, however, mostly used Internet and satellite, cable as indicated by almost 100 percent of the respondents. This showed a variation in the type of new media technology use and their choice of new media technologies depend on choice, station objective, as well as the financial status of the station.

Despite the fact that all the stations are not using the same set of new media technologies, Nyekwere (2009), Olley (2009) and Gurumnaan (2009) demonstrated that the internet is the most used new media technology in Nigeria as most of the broadcast stations are using it. In Gurumnaan (2009), the majority 76% of the respondents noted that NTA and AIT are on the internet; a majority 89% of the respondents also agreed that these stations have online streaming. These figures, which are

inconsistency, apparently establish that the respondents do not understand that it is with the help of the internet that online streaming is achieved. This is disheartening despite the fact that the internet is the centre of convergence (Olley 2009). This implies that broadcast media staff should undergo literacy retraining in new media technologies and should always be abreast of what is happening in their various stations at all times. However, Olley (2009) proved that the current state of new media technology use in the broadcast stations is not yet encouraging as implied by 68% of his respondents. No wonder a majority 88.8% of her respondents saw new media technologies as "challenging".

Online broadcasting is apparently relatively new in Nigeria as studies show minimal knowledge by practitioner toward the use of the internet to produce or broadcast video and audio contents. According to Agbenson (2011) in his work, Cool FM and Brilla FM are the first private stations to start online streaming. Later, Radio Nigeria Ibadan, Radio Lagos/Eko FM and Voice of Nigeria joined on www.radionigeria.org, www.radiolagosekofm.com, and www.voiceofnigeria.org respectively, thereby expanding their reach. However, there has been a huge success in online broadcasting as we have more so many online radio stations in Nigeria. Eulogizing the online streaming of some FRCN stations in 2007, Ben Egbuna, the then Director General of FRCN in Agbenson (2011) states:

> 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 (para.11).

In his study, Ganiyu (2011) discovered that NTA, Silverbird Television as well as Channels Television adopt video streaming while NTA runs a blog through WordPress. He noted that a check on the blog reveals lack of any post which apparently is "an indication that the blog is either not popular or the person in the organization who should do the initial posting on the blog to generate debate on issues does not know what to do" (p.132).

Ganiyu noted, however, that NTA did not offer a distinct audio streaming service; but why would one prefer the audio streaming when he already has the video which is more interesting and authentic? He went on to note that "the observation from the websites of both FRCN and VON is that in tune with the trends, both stations are available online, and stories, there can be read as text or listened to as live broadcast or streams" (p.131).

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 new media technologies leaving the state-owned broadcast media behind.

Despite the headway made in the area of adoption of new media, most stations are yet to comply. This was blamed chiefly on the high cost of these technologies and lack of adequate training by a whopping 81% of respondents in Nyekere (2009). Olley (2009) accentuated this as he noted that more than 65% of his respondents blamed the poor level of new media technologies used in stations on the high cost of acquiring the new media facilities. Though the Broadcasting Organization of Nigeria listed about sixty-eight stations with website addresses on October 2007 (Soola &Alawode in Agbenson, 2011), 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) noted now "a media organization without an online presence is a huge local champion" (para.4). This lends credence to the sayings of Nworah (Agbenson 2011) that the attempt to be at par with other developed worlds by Nigerian broadcast stations, leads to the development of websites without taking into consideration other variables.

The print media, however, "appears to be stronger than their electronic counterpart" (Ganiyu 2011, p.132) with regards to online visibility. This is obvious as even the local newspapers like the Trumpeta in Imo state is read online at www.imotrumpeta.com. However, Ganiyu (2011) strongly believes the development of new media is the brain behind the reduction in the print circulation of newspapers while there are more subscriptions to the online copies. Sandison (Ganiyu 2011) was of the view that it would not have been so if not for the proliferation of internet which most young people prefer to use while sourcing for news and information.

Livingstone agrees that "new media rarely replace or even, displace older media. Rather, new media add to the available options, to some extent promoting new, more specialized, uses for books, television, radio, etc" (as cited on Olley, 2009, p.29). Obviously, not all media staff can handle new media technologies as a minimal 3.6% and 13.6% of the respondents in Nyekere (2009) and Olley (2009) respectively indicated they could handle all these facilities. Olley also identified unfair government policies, lack of interest by staffs, and lack of interest by broadcast managers as factors to be considered in new media technology use.

To effectively harness the potentials of new media technologies, broadcast staff must be trained in the different ways the new media technologies function and should always be on alert to feed the ever dynamic internet. Olley (2009) found out that most of the staff who can handle some of the new media technologies are those that trained themselves on a personal basis (52.8%) or in-house training (41.2%). In Gurumnaan (2009) a huge 77% of the staff got their training on a personal basis, followed by those that had in-house training (12%). He regarded this as saddening as only a few of the staff can afford adequate training considering the meagre salary broadcast media staffs receive in Nigeria.

Gurumnaan (2009) opines that "the low percentage in this regard could be interpreted to mean that these broadcast stations under study do not give adequate staff training to their media workers" (p.99). Further findings revealed that those that had their training through corporate training within and outside the country represented 8% and 3% respectively. This shows that a lot still needs to be done in the aspect of manpower training in order to meet up with international best practice as well as harness the potentials of new media technologies for effectiveness in Nigerian broadcast stations.

Obalanlege (2015) examined journalism practice and new media in Nigeria, with particular reference to how the internet, social media, and mobile telecommunications influence the practice of journalism among members of NUJ Correspondents Chapel in Abeokuta, Nigeria using questionnaire and in-depth interview devices. Findings showed that: Nigerian journalists continue to integrate new technologies into their news gathering techniques as they emerge. For them, covering events without internet facilities would be like going back in time. Sixty two percent (62%) of state correspondents surveyed in Abeokuta believe that it would be very difficult for them to gather news and report back to their various newsrooms without the use of internet. When asked about their internet use patterns, eleven percent (11%) admitted they spend an average of ten (10) hours on the internet daily for research and other areas that could improve their knowledge of global affairs. As such they see themselves as high user of internet technology. Twenty one percent (21%) spend an average of five hours daily on internet and see themselves as medium users, while eighteen percent admit spending an average of two hours daily and regard themselves as low users (p.73). In Obalanlege (2015) most journalists make use of new media tools in sourcing local news and mainly use SMS to contribute their news ideas for the news diary, “though the print diary is the primary tool for news sourcing and planning in many newsrooms in Nigeria. Other tools used in Nigeria include e-mail and Whatsapp” (p.75).

The study also discovered that most journalists in Nigeria are no longer using an official voice recorder for interview, as their Smartphone equally serves the same purpose. Again, most of the journalists working for print media admit that they sometimes use their Smartphone to video record important news events, in the public interest and share these recording on their newspapers website (Obalanlege, 2015). He noted that most of the journalists agreed that new media provide them with opportunities to contact their source in real time as was never been possible before as a combination of SMS, Whatsapp and e-mail platforms make it possible for appointments and clarification of issues with sources a reality, unlike a decade ago when these technologies were not in reach. In fact, journalists admitted a significant shift from the old traditional system of using paper to write stories in the newsroom while typists are waiting on one side to type news stories written by reporters. In contrast, today’s interactive era is one where Smartphones, personal computers, and tablets have

dominated journalism operations and in turn this has improved the quality of newsgathering and in extension the news content in Nigeria (p.76). This apparently indicated a high use of new media technologies in the state

Eludu, Mbazie & Ndinojuo (2016) examined the application of ICT by broadcast professionals of Nigerian Television Authority, NTA Channel 10, Port Harcourt using interview. They studied the Programmes; Engineering; and News & Current Affairs departments respectively. The study revealed that ICTs have been widely applied in television broadcasting by broadcast professionals; and that the station does not have a website. They also found that the predominate technologies in the news and current affairs section include desktop computers, DVDs, laptops; and mobile smart phones used to source information on the internet such as weather reports and stock market reports. The findings further affirmed that editing stories in the past was very tedious as, different types of analogue tapes and recording devices where used.

In Eludu, Mbazie & Ndinojuo (2016) the challenges of the analogue technologies were revealed as short recording time, low picture quality and poor sound signals, which delay broadcast operations. The station was found to be using non linear editing and DVDs which offer clearer picture and better sound quality. In their words, "this networking process is possible because of ICT where storage of files is possible using both network cables and wireless networks, although they still have analog tapes on stand-by as backup in case the network fails"(p.177). Eludu, Mbazie & Ndinojuo (2016) further complain that, "the organization lacks a website dedicated to the broadcast activities of NTA Port Harcourt and also, the use of public domain emails can have negative effects as the user does not have full control over content sent over such media"(p. 179).

A lot of other studies have also shown the import of social media in the news business. A national survey in the U.S.A of media use showed a huge gain in audience use of the Internet from 1995 to 1999, while there was a decline for both local and network television news and for newspapers (Stempel, 2000). In another study, findings show that the most experienced users have with the Internet, the more often they go online. Fifty percent of users who have four years or more of online experience go online five or more times a day, which is more often than Internet newcomers (Schiff, 2003). Garrison also found that since 1999 almost 90 percent of U.S. daily newspapers were actively using new online technologies to search for articles and most of them floated their own news websites to reach new markets (Garrison, 2001). Middleberg and Ross (2001) chronicled journalistic use of the Internet for 10 years exploring the symbiotic relationship between the media and the Internet. Their findings indicated that journalistic use of the Internet has increased. In the United Kingdom, another

study reported that all major national newspapers currently provide online versions of any type (Stanyer, 2001).

Journalists are increasingly using and been influenced by social media. Lariscy, Avery, Sweetser, and Howes (2009) surveyed 200 journalists to determine how they used social media. Of those surveyed, 32% rated social media as important or very important to their work, but, overall, the group did not feel it improved their work while 18.5% said they consulted social media when embarking on a story (p. 315). They found out that websites were the most commonly used online source, with 79% of surveyed journalists consulting them, followed by blogs with 8.4% consulting them as a source (p.315). The majority of the journalists surveyed, 59% use blogs as a primary resource to gain information and 24% said social networking sites such as Facebook and MySpace are some of the first places they look for information. Non-interactive websites such as web pages and directories are still the preferred online sources for journalists, but they are not yet fully adopting social media (Lariscy, Avery, Sweetser, & Howes, 2009, p. 316). However, since the 2009 study by Lariscy, Avery, Sweetser, & Howes, more journalists have jumped on the social media bandwagon. In a study by the Arketi Group, 69% of journalists were using social networking for their work (as cited by PR Newswire, 2011, p. 8).

Research in academic journals and discussion in professional publications on the computer-assisted reporting in the newsroom was even enthusiastic in the late 1980s and early 1990s (Davenport, Fico & DeFleur, 2002). But with the wide acceptance of the Web, research on gathering news electronically was limited after 1994 (Davenport, et al., 2002). The results of Garrison's studies on U.S. newspapers on computers use, that took place from 1994 to 1999, found that interactive information–gathering techniques in newsrooms has reached a critical mass for online research, non–specialist content searching and daily frequency on online use (Garrison, 2000). Davenport, et al. found that almost all state dailies in 2000 used one or more computerized source in order to obtain information for news stories. Most journalists used the Internet, social media, compact discs and public records in order to extract information.

However, a common thread running through the studies of social media is a blending of technology and social interaction in the co-creation of value and communication development. Middleberg and Ross (2001) surveyed journalists' use of the Internet for more than a decade and offered a comprehensive representation of media outlets to date. Based on their findings, it is clear that journalists are using the Internet more than ever, and that things are changing so rapidly now that the typical newsroom has far more Internet connections than phone lines.

Karttunen (2017) in her work on " Using Social Media" at a Metropolia's pop-up radio project for the station Kaupunkiradio which is a local radio station in Helsinki run by media students, found out that social media use is vital to radio news operations. A survey was conducted about the listeners' and the pop-up radio's reporters' experiences on the radio's social media use and findings showed that platforms Facebook, Instagram, Twitter, Snapchat, Periscope, and YouTube were found to be greatly used by the pop-up radio station. Findings further indicated that social media presence brings radio stations more visibility and helps them get to know their target audience; as they are easy to use on ordinary smartphones, tablets and computers; and both listeners and radio station staff are often already familiar with them. The disadvantages of using social media according to the study are: that not all radio listeners want to use it; it does not always allow the listener to be truly anonymous; the social media application downloaded on the company's device might have an access to sensitive data: and the station cannot always control what the listeners publish about them. This means that though social media is very important in the media production processes, it should be handled by expertise with caution.

The key understanding of social media is essentially resultant from the user-generated content itself, which has blurred the distinction between consumers and marketers (Cooke and Buckley, 2007). This resulted in social media being utilized by users on their own initiative instead of it being promoted and encouraged. This facilitates co-creation of content, context, and connection as well as multiple communications. This also creates a social trend in which users use social media technology to acquire information from one another (Bernoff &Li, 2008), which obviously drives its success (Kaplan & Haenlein, 2005). In fact, social media has become a mass media vehicle for user-sponsored communication, representing number one source of media for consumers at work and the number two source of media for consumers at home (Rashtchy, Kessler, Bieber, Shindler, & Tzeng, 2007).

Studies equally supported the argument that professional and normative concerns characterize journalists and editor's decisions regarding the level of involvement they allow users in the news production and presentation process. Shirky (in Pesce, 2002) observed that media people often criticize the user-generated content (UGC) for being unedited and low quality. Chung (2007) interviewed news website producers and found that journalists indicated that they find it difficult to navigate the challenges that user-generated news content brings to established notions of professional identity and their role as gatekeepers. She found that journalists are uncomfortable in fully adopting interpersonal and interactive features onto their websites. Studies (Lowrey, 2003; Singer, 2002) also showed that many online news operations have been slow to offer audiences the means necessary to interact with journalists, sources, and other audience members. Even among BBC journalists, the user

participation terminology itself was not interpreted as such, as UGC is perceived 'in newsgathering terms, rather than as a tool for wide spreading participation' (Wardle & Williams, 2008, p. 58).

Other studies, nonetheless, indicated that journalists are more responsive to their audiences, assuming the role of 'partner' (Bardoel, 2002; Pavlik, 2001). Deuze, Bruns, and Neuberger (2007) found that when journalists engaged citizens in the production of news, it was not because they believed that such practices would provide society with better information, but because of economic reasons, such as attracting advertisers and winning back otherwise non-reading newspaper audiences. Lewis, Kaufhold, and Lasorsa (2010) interviewed editors of community newspapers about the integration of citizen journalists. They found that some editor favour or disfavour the use of citizen journalism based on professional concerns, such as objectivity and accuracy, while others cite practical concerns. Robinson (2006) found that although editors are still concerned about authority and traditional standards such as gatekeeping, they also commented about the future, in which news would transform itself from an 'institution' to a 'platform.' In Belgium, Paulussen and Ugille (2008) found that the slow adoption of user-generated content is due to newsroom structures, work routines, and professional beliefs.

In another related study by Vobic (2009) titled: '*Newsroom Convergence in Slovenia: Newswork Environments of the Media Organizations Delo and Žurnal media',* participant observation was used to study two newsrooms in Slovenia over a period of one month each. Findings revealed that *Delo* and *Žurnal media* originate from different societal contexts and distinct newsroom traditions play different roles and have varying shares of the Slovenian media market, as well as differing in the demography of news staff and size of news production. In addition, both media organizations, despite similar internal and external factors, adopted specific newsroom convergence models that reflect diverse relationships between journalistic norms, market norms, and technology but are both closer to the integrated model of Avilés & Carvajal (2008) than their cross-media model (p.20).

The studies reviewed clearly indicated a gap in studies concerning a study of media practitioners working in newsrooms in their natural environment and how they use new media technologies in the news business. Also, the Nigerian studies reviewed concentrated on a few stations in a particular state, but this study encompasses the five states in the south-east with the concentration on new media use patterns in newsrooms in nine stations including both radio and television. So this study will be relevant as it has become important to evaluate the usage pattern of new media technologies in South East stations using an ethnographic method, especially given the Digital Switch Over ultimatum by ITU for stations to be fully digitized. In this regard, this includes a technological mapping of technologies in broadcast stations.

2.3 Theoretical Framework

Theories are described as an important roadmap for research (Potter & Riddle, 2007) because they guide research by providing clarity to ideas and findings that require testing and interpretation. Potter and Riddle concluded that theories function as glue to important research findings thereby providing a critical platform for justification of certain systems. Studies on media use patterns like the new media technologies under study in this dissertation, are always based on theories, some absolutely and others overtly. Early communication studies point to some motivating factors towards the use or non-use of a media technology. Boczkowski's (2004) insights that technological change in newsrooms emerges out of existing norms, routines, relationships and social and material contexts. Technology does not in itself shape journalism, but rather is itself shaped by the way it is adopted, adapted and altered in specific and diverse news contexts (Deuze, 2007). This study on "New Media Use Patterns in Broadcast Newsrooms: a Study of Selected Stations in South East, Nigeria" is, therefore, anchored on the Technological Acceptance Model, and Diffusion of Innovation Theory. Due to the hydra-headed nature of media technologies, there is no one-size-fits-all theoretical perspective that encompasses the concept. It can be viewed from the different theoretical lens.

2.3.1 Diffusion of Innovation Theory (DIT)

Underlying the usage pattern of technologies in broadcast stations is the theoretical work of pioneering social science scholar Everett M. Rogers, who carried out a research on the adoption and diffusion of innovations. This leading theory for analyzing technology characteristics in relation to technological consumption is called diffusion of innovation theory (Pavlik & Bridges, 2013, p.11). Essentially, this theory suggests that when a concept is perceived as new, an individual utilizes communication tactics within their social systems to arrive at a decision point of either adoption or rejection of the innovation. Peter and Olson (2010) indicate that innovation characteristics serve as an important influence on an individual's adoption decision. Diffusion of innovation theory also predicts that the media and other interpersonal contacts provide information and influence audience behaviour towards the adoption of innovations.

Diffusion of innovation applied most directly to communication studies by Rogers (Rogers, 1995; Rogers and Shoemaker, 1971), is the acknowledged starting place for studies attempting to describe the implementation and use of new technology. In their original conceptualization, Rogers and Shoemaker (1971) defined adoption behaviour as the relationship between the time at which individuals choose to adopt a technological innovation and the time at which other members of their social system do so. A new technology (or other innovation) is introduced in a social group (community, organization, nation, market, industry), often by a change agent with an interest in promoting it (private firm, public agency or influential individual).

Pavlik & Bridges (2013, p.11) note that Rogers's research delineated five stages in the process of adoption of an innovation which is: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation. According to them:

> In the knowledge stage, an innovation becomes known, but there is insufficient information. In the persuasion stage, potential users become interested in the innovation and seek more information. In the decision stage, the innovation is evaluated with advantages or disadvantages listed that help to adopt or reject it. If the innovation is adopted, the implementation stage involves a trial of the innovation in which the overall usefulness of the innovation and whether it should be used on a larger scale are assessed. Finally, the confirmation stage involves the adoption of the innovation to its fullest potential (Pavlik & Bridges, 2013, p.11).

The theory also considers that for any innovation to be adopted, certain factors are to be considered. Pavlik and Bridges (2013, p.11) posit that the rate of adoption of an innovation is influenced basically by at least five factors, including (1) the perceived relative advantage of the innovation, (2) compatibility, (3) complexity or simplicity, (4) trialability, and (5) observability. Certain personal characteristics also influence innovation adoption; demographic indicators such as sex, age and educational and social backgrounds become key markers. In the social or cultural organization, however, Rogers stated there are various levels at which different people react to and adopt change. People chose to adopt technology at various stages. A person's decision to adopt or reject an innovation is often determined by the innovation itself (Rogers, 2003).

The pattern by which an innovation spreads through a social system has been well documented and follows a classic S-shaped curve of adoption over time (Davenport, *et al.,* 2002). There are five distinct categories of adopters according to the theory and the approximate percentage of individuals included in each category is described, based on the degree of their “innovativeness”. This includes innovators, early adopters, early majority, late majority, and laggards. These classifications according to Rogers (1995) can be used to understand the process by which information technology has become part of the journalistic profession. Also (Rogers, 1995; Li, 2003), listed three sets of variables in the diffusion process; ‘technology ownership, adopters' characteristics, and innovation attributes, and each has enduring impacts on the adoption of new technologies.

There are recent innovation diffusion studies that focused on the adoption of product technologies, for instance, the mobile phone (Roach, 2009); mobile gaming (Kleijnen et al., 2004); Internet as a communication channel (Lin and Yu, 2006) and; mobile Internet service (Pedersen, 2005). There seem to be few studies that concentrate on the adoption of the new media, especially in the broadcast newsroom (Fischer 2011; Shin & Shin, 2010; Cheung, Chiu & Lee, 2010). Thus, this study will conceptualize new media use in broadcast newsrooms to be an innovation, which distinguishes it from other media communications.

Criticism of Diffusion of Innovation Theory

Research has shown that many factors which might affect the diffusion of the innovation process. Surendra (2001) used diffusion of innovations theory to examine the use of Web technology among college professors and administrators. The theory was used to provide a background against which social media adoption by journalists was studied. D'arcy (2012) in her study of social media use among TV journalists used the diffusion of innovations theory to hypothesize potential relationships between age, educational level, experience and social media use. Her preliminary findings showed that age and educational level did influence social media use. Journalists aged 29 and below tended to use social media more than those 39 years and above.

This shows that with this theory, the adoption of a new idea does not just happen within a twinkle of an eye. It moves from one step to the other. First of all, users must be aware of the innovation as well as the need for an innovation. From this awareness level, they make up their minds on whether to adopt the innovation or not. If they make up their minds towards the positive direction, they would proceed to test the innovation to ascertain its effectiveness. Satisfaction from this initial usage leads to the continuation and adoption of that innovation. This implies that for converging new media technologies to be adopted in the broadcast media terrain, media practitioners must, first of all, identify the existing vacuum in their practices which could be enhanced by the media technologies before the adoption takes place. Rogers identified some clear steps in the adoption process: first, people have to become aware of innovations; a small group of early adopters will try it out; the early adopters share their successes with opinion leaders who try the innovation themselves. He also observes that: the early adopter will then share their success with opinion followers, who ultimately try it out and that the late adopters finally get with the program when almost everybody else has adopted the innovation. For instance, think about how people in our society have adopted the use of cell phones or personal computers. There will probably be some early adopters, some opinion leaders and some late adopters in our society with regard to those new technologies. One may, probably, be an early adopter of one kind of innovation, but a late adopter in another.

Also, adopters must be aware of these technological innovations with regards to how they function before they can utilize them for optimum performance. From this theory, it is clear that the media practitioners are expected to be aware of the existence of a particular technology as well as how it operates before they decide to adopt it in their operations. Failure to do this could lead to inappropriate handling of the technology. In such a situation, the development which the technology is expected to bring would no longer be achieved. From this awareness level, they move over to the next level, which is test-running. If the technology affects a significant and appreciable change in their system, it

becomes part of their system. Therefore, it important that media outfit makes available the technologies facilitating the adoption of new media for use by media practitioners.

2.3.2 Technology Acceptance Model

Closely related to diffusion theory is the Technology Acceptance Model (TAM). The technology acceptance model is an extension of the diffusion of innovations theory. Originally conceived by Davis (1985) in his doctoral thesis in which he suggests that an individual user's motivation to use a system is influenced by the system's features and capabilities. Davis et al. (1989) suggest that perceived ease of use and perceived usefulness are beliefs about a new technology that influence an individual's attitude toward and use of that technology. TAM is believed to have a relationship with the Theory of Reasoned Action (TRA). Wu, Tao and Yang (2008, p.925) stressed that "the purpose of TAM is to simplify TRA and provide a generalization model that possesses theoretical foundation and parsimony and the tools that a manager uses". They further agree with Venkatesh, Morris, Davis, & Davis (2003) that TAM allows users to weigh the introduction of new technology, and then predicts and explains the user's behaviour of accepting information technology. At the same time, the researcher can understand the external factors that affect researcher's internal faith, attitude and desire when using the technology.

Basically, TAM is designed to predict adoption of new technologies in the workplace, especially at the individual level. Key predictors include performance expectancy, or belief that the technology will improve job performance; effort expectancy, or ease of use of the technology; and social influence, or belief that "important others" sanction the technology. As is evident, the rational choice behaviour is assumed, though the response to social influence in the form of "compliance" suggests the pursuit of legitimacy. However, the impetus for compliance is instrumental rather than institutional; as individuals comply mostly because, they expect rewards from an "important other" (Venkatesh, et al., 2003).

The theory has been employed in several studies of communication and information technology. Porter and Donthu (2006) employed TAM to explain how attitudes determine Internet usage. Their study revealed that factors such as age, education, income, and race influenced beliefs about the Internet and thus were determinants in how people used it. Porter and Donthu (2006) also looked at access barriers such as cost and how this affected perceptions regarding perceived usefulness and ease of use. Similarly, Nasri & Charfeddine (2012) studied the adoption of Facebook among 240 university students in Tunisia. Their study aimed to propose a conceptual framework to better understand the factors in Facebook adoption in Tunisia. The results confirmed a relationship between perceived ease

of use and perceived usefulness in the adoption of Facebook and revealed that attitudes, as well as social norms, were important factors in Facebook adoption.

Criticism of TAM

Technology Acceptance Model is based primarily on the Theory of Reasoned Action (TRA), proposed by Fishbein & Ajzen (1975), which postulates that beliefs influence attitude, which in turn shapes a behavioural intention to engage in a particular behaviour. The Theory of Planned Behavior (TPB) extends TRA by incorporating perceived behavioural control to account for situations where an individual lacks the control or resources necessary for carrying out the targeted behaviour, despite a positive attitude toward it (Ajzen 1991). The Technology Acceptance Model (TAM) shares with TRA the common thread that connects attitude to behavioural intention, but differs in its theorized determinants of attitude and behavioural intention. TAM is also specifically designed to address the determinants of end-user computing technology acceptance (Chau & Hu 2002).

The reason why TAM is generally valued and adopted by researchers is that it uses users' perception to infer Behavioral Intention (BI) directly, its method is simple and clear, but questions such as "which factors would influence users' perception" have not been discussed. Legris, Ingham, and Collerette (2003) suggested that other variables should be added to TAM so as to provide a complete model structure. Venkatesh and Davis (2000) therefore, proposed a new structure, TAM2, which extends forward, and they claimed that “social influence” and “cognitive instrumental” are the two main variables that influence users’ consciousness. However, TAM includes three dimensions, which are “subjective norm”, “voluntariness” and “image”; while the new TAM2 includes four dimensions, which are “job relevance”, “output quality”, “result demonstrability” and “perceived ease of use”. This study is hinged on Technology Acceptance Model and takes cognizance of these dimensions in examining the use of new media technologies in broadcast newsrooms in South East, Nigeria.

Nordenson (2008) highlighted the impact of the information age on news production and consumption in the areas of openness, user-friendliness, and self-government. In a study that examined journalism‘s future in an era of unprecedented information abundance, Nordenson concluded that the Internet has altered the business model of media organizations. How the Nigeria media entrepreneur balances this reality, will shape the contour and terrain of new media adoption and media convergence in the country. Given this scenario, the complete adoption of new media technologies and expansion in social media use in media practice as practised in the United States, Britain, and other countries could help to deliver to the audience quality programming and editorial content that will foster development. Embracing a new media model may well be the better option for media proprietors in Nigeria. However, this requires a change of mindset and a determination to adjust to new ways of doing

broadcasting as a business. Quinn (2005) remarked that the success of multimedia journalism is dependent upon the readiness of journalists to change old habits and adopt new practices which challenge their ego, skill, innovation, creativity, and patience. Quinn‘s view touches at the heart of the imminent challenge facing the average Nigerian media practitioner who has to struggle to put behind old media practices, including ego and learn to give the readers and viewers a premier consideration in a converged media environment. This study will employ the applicability of TAM in explaining the perception of Nigerian broadcast practitioners concerning the usefulness of new media technologies in media practice.

2.4 Summary Of Literature Review

The section on literature review was done with a concentration in three major review areas which are: Conceptual review, Empirical review and Theoretical review. The review started with the identification of key areas to be reviewed and the sources of literature.

The first concept reviewed was broadcast media which started with telegraph as the evolution of broadcasting. Lule (2012) states that the contemporary media age can trace its origin back to the electrical telegraph of Samuel Morse in 1837. The history of radio followed suit. Radio was recorded to have started with James Maxwell in 1864. Radio was brought to Nigeria in 1932 by the British colonial government. The scholarly review shows that radio served the role of information and entertainment from its advent. This, fundamentally, explains the high importance always placed on the news in broadcasting. The development of television was the next. Bittner (1989) traced the origin of the TV to 1839 when Alexandre Edmon Becquerel observed the electrochemical effects of light. Television came to Nigeria in 1959 from the western region under Chief Obafemi Awolowo.

The subsequent area reviewed is the concept of old media technologies. Radio, television, magazine, newspaper are regarded as old media as well as media technologies that are still analogue. The advent of information and communication technology was equally reviewed. This section has a strong relationship with the study as new media and social media are offshoots of ICT and internet. This is followed by a special review of the concept of new media. Literature agreed that new media started around 2000 with the emergence of the global village concept of McLuhan. Various ideologies on the meaning of new media were reviewed as well as new opportunities which came with the new technologies that were explained such as new audience, and new journalism landscape with regards to its impact in broadcast practice.

Social media's role in broadcast practice was also reviewed. Literature shows that social media are digital media that allows users to connect and communicate with contacts; and to exchange and share

information such as Facebook, Twitter, Instagram, and so on. Some platforms of social media that are most useful for broadcasting were equally reviewed such as Facebook, Twitter, Whatsapp, Skype, and YouTube. Mobile technology and its role in broadcasting was also looked into as well as the new media technology's role in broadcasting such as podcasting and webcasting were examined in the context of broadcast news production. This leads us to a new trend in new media practice called media convergence. Scholarly arguments about the meaning of convergence were examined within the broadcast media context. This was followed by a review of journalism of the new media era, such as citizen, alternate, location-based journalism and amongst others.

The review also contained an empirical review of related studies. Empirical works on the use of new media were reviewed and their findings compared in the study. The theoretical review was done on two vital theories which underpinned this study. The theories are Diffusion of Innovation Theory and Technological Acceptance Model. These two theories were adequately related to new media technology use patterns in broadcasting.

2.5 Gap in Literature

In this chapter, works of literature on new media technology and related literature were reviewed. By focusing the analysis on the intersection between new media technologies, broadcast journalism, broadcast media, media convergence and media use patterns; the review established the connection of new media technology use in broadcast news media development in the 21 century. Unlike the present study, the reviewed studies apparently failed to examine the extent of new media technology use and patterns of use in a natural newsroom setting in South East, Nigeria. The present study further used the ethnographic method of participant observation to study newsrooms in southeastern Nigeria supported by in-depth interview and survey. This implied that the findings of this study would contribute to literature and scholarship.

It was also evident in the review that although scholars in technologically advanced countries in Europe, Asia, and the United States have developed theories on how new media technologies are shaping contemporary media practice in profound ways, they have apparently overlooked or excluded the impact of the new media technological trends in sub-Sharan Africa and Nigeria in particular where access to internet connectivity, mobile and social media subscription kept accelerating on daily basis causing overwhelming changes to every sphere of the society. This change equally affects the broadcast media and the limited research on new media technology use patterns in the broadcast newsrooms in South East Nigeria was therefore, so obvious.

2.6 Research Hypotheses

H_1: There is a significant difference in the most predominantly available new media technologies in each broadcast newsrooms in South East, Nigeria

H_0: There is no significant difference in the most predominantly available new media technologies in each broadcast newsrooms in South East, Nigeria.

H_2: The extent to which broadcast newsrooms use new media technology in their operation in South East, Nigeria are significantly different.

H_0: The extent to which broadcast newsrooms in South East, Nigeria use new media technology in their operation in South East, Nigeria are not significantly different.

H_3: The patterns of use of new media technology in selected newsrooms in South East, Nigeria differs significantly.

H_0: The patterns of use of new media technology in selected newsrooms in South East, Nigeria do not differ significantly

H_4: There is a significant difference in the most popularly used new media technology in broadcast newsrooms in South East, Nigeria.

H_0: There is no significant difference in the most popularly used new media technology in broadcast newsrooms in South East, Nigeria.

H_5: There is a significant difference in the factors that affect media practitioner's use of new media technology in broadcast newsrooms in South East, Nigeria.

H_0: There is no significant difference in the factors that affect media practitioner's use of new media technology in broadcast newsrooms in South East, Nigeria.

H_6: The dispositions of broadcast practitioners towards the use of new media technologies in newsrooms in South East, Nigeria are significantly different.

H_0: The dispositions of broadcast practitioners towards the use of new media technologies in newsrooms in South East, Nigeria are not significantly different.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter highlights the research method used to generate the data in this study on **New Media Technology Use Patterns in Broadcast Newsrooms: A Study of Selected Stations in South East, Nigeria.** The central components of this section included the research design, area of study, study population, sample and sampling procedure, data collection instrument and method of data analysis. Also, details of the measurable variables and procedures during the pretest and data collection formed a part of this chapter.

3.1 Research Design

This study adopted mixed method approach featuring a combination of qualitative and quantitative research methods in the form of In-depth Interview (IDI), survey and participant observation methods. This approach helped to put in proper perspective the work of media practitioners with respect to their use of new media technologies in broadcast media practice. Olsen (2004) is of the view that mixed methods are useful in research as "… diverse viewpoints or standpoints cast light upon a topic" as the mixing of the data type in data triangulation help in validating the claims that might arise from the initial pilot study (p. 3). The basic idea underpinning the concept of mixed method or triangulation is that the phenomenon under study is best understood when approached with a variety or a combination of research methods.

Triangulation are classified into four: triangulation of methods of data collection, investigator triangulation, theory triangulation (including methodological variations that account for between-method and within-method approaches), and triangulation of data sources (Denzin in Rothbauer, 2008). Methodological triangulation and theory triangulation were applied in the study and involves approaching a field of study using several methods and theory so as to discover useful ‘unexpected dimensions of the area of inquiry’ (Jensen &Jankowski) in Erdal (2008, p.29). Justifying the use of triangulation method, Creswell (2002) opines that the purpose of triangulation or mixed method is to concurrently collect quantitative and qualitative data, “merge them and use the result to best understand a research problem. A basic rationale for this design is, that one data collection form, supplies strength to offset the weakness of the other form” (p.566). Erdal (2008) on point observes that "…while, generally, quantitative methods are regarded as useful for testing hypotheses, qualitative methods are more suitable for exploring unknown territories and building theory"(p. 29).

In terms of design, after considering many types of formats used in mixed methods research designs, Creswell & Plano Clark's (2007, p. 59-79) model was, however, adopted. It is a four-part distinction between the ‘triangulation,’ the ‘embedded,’ the ‘explanatory,’ and the ‘exploratory' design. In this

regard, on the triangulation design-type, the implementation of both quantitative and qualitative components took place simultaneously in the same time frame and both methods have equal weight. The embedded design-type is slightly dissimilar as one set of data in this model played a supportive, secondary role in a study based on other data types. Then, in explanatory design-type, qualitative data helped to explain or build on the initial quantitative results; while in the exploratory design-type, the explanation of the qualitative helped to train, inform or enrich the findings of the quantitative method.

Participant Observation and in-depth interview, in the context of this study, gave real-time practical insights into the employment practice of new media technologies in newsrooms of the chosen broadcast stations. The questionnaire device helped to extract information from the practitioners individually concerning the aims of the survey. The interview and observation components, thus, played supportive roles throughout the procedure while the quantitative (survey) component served as a way of identifying the samples for the qualitative analysis. The design approach adopted in this research, therefore, agreed with various categories of Creswell and Plano Clark's (2007) classification. The primary ingredients (two methods) were merged to address the key research questions, which fits 'triangulation.' The interviews and observations played supportive roles; which exposes the 'embedded' part while using the quantitative (survey) component to select samples for the qualitative resonates with the 'exploratory' design-type.

Participant Observation was used to generate data on the actual new media technology in use in newsrooms and the extent of the use in each selected station in the South East. Participant observation (Berger, 2016) is a form of field research in which observations are carried in real settings without control or structure. In this qualitative method of data collection, the researcher takes part in everyday activities related to an area of social life in order to study an aspect of that life through the observation of events in their natural contexts (Berger, 2016, p. 254). The role of participant observation is to reach a deep apprehension of a special subject or position through the meanings attributed to it by the individuals who live and feel it. Field observation as Erdal (2008, p. 32) pinpoints has been an integral part of many newsroom studies' as 'observation is generally seen as a hermeneutic method, in which the researcher continuously confronts theory and assumptions with empirical findings.' The possibility of fine-tuning research questions during a reflexive observation process is also one of the advantages of this method as Erdal (2008, p. 32) further observes. According to McKechnie (2004) participant observation is considered appropriate for studying social phenomena about which little is known and "where the behaviour of interest is not readily available to public view. Through its emphasis on first-hand access to the real world and its meanings it is effective in allowing understanding of the way of life of others" (p.598).

There was a three months observation period in the selected newsrooms in South East during which the researcher played the part of the 'observer as participant' where the "observer is a neutral outsider who has been given the privilege of participating for the purpose of making an observation and recording them" (McKechnie, 2004, p.254). Thus, newsroom activities, human behaviours, the physical features of settings and everyday activities in the selected broadcast media house were all observed. Besides, the personal impression of the researcher on the above aspects, informal interview, and document analysis formed part of the participant observation techniques or strategies used to generate data for this study. Participant observation is suitable for this study as it entails physical engagement in the subject area which allows for the gathering of more detailed and precise information.

The interview component was utilized to complement the participant observations in newsrooms as interview enables the researchers to acquire the information which they cannot gain when using only observation (Berger, 2016). In addition, the interview qualitative research method is succinctly described by Berger as "conversation between a researcher (someone who wishes to gain information about a subject) and an informant (someone who presumably has information of interest on the subject" (p. 190). In-depth interview was used to determine the managerial perceptions toward the use and choice of new media technologies in broadcast stations as well as the advantages, and challenges inherent in the use of each technology. The in-depth interview is an unstructured interview in which "participants are encouraged and prompted to talk in depth about the topic under investigation without the researcher's use of predetermined, focused, short answer questions" (Cook, 2008, p. 422). Hence, the researcher is not required to make an extensive list of questions though, it is obligatory to be cognizant of the major subjects of experiences likely to be discussed by the participant, and be capable to study how these relate to the topic under investigation.

Media practitioners with expert knowledge and some key media players in the news section and production units were, therefore, interviewed in this study based on the fact that they are key stakeholders. These practitioners should be able to talk on matters related to their news organizations; concerning the types of new media technologies used in the production process of the broadcast media; patterns of use; extent of adoption; and even media convergence. The key media practitioners were interviewed to investigate more comprehensively their experiences and perspectives on new media technology use in news media practice. Also, a systematic structure using an *aide memoire or agenda* was used to guide the line of questioning in the interviews (see Appendix III). In summation, as part of the preparation for the qualitative interview, the interview took place in a quiet environment to avoid interruption of confidentiality guaranteed to respondents in adherence to McNamara (2009) recommendations. McNamara supports researchers to explain the design, format, and duration of the

interview to participants and not to rely on their memory in recalling answers to questions. Abiding by this advice, the researcher made use of a tape recorder after obtaining the consent of the respondents to put down all questions and reactions; and utilized pen and paper as a backup strategy. Even with a recording device, it is advisable to check out the recording device occasionally to be certain it is working (McNamara, 2009).

An analytical survey was also conducted among broadcast practitioners sampled from the selected newsrooms to determine how they are employing new media technologies in their practice and the extent of the use. Wiseman and Aron (Berger, 2016, p.290) state that survey research is a method for gathering and analyzing social data via highly structured and often very detailed interviews or questionnaires in order to obtain data from large numbers of respondents presumed to be representative of a specific population. There are essentially two forms of surveys which are, descriptive and analytic (or explanatory) as explained by Berger (2016, p. 291). The analytic survey used in this study sought to discover why people behave the way they do and "attempts to see whether there are causal relationships between certain sorts of behaviour and societal and demographic characteristics of people" (p. 292).

It is desired that the analytical survey would discover certain aspects of new media technology use patterns among individual media practitioners in South East, Nigeria. Consequently, a questionnaire with mostly close-ended questions was designed and copies distributed among sampled media practitioners from the selected newsrooms in South East, Nigeria. The copies of the questionnaire was self-administered one-to-one with the assistance of three research assistants to the selected sample under supervision. Some advantages of using self-administered questionnaire include the fact that it is inexpensive; it has no interview bias to worry about; one can ask about very personal things; and one can even ask complex, detailed question (Berger, 2016, p. 295).

3.2 Research Population

The universe of this study consisted of all the licensed broadcast stations in the South East, Nigeria. The population of this research comprised the entire 215 news department employees of the nine selected stations and the individual newsrooms of the selected radio and TV stations; which comprised the entire news departments/ employees within the South East region. It becomes imperative to narrow the research to the selected stations that will be regarded as representative because of manageability factors. The nine stations were selected because of the need to examine the extent of use of new media technologies in privately owned stations and government-owned ones; hence, one individual and one government station were chosen from each of the five states in South East totalling nine broadcast stations. Ebonyi state does not have any licensed private station. Against this, all the state government-

owned stations in the five South East Nigerian states of Abia, Anambra, Imo, Ebonyi, and Enugu were selected along with four privately owned radios. The nine broadcast media organizations in the South East region of Nigeria — four radio stations, and five television/radio stations were studied using participant observation, survey and in-depth interview (IDI) to determine their patterns of usage of new media technologies in their respective newsrooms. The researcher with the help of three trained research assistants visited the selected media houses and used the data collection methods discussed above to generate data for the study.

3.2.1 Sampling Frame

The sampling frame consisted of all the licensed television and radio stations in the five states of the South East, Nigeria, which comprised every radio and TV stations in Abia, Anambra, Ebonyi, Enugu and Imo states. There are 53 licensed radio stations in the South East including privately owned (PO); government owned (GO) and community/campus radios (CO) (nbc.gov). There are also 13 television stations located in the South East, which are mostly government owned (nbc.gov). The broadcast stations and the corresponding states are as follows:

Table 0.1- List of Radio Stations in South East Nigeria

S/N	Abia State	Anambra State	Ebonyi State	Enugu State	Imo State
1	Broadcasting Corpora Umuahia-88.1 (GO)	ABS, Awka-88.5 (GO)	Unity FM, Abakaliki- 101.5 (GO)	Dream FM-92.5 (PO)	Orient FM, Owerri-94.4 (GO)
2	Love FM, Umuahia-103.9 (PO)	Brilla FM, Onitsha-90.7 (PO)	Salt FM, Abakaliki-98.1 (GO)	Solid FM-100.9 (PO)	Heartland FM, Orlu-100.5 (GO)
3	Magic FM, Aba (Online)-102.9 (PC	Minaj FM, Obosi-89.4 (PO)		Lion FM Campus Community(CC)	Hot FM, Owerri-99.5 (PO)
4	Vision Africa, Umuahia-104.1 (PO)	ABS, Onitsha-90.7 (		Coal City FM, Enugu -92.9 (GO)	Zanders FM, Owerri-105.7 (PO)
5	Pace-Setter FM, Umuahia-103.5 (GO)	Blaze FM, Oraifite-91. 5 (PO)		Radio Nigeria, Enugu -82.8 (GO)	Megaband FM, Owerri- 97.3 (PO)
6	Rhema FM, Aba-93.3 Rhema university, Aba (CO)	Madonna Radio FM, Okija – 93.3(CO)		Caritas University FM ,Enugu -98.7 (CO)	Federal Poly Nekede FM-103.2 (CO)
7	Green FM 105.7, Michael Okpara University (CO)	UNIZIK FM, Awka-94.1 (CO)		GOUNI FM – 106.9 (CO)	Imo Broadcasting Corporation AM, Owerri- 721kHz 416 metre(GO)

8	FIO FM, -94. 9 Umuahia	Radio Sapientia FM, Onitsha-95.3		Stallion FM, Eha-Amafu -106.5 (CO)	Owerre-Nkwoji Town Union Community Radio, Nkwerre LGA
9	ABSU FM,- 101.9 Uturu	Rhythm FM, Awka- 95.7 (PO)		Voice FM Nsukka-96.7 (GO)	MyRadio FM, 101.1 Owerri(PO)
10		Odenigbo FM, Obosi (Online)-99.1(PO)		Sunrise FM, Enugu- 96.1 (GO)	IMUSU Star FM 90.90, Owerri (CO)
11		Purity FM, Awka-102.5 (GO)		Urban FM Radio, Enugu- 94.5 (PO)	Fish FM(PO) (Online)
12		Alpha FM, Nnobi-106.5(PO)		ESUT Radio, Enugu-106.5 (CO)	
13		Lumen FM, Uga- 90.1(PO)		FRCN National Station- 6.025 MHz SW,826kHz	
14		Tansian Radio FM, Umunya-107.1 (CO)		Uroshi Community Association Community Radio, Igboeze North, LGA (	
15		Authority FM, 104.1 Nnewi (PO)		IMT Radio 107.2, Enugu (CO)	
16		Gist FM 103.5, Ogidi(PO)			
TOTAL	9	16	2	15	11

Source: Nigeria Broadcasting Commission

TABLE 0.2- List of Television Stations in South East Nigeria

S/N	Abia State	Anambra State	Ebonyi State	Enugu State	Imo State
1	NTA, Umuahia-741 MHz (GO)	NTA, Awka (GO)	NTA, Abakaliki 43 MHz (GO)	NTA, Enugu, Channel 8 (GO)	NTA, Owerri, Channel 12 (GO)
2	Broadcasting Corporation Television (BCA, TV), Umuahia (GO)	NTA, Onitsha (GO)	Ebonyi State Broadcasting Service Television, Abakaliki (GO)	Enugu Broadcasting Service Television (ESBS TV), Enugu channel 50(GO)	Imo Broadcasting Corporation, Orient TV, Owerri (GO)
3		Anambra Broadcasting Service, Television Awka (GO)	Ebonyi Cable Station TV, Abakaliki UHF 70,72.74 (PO)		
4		Minaj Broadcast International Television Obosi,(PO)			
TOTAL	2	4	3		

Source: Nigeria Broadcasting Commission

3.3 Sample and Sampling Procedure

To describe the survey sample population, the purposive sampling technique was employed. The South East region was purposively selected and then, nine broadcast stations were also purposively selected from the five states based on the following conditions that:

1. The station is situated in the South East region.

2. The station has a license and has been operational for at least over one year.
3. The station is a community/campus private station; a commercial private owned station; or a government-owned station.
4. The station receives a web presence.

The use of purposive sampling for this study aligned with (Osuala 2001; McNabb, 2008)) suggestions that purposive sampling can be used when a researcher targets a specific group quickly, in this case, the selected broadcast stations in the South East. Wimmer and Dominick (2002) support that in exploratory studies such as this, the researcher could bring together elements of a convenience sample and a purposive sample of participants chosen because of some predetermined attributes. As such, media practitioners were chosen on the basis of the above-listed reasons for their perceived knowledge and usage of new media technologies.

A purposive sampling technique used in this study also helps situate the study on two predominant types of media ownership patterns existing in Nigeria which are: government and private ownership of radio and TV stations. This approach is the most commonly practised varieties of non-probability sample often recommended when the investigator believes the unique background of participants as consistent with the goals of the study (Patton, 2002). In other words, the researcher used her discretion to choose the sample considered to be meaningful in conducting the research. This necessitated conducting a census study as the population of the selected nine news departments was found to be small and manageable. A census study was, therefore, employed in studying the entire news department staffs of the nine selected stations as the entire population was deemed to be manageable.

Founded along the outlined criteria, and using the purposive sampling technique, an aggregate of nine broadcast media systems as shown in table 0.3 below were selected among the entire broadcast stations in South East, Nigeria. These include five government television/radio stations in the five South East states and four private radio stations in Enugu, Imo, Abia and Anambra states. Ebonyi state does not have any private radio station and was therefore excluded in the options.

TABLE 0. 3: SELECTED SAMPLE OF STATIONS IN SOUTH EAST, NIGERIA

S/N	State	Media Organization	Total Staff Population	News Department Staff Population
1	Abia	Broadcasting Corporation of Abia State (BCA) (Radio and television), Umuahia	355	42
		Rhema FM, Aba	23	11
2	Anambra	Anambra Broadcasting Service (ABS) (Radio and television)	227	28
		Madonna Radio FM, Okija	30	10
3	Enugu	Enugu State Broadcasting Service (ESBS) (Radio and television)	84	34
		Dream FM, Enugu	66	12
4	Ebonyi	Ebonyi State Broadcasting Service (Radio and Television)	200	32
5	Imo	Imo Broadcasting Corporation (Orient FM and Orient Television, Owerri	198	31
		Hot FM, Owerri	44	15
	TOTAL	9 Stations	1227	215

It was not possible to examine the entire universe as our main interest was the news and current affairs division and their deployment of new media technologies in newsroom practice. The researcher thus, concentrated solely on the news departments of the selected nine stations in the five South East countries which were focal points of this study and examined the entire staff members of the news and current affairs sections in each. This involved conducting a census study of the nine news departments of the selected nine stations made up of 215 news media practitioners which constituted the sample size for the survey.The census study of the selected stations was deemed to be a truthful representation of the selected nine stations in South Eastern Nigeria. Apparently, this implied a truly representative sample of the selected stations in the South East, as there was a survey, interview, and observation of the media practitioners and their operative procedures regarding news production using new media technologies. A detailed profile of the selected broadcast stations is available in Appendix I.

3.4 Data Collection Instruments

The researcher adopted one instrument of quantitative research method: questionnaire; and two instruments of qualitative research method: In-depth Interview and Participant Observation as data collection instruments for this study. They are the preferred data collection procedures for the study based on the research objectives. One of the main advantages of combining participation observation with In-depth Interview is that it allows the researcher to develop a comprehensive picture of the interviewee's backgrounds, attitudes, and actions on their own terms (Schutt 2009). On the other hand, the secondary data were compiled from several sources, including books, journals, conference papers, websites, papers, magazines, internet and official publications.

3.4.1 Quantitative Design- Survey

To generate quantitative data on new media technology use pattern in newsrooms in broadcast stations in South East, Nigeria, the survey research methodology was used. The sample for this research design constitutes of broadcast practitioners working in the newsrooms in selected radio and TV stations. Nine broadcast stations were purposively chosen to stand for the entire population of broadcast stations in the South East, Nigeria. Two stations comprising one government-owned and one privately owned station each were taken from each of the four states of Enugu, Anambra, Imo, and Abia totalling eight stations. But one government broadcast station was selected from Ebonyi state because at that point there was no licensed private radio station in the state and this resulted in the number of selected station been nine. The selected nine stations had a sum of 215 newsroom staff that were studied in a census study. This decision was taken because the size is manageable for a work of this kind and grounded on the demand for thorough research. The selected nine stations were Madonna FM, Okija; Anambra State Broadcasting Service (ABS) Anambra; Dream FM, Enugu; Enugu State Broadcasting Service (ESBS), Enugu; Hot FM, Owerri; Imo Broadcasting Corporation (IBC), Owerri; Rhema FM, Aba; Broadcasting Corporation of Abia (BCA), Umuahia, Abia State; and Ebonyi Broadcasting Corporation (EBBC), Abakaliki, Ebonyi State.

3.4.1.1 Measurable Variables

The questions contained in the questionnaire design were grouped into different divisions based on some of the theoretical issues identified in the survey. Most of the questions except for a few open-ended and some multi-choice ones were close-ended on a five-point likert scale. The independent variables included gender, age, social status, qualification, nationality, number of years on the job and marital condition. Some of the dependent variables measured included:

1. Broadcast media use of a particular new media technology that was measured by the type of technology available in the station; the ability of the practitioners to utilize a particular technology at the workplace and, the usefulness of technology to the news business.
2. Media practitioners' extent of use of new media technologies in broadcast media houses in South East, Nigeria that was measured by the regularity of use of new media technology at the workplace; and new media technology extent of importance in news production.
3. Media practitioner’s usage pattern of new media technology that was measured by the level of use of the new media technology in the news and editorial processes; and the dominant features of new media technology that enables its use in the newsroom.
4. Media practitioners' most popularly used new media technology platform that was measured by the extent of the trendiness of new media technology; the most preferred social media platform for

news business; extent of use of User Generated Content (UGC) in news production; and, level of use of news blogs in the news business by the selected stations.

5. Factors affecting media practitioners' use of new media technologies that was measured by types of hindrances encountered during use of new media technologies in the workplace; and the degree of importance placed on the utilization of new media technologies by the individual practitioners.
6. The disposition of media practitioners towards the use of new media technologies that was measured by the level of compatibility between the media practitioners and new media technologies, and media practitioners level of positive disposition towards the use of new media technologies in selected newsrooms.

3.4.2 Qualitative Design: In-Depth Interview

In-depth interview, which is a qualitative research method, was employed as a methodology in the study. In-depth Interview was used to effectively investigate the use pattern of new media technologies in each newsroom in South East, Nigeria. The choice of interviewees was done in the selected broadcast stations in South East Nigeria. One respondent each was purposively chosen from each station for an equal representation in the selected area. Thus, an aggregate of nine respondents constituted the sample size of this methodology. The selected stations are Dream FM, Enugu; Enugu State Broadcasting Service, Enugu; Madonna FM, Okija, Anambra; Anambra Broadcasting Service; Imo Broadcasting Corporation, Owerri; Hot FM, Owerri; Broadcasting Corporation of Abia; Rhema FM, Aba, and Ebonyi Broadcasting Corporation. The selected sample size constituted of the senior staff members and heads of various news departments whom the researcher deemed fit to answer the research questions.

The data collection method used for this was a lot of open-ended questions administered using *aide-memoire* in an unstructured form to each of the nine respondents in the selected nine stations at different points during the study. The researcher visited each station to seek consent and book appointments with them prior to the actual study period. The tape recorder was used to record the interviews assisted by jotting on paper by the researcher and the responses were later transcribed. The major themes in the *aide-memoire* structure for the interview centered on the type of broadcasting operations in the station; the most used new media technology; the extent of use of such technology; the type of popularly used new media technology; the factors affecting use of new media technologies in selected stations and; the level of disposition of the media practitioners in each station towards the use of new media technologies. All these subjects provided data that answered research questions 1, 4, 5 and 6 formulated for the study. An aide-memoire structure (Minichiello, Rosalie, Eric, & Loris, 1995) was used to direct the researcher in the course of the interview on the objectives of the study so as to produce more consistent and structured data across different interviewees.

3.4.3 Qualitative Design- Observation

Participant Observation, a qualitative method was applied to study the newsrooms of the selected stations in South East, Nigeria. This methodology was selected in order to discover the manner media practitioners in selected newsrooms use new media technologies and to reveal the extent of this use. This methodology was deemed appropriate in this study so as to complement the data received from the survey and In-depth interview. The researcher thus used participant observation method to observe newsrooms activities in the selected stations for a period of three months. The nine stations studied through In-depth Interview were also selected for the observations. The selected stations are Dream FM, Enugu; Enugu State Broadcasting Service, Enugu; Madonna FM, Okija, Anambra; Anambra Broadcasting Service; Imo Broadcasting Corporation, Owerri; Hot FM, Owerri; Broadcasting Corporation of Abia; Rhema FM, Aba, and Ebonyi Broadcasting Corporation. The nine stations were purposively selected from each of the five states based on the criteria mentioned earlier in section 3.3 (sample and sample procedure), and their newsrooms activities observed for a period of seven days for each station. The researcher kept records of each observation day in an Observation Diary. The observation was done for seven days in each newsroom with an adequate concentration on the newsroom, editing room, news studio, across the broadcast stations and technical/control rooms of every broadcast station. The observation method provided additional data used in substantiating research questions 1, 2, 3 and 4 with the added advantage of discovering the extent and differential in new media technology use in each station in the South East.

3.5 Pretest and Validation of Research Instruments

The actual validation of the chosen instruments utilized the same procedure and principles as the validation of any instrument of test and measurements. The entire instruments were expected at the elementary level to have face validity. This implied that each question must be related to the topic under investigation, that is; it must focus on the usage pattern of new media technologies in broadcast stations and its influence on media development. As well, there should be an adequate reporting of the overall theme and every query must be well-defined and unequivocal. Osuala (2001) indicates that an adequate validation requires checking the response which the instrument elicits against an external criterion. Nine respondents from the nine stations under study were, therefore, utilized in the pre-test and validation of the survey research instrument which lasted one week. The pre-test was conducted for the following reasons:

1. To see whether the questions in the instruments were suitable for addressing the measurable variables;
2. To make relevant corrections thereafter from the effect of the pretest in case of any ambiguities; and
3. To examine the validity of the field instrument.

Believing that a hermeneutic approach demands that participants in a study should have sound knowledge of the subject or phenomenon under investigation (Creswell, 1998), validity was therefore, ensured in the qualitative method through these endeavours.

The decision to interview media practitioners were as well, taken because of their perceived knowledge of the use of new media technologies and its possible relationship with media development. In addition, the choice of media practitioners and interview method arose out of concerns for issues related to the validity, reliability, credibility, and affordability. Consequently, experienced and key media practitioners were chosen from the sample and interviewed one-on-one. Osborne (1993) indicated that the eagerness of participants to exchange ideas on the theme of research helps to produce a close affinity with the researcher. The interview method also gave the participants the freedom to interrogate assumptions about new media technologies and provided instant feedback as to whether the study made meaning to them or not.

Validity in this context means "the degree to which a test measures what it claims or purports to be measured" (Brown 1996, p. 213) while reliability deals with the accumulation of information in a reproducible and precise manner (Seliger & Shohamy 1989). Creswell and Plano Clark (2007) and Titscherm Meyer, Wodak & Vetter (2000) emphasize reproducibility, suggesting that the research result must remain consistent if repeated by some other researcher. As noted earlier, this study adopted a strict adherence to the procedure as determined and distinctly expressed as part of the validity and reliability process. It is also apt to reemphasize that the use of triangulation technique in this study is, first, to increase the degree of validity and reliability; and to achieve a quantitative depth through the provision of quantitative breadth (Reason & Garcia 2007).

A combination of methods offsets the weaknesses in the individual methods and further serves to assure robustness and reliability (Erzberger & Kelle, 2003). The researcher believes that one individual method would be insufficient to provide an equal and comprehensive analysis of the findings and, as such a combination of methods, which supported triangulation of findings, was adopted in order to mitigate the weaknesses in the individual methods; and further elevate the degree of validity and reliability. Therefore, as part of the procedure of attaining a high level of valid and dependable solutions, proper care (the adoption of a census study) was taken to ensure that samples are representative of the target populations. Pre-test of the selected instruments, as Wimmer and Dominick (1997) have recommended, was attempted and a pilot survey was done. The issue of validity was further enhanced by the fact that the interviews of media practitioners took place in their work settings, thereby satisfying Willig's (2008, p. 16) ecological validity.

Most importantly, to ascertain the rigour of the selected instruments, it was put forward to the supervisor of this dissertation for proper examination. This was to ensure that the questions were tailored in an unambiguous manner in order to draw out information relevant to the research aims. As well, extra copies of the questionnaire were produced which serve as a 'strategic reserve' to ensure that the entire sample was interviewed, especially lost, unfilled or unreturned copies during data collections. The copies of the questionnaire were distributed to the respondents during the observation days so as to obtain an easy entree to those practitioners that do shift duties. The reliability of the instrument was further ascertained by the pilot study, which was conducted before the main study. For the secondary data, an attempt was established to assure that the data gathered were from recent authors with appropriate references to avoid wrong interpretation.

3.6 Data Collection Phase

In this study, data were gathered from surveys, in-depth interview and observation at each selected station within the seven days allocated to each of them. Data collection was done in three phases within the duration of three months. It involves the collection of data from survey research through questionnaire administration, observations of the newsrooms and interviews of stakeholders in news departments across the nine stations in the five states in South East Nigeria. The researcher with the aid of three research assistants administered copies of the questionnaire personally to media practitioners in the selected nine stations (members of staff of the various newsrooms) and collected them back. There was a great effort to ensure a 100 percent return, although some questions were not properly answered on the questionnaire. Besides, nine respondents in nine stations were interviewed and observation also done in those nine stations during this period. The first stage took place in the month of February 2017 and traversed the four stations of Imo Broadcasting Corporation (IBC), Madonna FM, Broadcasting Corporation of Abia (BCA), Anambra Broadcasting Service ABS; which its data collection period was done within 1st February 2017- 28th February 2017. The second stage comprising: Dream FM, Ebonyi Broadcasting Corporation (EBBC) and Enugu State Broadcasting Services (ESBS) was carried out in one month from within 6th May 2017 to 6th June 2017. Ultimately, the research was concluded in the third phase with studies in the two stations of Rhema FM Aba and Hot FM Owerri on November 1st, 2017 to November 30th, 2017. The data from the observations and interviews were analyzed thematically with executive summaries.

3.7 Method of Data Analysis

The data analysis for quantitative survey research was done with the use of descriptive statistics, which include frequency distribution, mean scores, standard deviation and percentage distribution approach. The hypotheses were tested with Sample T-Test statistical technique being an inferential statistical technique as the study aims to determine if the deviation in the variables/responses are

statistically important. The study data were analyzed using SPSS (Statistical Package for Social Sciences) version 19 and Microsoft Excel 2010 bundle.

Qualitative data analysis and interpretation take different forms and depend on the subject of investigation, researcher‘s preference, time, and resources at the disposition of the researcher (Tere, 2006). A number of researchers (Cresswell, 2007; Patton, 2002; Ratcliff, 2009; Tere, 2006) have compiled numerous methods of analyzing qualitative data. Of all those methods, the study focused on thematic analysis because of the seemingly inherent inductive slant of the methods. This type of analysis is helpful because the themes emerge from the data with little or no interference by the researcher. Similarly, the dual purpose of data collection and analysis consistent with thematic analysis trumps this method just as the method enables the researcher to routinely scan transcripts and research literature (Tere, 2006).

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

This chapter concentrated on the presentation and analysis of data of **"New Media Technology Use Patterns In Broadcast Newsrooms: A Study of Selected Stations in South East, Nigeria"** and to verify the validity of the research hypotheses. The study used the mixed research methodology and against this reason, the presentation of the data was done in three parts; starting with the presentation of data from the quantitative research instrument to data from qualitative instruments. The mixed research involves philosophical assumptions that direct the management of the collection and analysis of data and the collection of qualitative and quantitative data in a single subject or series of works (Creswell and Plano-Clark, 2007, p. 5). Its fundamental premise assumes that the use of quantitative and qualitative approaches in combination provides a thorough understanding of research problems than either approach alone.

The data analysis was done with the use of descriptive statistics, which include frequency distribution, average scores, standard deviation and percentage distribution approach. The sample size for the survey comprised 215 respondents (see chapter 3 section 3.3) of the selected broadcast media houses in Southeastern Nigeria. The data gathered from the field are hereby given and analyzed based on the collection development criteria of authors' reputation, physical format, relevance, scope, number of copies and users' participating in the acquisition process of data resources in different classes.

This chapter is therefore organized along these subheadings which include; distribution and collection of questionnaire copies, presentation, and analysis of questions in part A, answering of research questions, testing of hypotheses, analysis of qualitative data and discussion of findings. The hypotheses were tested with Sample T-Test statistical technique, an inferential statistical technique to ascertain whether the differences in the variables/responses are statistically significant. The rejection of the null hypothesis was based on the p-value; as the null hypothesis was rejected if p-value<0.05. The data were analyzed using SPSS (Statistical Package for Social Sciences) version 19 and Microsoft Excel 2010 package. The findings and consequently, the conclusions were dependent on the decision rule. The data resulting from the survey were thus presented first, followed by the data from in-depth interviews and data from the participant observations. The hypotheses were tested along with each analysis of each research question.

4.1 Analysis of the Survey Method: Distribution and Collection of Questionnaire

This section begins with the presentation and analysis of data from a Survey of the news department of the nine selected stations in South East, Nigeria on the use of new media technologies in newsrooms. Two hundred and fifteen copies of questionnaires (see Appendix II) were distributed to 215 news staff members of the selected stations. Below are the reports and analysis of the findings:

Table 1a: Questionnaire Distribution

ITEM	N	(%)
No. of Questionnaire Properly filled	215	100
No. of Questionnaire not returned or properly filled	0	0
No. of Questionnaire Distributed	215	100

From the table 1a above, it could be determined that the targeted sample size for the survey was 215. The researchers distributed 215 copies of questionnaire of which the 215 were properly filled and returned, accounting 100% of the entire copies distributed. This response rate further provided substance and credibility to the collected data.

4.1.1 DEMOGRAPHIC VARIABLES

The demographic variables of the media practitioners were measured using question item 1b to item 7 in the questionnaire (see Appendix II). Data generated are hereby presented:

Table 1b: Gender Distribution

Gender	Frequency	Percent
Male	129	60
Female	86	40
Total	215	100

The data in table 1b represented the gender distribution of the respondents from the nine broadcast newsrooms studied. The result indicated that 60% of the respondents were male, while 40% of the respondents were female. This means that there are more male respondents than female respondents in broadcast newsrooms in South East stations which represented a moderate gender disparity in the workforce.

Table 2: Age of Respondents

Age	Frequency	Percent
18-25 years	15	7
26-35 years	37	17.2
36-45 years	77	35.8
46-55 years	42	19.5
56-65 years	26	12.1
66-75 years	18	8.4
Total	215	100

The output in Table 2 reported the respondent's age. The result showed that there were more respondents within the age bracket of 36-45 years in the broadcast station as it accounted 35.8% of the respondents, followed by respondents between the ages of 46-55 years accounting 19.5% and those within the bracket of 26-35 representing 17.2 percent of the respondents. Twenty-six respondents (12.1%) were aged between 56-65 years. The survey respondents with age bracket 66-75 years and 18-25 years were the least respondents considered as they reported 8.4% and 7.0%, respectively. This means that most of the practitioners in South East newsrooms fall between eighteen to fifty- five years of age (summation of 79.5%); which indicated that they joined the profession at a young age which falls in with the peak of new media technological evolution globally. Excerpt from Table 2 on the ages of the respondents had more or less 35.8% of respondents' aged between 36 years – 45 years. This may have strategic implications on the output and competitiveness of the media practitioners, especially when all those whose age brackets fell within the 36-45 years contract to their retirement years. It then means that the organization would lose a huge level of the workforce, which invariably could puncture or possibly affect their effectiveness.

Table 3: Years of Practice

Years	Frequency	Percent
<5 years	76	35.3
6-10 years	67	31.2
11-20 years	42	19.5
21-30 years	15	7
>30 years	15	7
Total	215	100

The output in table 3 reported the respondent's years of practice. The result here indicated that there were more respondents with less than 5 years of experience in broadcasting as it accounted 35.3% of the respondents, followed by respondents with 6-10 years and above experience accounting

31.2%. The study respondents with 21-30 and more than 30 years of experience were the least respondents considered as they reported 7.0% respectively. This means that the majority of the media practitioners in South East newsrooms fall between one to ten years in practice which correlates responses on table 2 which showed that they joined the broadcast profession at the pinnacle of the new media technological era (just about 2006).

Table 4: Educational Qualification Distribution

Educational Level	**Frequency**	**Percent**
SSCE	1	0.5
OND/NCE	37	17.2
HND/BSC	165	76.7
PGD/M.Sc.	12	5.6
Total	215	100

The output in Table 4 describes the level of respondents' educational attainment. The result showed that there were more respondents with HND / BSc. Degrees that participated in the study as the result accounted about 76.7% of the respondents; followed by respondents with OND/NCE accounting 17.2% and a minority of SSCE and PGD/MSc holders accounted for 5.0% and 5.6% of the respondents respectively. This means that majority of the newsroom staffs are HND/BSC graduates who were taught computer appreciation in schools and were assumed to be new media literate. Graduates are also expected to increase reading ability on the job, competency and quality productivity and competitiveness (Porter, 2006).

Table 5: Respondents' Rank Distribution

Rank	Frequency	Percent
Junior	45	20.9
Mid-career	134	62.3
Senior	36	16.7
Total	215	100

The result in table 5 reported the rank of the respondents, showing that there were more respondents in the mid-career rank in the broadcast stations accounting for 62.3% of the respondents, the junior rank accounted for 20.9% of the respondents and the senior rank had 16.7%.

Table 6: Nationality of Respondents

Nationality	Frequency	Percent
Nigerian	215	100
Non-Nigerian	0	0
Total	215	100

The result of Table 6 portrayed that the entire 215 (100%) respondents were Nigerians. In the five (EBBC, IBC, ESBS, ABS, and BCA) state government stations studied, observations showed that the entire staffs working in the newsrooms were from the South East region. Nevertheless, there was a different case at Hot FM with staff members from Enugu, Abia and Anambra state; and at Dream Fm, where some members of the staff the first, a male is from the southwestern state while the other two females were from the south-southern state. Having most of the employees hailing from southeast of Nigeria could pose a challenge on the efficacy and level of dedication towards the collection and production of news which could affect the gatekeeping process in a privately owned station.

Table 7: Marital Status Distribution

Marital Status	Frequency	Percent
Married	137	63.7
Single	78	36.3
Total	215	100

The output in table 7 reported the marital status of the respondents. The results showed that a majority (63.7%) of respondents in the nine stations were married while only 36.3% of the respondents were single. It could likewise be considered that the above result which showcased most of the employees or workforce married, has the ability to involve commitment, devotion and advanced inclination to investigative news and content use with regards to new media technologies; which could as well affect productivity in the news department.

4.2 Dependent Variables Analysis and Test of Hypotheses

In this section, data on the dependent variables were presented. The effort was to answer each research question which generally centres on ascertaining the use of new media technologies in broadcast newsrooms in South East Nigeria. This part also contains a test of hypothesis against each question. Below is a comprehensive analysis of data on major dependent variables set out in the study.

RESEARCH QUESTION 1: Which new media technology is predominately available in each broadcast newsroom in South East, Nigeria?

Table 8: Type of Broadcast Technology System Available in Stations

Types of Broadcasting	Frequency	Percent
New Technology (Digital)	173	80.5
Old Technology (Analogue)	42	19.5
Total	215	100

The result from Table 8 indicated the predominant technology found in broadcast newsrooms in the South East. The outcome established that new media technology (Digital) accounted for 80.5%, while old media technology (Analogue) accounted for 19.5%. This means that new media technology offering digital broadcasting system is the most predominantly available technology in media stations in the South East. See table 8b for broadcasting stations in South East, Nigeria and the practitioners' perceptions of the types of the broadcasting system applicable in their stations.

Table 8b: Specific New Media Technologies Applicable in each Selected Stations in South East, Nigeria

Broadcast station	**digital**	(%)	**analogue**	**(%)**	**Total**
ESBS	34	100	0	0	34
ABS	28	100	0	0	28
BCA	15	35.7	27	64.3	42
IBC	31	100	0	0	31
EBBC	17	53.1	15	46.9	32
Dream FM	12	100	0	0	12
Hot FM	15	100	0	0	15
Madonna FM	10	100	0	0	10
Rhema FM	11	100	0	0	11
Total	**215**	100	**0**	0	215

Table 8b showed that ESBS, ABS, IBC, Dream FM, Hot FM, Madonna FM and Rhema FM broadcasting stations in South East, Nigeria mostly, have new media technologies in their newsrooms, which are also digital technology as 100% of the respondents from this station attested to this. Broadcasting stations such as BCA and EBBC however, have both new technology (digital) and old technology (analogue) in their newsrooms. BCA broadcasting station was reported to be using analogue technology (64.3% of the responses from the station attested to this statement) more than the digital new media technology (accounting 35.7%); while EBBC, kind of balanced the two types of media technology with about 53.1% of the respondents from EBBC broadcasting station attesting to this statement and (46.9%) 32 respondents affirming that analogue system was more applicable. These findings showed that new media technologies are mostly used in newsrooms though, there were apparently, traces of media convergence in some newsrooms. See figure 1 for a graphical representation of types of the broadcasting system applicable to the various selected broadcasting stations.

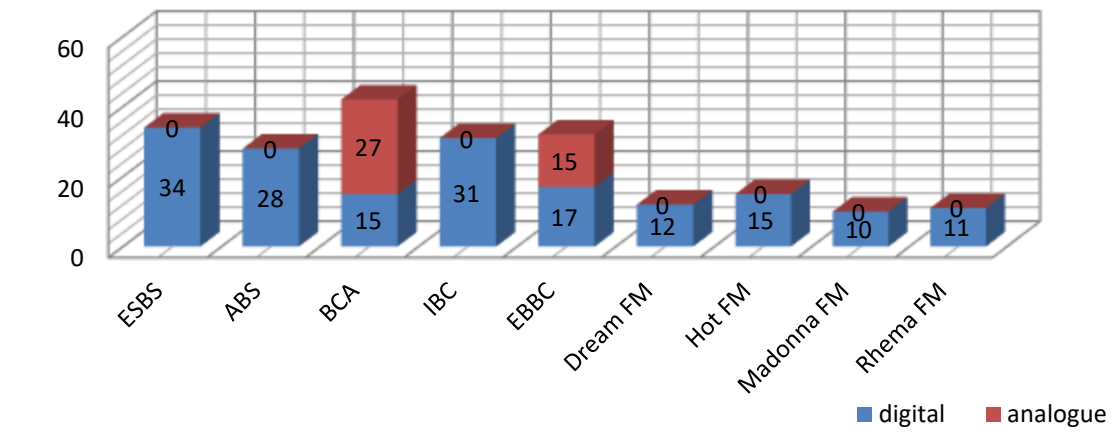

Figure 1: Specific broadcasting media technologies available in selected stations

Table 9: Respondents Most Conversant Technology

Technology Conversant with	Frequency	Percent
Old media technology	45	20.9
New media technology	102	47.4
Both of them	68	31.6
Total	215	100

Data on Table 9 contained the responses on the type of technology the respondents were most conversant with in selected newsrooms. It shows that 47.4% of the respondents were mostly conversant with the new media technology; 31.6% were most conversant with both new and old media technology; while 20.9% of the respondents were most conversant with old media technology. This implied that some of the respondents are apparently not skilled in using new media technologies apparently because it is not adequately available in the stations. This has a correlation with responses on Table 8b where some respondents, 64.3% from BCA and 46.9% from EBBC attested to their station still using analogue broadcast technologies which are old media (see Appendix IV: pix 11, 21,24,)

Table 10: How New Media Technology Improves Work Performance

Extent	Frequency	Percent
Average extent	45	21
Large extent	170	79
Total	215	100

Table 10 reports the technology that improves the work performance of respondents. The result shows that 79.1% of the respondents attested that usage of new media technology has helped to

improve their work performance to a large extent while 20.9% of the respondents said new media technology has enhanced their work performance to an average extent.

TEST OF HYPOTHESIS 1:

H_1: There is a significant difference in the most predominantly available new media technologies in broadcast newsrooms in South East, Nigeria

H_0: There is no significant difference in the most predominantly available new media technologies in broadcast newsrooms in South East, Nigeria.

Table 11: Sample T-Test result of the new media technology most predominantly available in broadcast newsrooms in South East, Nigeria $p<0.05$.

	t	df	p-value	Mean Difference	Decision
Types of broadcasting sy applicable	44.105	214	0.000	1.195	Reject

Table 11 showed a summary result of Sample T-Test on the new media technology most predominantly available in broadcast newsrooms in South East, Nigeria $p<0.05$. From the result, we can see that the technology most predominantly available in broadcast newsrooms in South East, Nigeria is significantly different as our p-value accounted 0.000 which is less than 0.05 with t_{cal} = 44.105. This means that we shall reject H_o and concluded that there is a significant difference in the technology most predominantly available in broadcast newsrooms in South East, Nigeria ($p<0.05$).This report showed that media technology most predominantly available in broadcast newsrooms in South East, Nigeria differs among broadcast stations and the most predominant available technology was found to be new media technology as the mean difference account of 1.195 skewed towards digital broadcasting (new media technology) (see Appendix IV: pix 7,9,10,12-18,20).

RESEARCH QUESTION 2: To what extent does each broadcast newsroom use new media technologies in their operations in South East Nigeria?

Table 12: Respondents Opinions on Regularity of New Media Technology Use in Broadcast Stations

	Old media		New media	
Responses	Frequency	Percent	Frequency	Percent
Always	34	15.8	169	78.6
Often	1	0.5	2	0.9
Sometimes	35	16.3	14	6.5
Rarely	130	60.5	12	5.6
Never	15	7	18	8.4
Total	215	100	215	100

The result of the extent of the usage of new media technology was represented in Table 12 above. The result reported that a majority 78.6% of the respondents were of the view that new media technology were always used in their broadcast newsrooms; while only 8.4% of the respondents indicated that new media technology were never used in their broadcast station. This shows that new media use is indeed pervasive to a large extent in the broadcast stations in Nigeria.

The table 12 above also portrayed the extent of usage of old media technology in those stations. The result shows that majority 60.5% of respondents indicated that old media technology was rarely used as a measure of extent; 16.3% and 15.8% of the respondents indicated that old media technology were used sometimes and always respectively; while 7.0% of the respondents indicated that old media technology was never used by their broadcast stations' newsrooms. This implies that old media technologies are gradually phasing out in newsroom practice in Nigeria with only a few respondents still using it to a minimal extent (see Appendix IV: pix 8,11).

Table 13: Level of Relevance of New Media Technology in News Production

Responses	Frequency	Percent
Highly	175	81.4
Averagely	21	9.8
Poorly	15	7
Unimpressively	4	1.9
Total	215	100

Table 13 shows the level of relevance obtainable with new media technology in news production. The result showed that 81.4% of the respondents were of the view that new media technology have highly helped in news production, 9.8% of the respondents indicated that it has averagely helped in news production, only about 7% and 1.9% of the respondents minimally indicated that new media technology has been poorly and unimpressive respectively in helping their stations with news

production activities. This has a correlation with responses on table 12 on the extent of use of new media technologies where few respondents 32.1% agreed that they use old media technologies to some extent.

TEST OF HYPOTHESIS 2:

H_2: The extent to which broadcast newsrooms in South East, Nigeria use new media technology in their operations are significantly different.

H_0: The extent to which broadcast newsrooms in South East, Nigeria use new media technology in their operations are not significantly different.

Table 14: Sample T-Test result on the extent to which broadcast newsrooms in South East, Nigeria use new media technology in their operations ($p<0.05$).

	t	df	p-value	Decision
Old media usage	43.232	214	0.000	
New media usage	18.423	214	0.000	Reject
Old media usage /New media usage	19.739	214	0.000	

Table 14 shows a summary result of Sample T-Test on the extent to which broadcast newsrooms in South East, Nigeria use new media technology in their operations ($p<0.05$). From the result, we can see that the extent to which broadcast stations in South East, Nigeria use new media technologies in their operations is significantly different as our p-value accounts 0.000 which is less than 0.05 with teal = 19.739. This implies that we shall reject Ho and concluded that there is a substantial divergence in the extent to which broadcast newsrooms in South East, Nigeria use new media technology in their operations ($p<0.05$). This report indicated that the extent to which broadcast stations in South East, Nigeria use new media technology in their operations differs among newsrooms of selected broadcast stations.

RESEARCH QUESTION 3: What is the differential in the usage patterns of new media technologies in selected newsrooms in South East, Nigeria?

Table 15: Perceived Dominant Feature Of New Media Technology With Regard To Use

Responses	**Frequency**	**Percent**
Ease of use	25	12
Interactivity	26	12
Participatory	34	16
Multimedia/Multiplatform	38	18
Fluidity	4	1.9
All of the above	88	41
Total	215	100

The result of Table 15 above shows the respondents perceived dominant feature of new media technology with regard to its use in the workplace. The results showed that 40.9% of the respondents indicated that all the mentioned features are dominant characteristics of new media technology with regards to its usefulness in performing their journalistic duty; 17.7% of the respondents indicated that multimedia/multiplatform is a dominant feature while fluidity had the least representation with 1.9%. This showed that fluidity is not commonly perceived among the practitioners as a feature of new media technologies that should enhance their work.

Table 16: How New Media Technology Influences the Editorial Decision

Responses	Frequency	Percent
Always	192	89.3
Often	23	10.7
Total	215	100

The result in table 16 above indicated the influence of new media technology on the editorial process. The result shows that a majority 89.3% of the respondents testified that new media technology always determines the editorial process and 10.7% indicated that the influence on the editorial process is often taken based on new media availability. This implied that new media technology is a major determinant of the editorial procedures in selected places. This finding has a correlation with the findings on tables 8a where new media technologies were found to be mostly available in most stations (80.5%). This consequently affected its (new media technology) level of influence on the editorial process (89.3%).

TEST OF HYPOTHESIS 3:

H_3: The patterns of use of new media technology in the selected newsrooms in South East, Nigeria differs significantly.

H_0: The patterns of use of new media technology in the selected newsrooms in South East, Nigeria do not differ significantly

Table 17: Sample T-Test result on the pattern of use of new media technology in selected newsrooms in South East, Nigeria ($p<0.05$).

	t	df	p-value	Mean Differe	Decision
Usage Pattern	32.743	214	0.000	4.088	Reject

Table 17 showed a summary result of Sample T-Test on the pattern of use of new media technology in selected newsrooms in South East, Nigeria ($p<0.05$). From the result, we can see that the pattern of use of media technology in selected newsrooms in South East, Nigeria is significantly different as our p-value accounted 0.000 which is less than 0.05 with $t_{cal} = 32.743$. This implies that we reject Ho and concluded that the pattern of use of new media technologies in selected newsrooms in South East, Nigeria do differ significantly. This report confirms the responses that the extent of use of media technology in the broadcast newsrooms in South East, Nigeria equally differs among broadcast stations.

RESEARCH QUESTION 4: Which is the most popularly used new media technology in broadcast newsrooms in South East, Nigeria?

Table 18a: Most Popular New Media Technology

Responses	Frequency	Percent
Digital technologies (Hardware gadgets)	183	85
Social Media	16	7.5
Internet (Online) based	16	7.5
Total	215	100

Table 18a depicts the result of the most popularly used new media technologies in newsrooms. The result shows that majority 85.1% of the responses indicated digital technologies like computers, digital: laptops, smartphones, iPads, CDs, recorders, transmitters, microphones, cameras, etc are mostly used while 7.5% of the respondents popularly use social media and other internet-based new technologies respectively. This implies that the majority of the respondents popularly use hardware digital technologies in newsrooms more than social media and online based ones as was equally found in Eludu, Mbazie & Ndinojuo (2016) study of NTA, Port Harcourt.

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Table 18b: Extent of Trendiness of Choice New Media Technology

Responses	Frequency	Percent
Highly	183	85
Average	32	15
Total	215	100

Table 18 depicts the result of the extent of the trendiness of popularly used new media technologies. The result shows that 85.1% of the responses indicated digital hardware technologies are trending to a high extent while 14.9% of the respondents indicated that their alternative social media and web-based(Online) technology are, however, trending to an average extent.

Table 19: New Media Technology (Social Media) Most Preferred For News Business

Social media tools	Frequency	Percentage
Facebook	51	34
Twitter	10	6.7
Whatsapp	8	5.4
YouTube	14	9.4
Instagram	5	3.4
Skype	10	6.7
LinkedIn	0	0
Snapchat	0	0
Facebook-Instagram	34	23
All the above	17	11
Total valid	149	100
No response	66	31
Total	215	100

The result of Table 19 shows the most preferred social media platform. It shows that 34.2% of the respondents preferred Facebook, 22.8% of the respondents use Facebook, Twitter, Whatsapp, YouTube and Instagram together. The least preferred social media platform is Instagram with 3.4% of the respondents indicating its use, while LinkedIn and Snapchat have not gained popularity at all at 0%. The finding on Facebook, Twitter, Whatsapp, YouTube and Instagram as the most preferred social media is in consonance with literature that reported social media is one of the most popularly used new media technologies among Nigerians (Ekwenchi, Morah & Adum, 2015).

Table 20: User Generated Content (UGC) as Sources of News

Responses	Frequency	Percent
Yes	53	24.7
No	155	72.1
Not sure	7	3.3
Total	215	100

The result in table 20 depicts the position of User Generated Contents (UGC) as a source of news to newsrooms. The result indicated that majority 72.1% of the respondents disagreed that their stations use UGC as a source of news while 24.7% of the respondents agreed. The result also showed that 3.3% of the respondents were not certain whether their station's use UGC as a source of news or not. The result means that UGC is not popularly used as news sources in the selected stations. This also implied that some of the media practitioners are not new media literate and could not differentiate between using social media and user-generated contents as news sources.

Table 21: Response on Blog Usage

Responses	Frequency	Percent
Yes	34	15.8
No	181	84.2
Total	215	100

Table 21 portrays the responses of respondents on blog usage in newsrooms. From the result, it is clear that a majority 84.2% of the respondents does not use blogs and only 15.8% of the respondents indicated that they use blogs. This implies that blogs are not popularly used in news departments in the South East.

TEST OF HYPOTHESIS 4:

H_4: There is a significant difference in the most popularly used new media technology in broadcast newsrooms in South East, Nigeria.

H_0: There is no significant difference in the most popularly used new media technology in broadcast newsrooms in South East, Nigeria.

Table 22: Sample T-Test result on the most popularly used new media technology in broadcast newsrooms in South East, Nigeria ($p<0.05$).

	t	df	p-value	Mean Differe	Decision
New Media	16.179	148	0.000	4.779	Reject

Table 22 shows a summary result of Sample T-Test on the most popularly used new media technology in broadcast newsrooms in South East, Nigeria ($p<0.05$). From the result, we can see that the most popularly used new media technologies in broadcast newsrooms in South East, Nigeria is significantly different as our p-value accounts 0.000 which is less than 0.05 with t_{cal} = 16.179. This means that we shall reject H_o and conclude that the most popularly used new media

technologies in broadcast newsrooms in South East, Nigeria differ significantly. This report shows that the most popularly used new media technologies in the broadcast newsrooms in South East, Nigeria differs significantly among the selected broadcast stations.

RESEARCH QUESTION 5: What Factors Affect The Use Of New Media Technologies Among Media Practitioners In Selected Newsrooms In South East, Nigeria?

Table 23: Hindrances Encountered In the Usage of New Media Technologies in Broadcast Newsrooms

S/No.	Response	Frequency	Percent
1	Financial status	44	21
2	Low Interest	16	7.4
3	Availability	12	5.6
4	Low Media Literacy	23	11
5	Lack of Internet Access	30	13.9
6	Poor Accommodation	6	2.8
7	1-5	65	30
9	All of the above	19	8.8
	Total	215	100

Table 23 shows the result of the hindrances encountered in using new media technologies in selected broadcast newsrooms. The result shows that 30.2% of the respondents agreed the factors listed from 1-5 are the major hindrances, 20.5% indicated that financial constraint is a major hindrance, and lack of internet access (13.9%) was also found. However, only 2.8% of the respondents indicated that poor accommodation space is an encumbrance to the use of technologies in broadcast newsrooms in the South-East.

Table 24: Perceived Level of Usefulness of New Media Technologies to Work

Response	Frequency	Percent
Very important	134	62.3
Important	69	32.1
Somewhat important	12	5.6
Total	215	100

Table 24 shows the perceived level of importance of new media technology to media practitioners work. The result shows that 62.3% of the respondents indicated that new media technology is very important to their profession; 32.1% of the respondents indicated that new media technology is important while 5.5% of the respondents indicated that new media technology is somewhat important. This clearly implies that media practitioner's perceived usefulness of new media technologies is very impressive (62.3%) though at different levels. This require some strategies

towards overcoming the barriers in table 23 for an effective use of new media technologies in broadcast newsrooms.

TEST OF HYPOTHESIS 5:

H_5: There is a significant difference in the factors that affect media practitioner's use of new media technology in broadcast newsrooms in South East, Nigeria.

H_0: There is no significant difference in the factors that affect media practitioner's use of new media technology in broadcast newsrooms in South East, Nigeria.

Table 25: Sample T-Test result of factors that affect media practitioners use of new media technology in broadcast newsrooms in South East, Nigeria ($p<0.05$).

	T	df	p-value	Mean Differe	Decision
Hindrances	24.714	214	0.000	5.256	Reject

The table 25 is a summary of Sample T-Test on the factors that affect media practitioners use of new media technology in broadcast stations newsrooms in South East, Nigeria ($p<0.05$). From the result we can see that the factors that affect media practitioners use of new media technology in broadcast stations in South East, Nigeria is significantly different as our p-value accounts 0.000 which is less than 0.05 with $t_{cal} = 24.714$. This means that we shall reject H_o and conclude that the factors that affect media practitioners use of new media technology in broadcast newsrooms in South East, Nigeria differs significantly. This report shows that factors affecting media practitioners'use of new media technology in newsrooms in South East, Nigeria differs significantly among broadcast stations.

RESEARCH QUESTION 6: What are the Dispositions of Media Practitioners Towards the Use of New Media Technologies in Newsrooms Activities in South East, Nigeria?

Table 26: Respondents Level of Compatibility with New Media Technologies

Responses	Frequency	Percent
Strongly agree	64	29.8
Agree	85	39.5
Strongly disagree	38	17.7
Disagree	28	13
Total	215	100

Table 26 shows the result of the level of compatibility with new media technologies among the media practitioners. From the table 39.5% of the respondents agreed that they are compatible with the new media technologies, 29.8% indicated that they strongly agree, 17.7% strongly disagreed and 13.0% disagreed with this view. This showed a high level of compatibility (70.3%) and could apparently affect their dispositions toward using the new media technology.

Table 27: Respondents Level of Positive Disposition to New Media Use in the workplace

Response	Frequency	Percent
Strongly agree	32	15
Agree	97	45
Disagree	23	11
Strongly disagree	43	20
No idea	12	5.6
Total valid	207	96
No response	8	3.7
Total Sampled	214	100

The result from the table 27 above shows the level of positive disposition in the use of new media technology among broadcast practitioners in the newsrooms. The result shows that 45.1% of the respondents agreed that there is a positive disposition among media practitioners, while 15% strongly agreed to this. However, 20.0% of respondents strongly disagreed that there is a confident disposition and 5.8% of the respondents showed that they are not sure if they have a positive disposition or not. This evidently implied a high level of positive disposition among media practitioners towards using new media technologies in newsrooms in South East, Nigeria.

TEST OF HYPOTHESIS 6:

H_6: The dispositions of broadcast practitioners towards the use of new media technologies in newsrooms in South East, Nigeria are significantly different.

H_0: The dispositions of broadcast practitioners towards the use of new media technologies in newsrooms in South East, Nigeria are not significantly different.

Table 28: Sample T-Test result on the level of dispositions of broadcast practitioners towards the use of new media technologies in South East, Nigeria ($p<0.05$).

	t	df	p-value	Mean Differe	Decision
Broadcast practiti dispositions	27.168	214	0.000	6.172	Reject

Table 28 shows a summary result of Sample T-Test on the level of disposition among broadcast practitioners towards the use of new media technologies in South East, Nigeria ($p<0.05$). From the result, it is obvious that the level of the disposition of broadcast practitioners towards the use of new technologies in South East, Nigeria is significantly different as our p-value accounts 0.000 which is less than 0.05 with $t_{cal} = 27.168$. This implies that we shall reject Ho and conclude that the level of the disposition of broadcast practitioners towards the use of new media technologies in South East, Nigeria is significantly different. This report shows that the dispositions of broadcast practitioners towards the use of new media technologies in South East, Nigeria differ among broadcast stations.

4.3 Analysis of Qualitative Methods: In-depth Interview and Participant Observation

This section presents an analysis of data from one of the qualitative instruments used in this work. The outcomes of the interview were given and analyzed using thematic analysis. The inductive methods were guided by thematic analyses that centred on the relationship between new media technologies and the change in broadcast production, covering professional identity, journalistic practices, processes of innovation and user-generated content. A thematic approach is valuable in discerning commonalities in the adoption of new media technologies in mass media and offering conclusions that can be greatly generalized. The thematic analysis allows for "identifying, analyzing and reporting patterns (themes) within the data."It minimally organizes and describes your data set in (rich) detail. However, frequently it goes further than this and interprets various aspects of the research topic," (Braun & Clarke 2006, p.79). Throughout the research process, ethical guidelines were of paramount importance and were rigorously adhered to. The authors noted that commitments to the standard of preserving secrecy and confidentiality are of paramount importance. For instance, other unauthorized persons will not have access to the recorded data.

In conducting the in-depth interviews, it was assumed that a lot would be learned about the research topic from the interviewee on their terms. The primary reason for this is that an unstructured interview relies on a series of open-ended questions and thus, each of the respondents could answer each of the individual questions in their own words (Schutt 2009). An aggregate of nine participants was interviewed comprising one respondent from each station. They are major key players in the news production unit whom the researcher considered apt for the subject. Nine of them (senior news development staff members); and who were directly involved in the production of news programme, were purposively selected because they are major stakeholders in news sections. The purposive sampling technique was instrumental in picking out the interviewees as they were thought to be very relevant in facilitating the study.

The research also focused on a sample of nine stations, which afforded the researcher a more intensive representation of the chosen players. Each interviewee acted as a "key informant survey" (Schutt 2009, p. 173). In other words, each interviewee was particularly knowledgeable about the issue under investigation of new media technologies and usage patterns of new media technologies within the station. The interviewees were chosen for their awareness and familiarity with the topic in question; based on their willingness to talk; and their ability to be "representative of the range of points of view" (Schutt 2009, p. 173).

The nine stations selected for interview were also observed directly. Therefore, on completion of the research process that is; after conducting the nine observation sessions and the nine interviews, the researcher invested a large amount of time analyzing the data. Immediately after each direct observation, field notes were written in great detail using the field notes and observation diary during the observations. Likewise, the researcher scrutinized the interview transcripts in immense detail. Below are reports of the findings of the qualitative studies

4.3.1 In-Dept Interview Analysis

The first qualitative method used in this study was In-depth Interview (IDI) as earlier explained in chapter 3. It was applied to add volume and perspective to research questions 1, 4, 5 and 6 by providing more explanations to findings from the survey in these research questions. Each of the questions asked contains research variables and subsequent ones were required as follow-up questions in an unstructured method, but with concentrations on some listed questions on the aide-memoire structure (see Appendix III) which emanated from the four focal research questions.

In Research Question 1, data from interviews provided answers to variables like most predominantly available new media technologies in each newsroom; types of new media technologies; the purpose of use and views about the state of news production today. Research Question 4 provided answers to the most popularly used new media technologies at the selected stations; Research Question 5 provided answers to problems affecting media practitioner's use of new media technologies in newsrooms and how those factors could be solved; while Research Question 6 provided answers to the dispositions of practitioners towards using new media technologies in news sections. The sample size for the IDI conducted comprised nine broadcast news stakeholders (managers and senior staffs) who were purposively chosen by the researcher from the nine selected stations in South East, Nigeria based on their willingness to answer questions, on new media technology use knowledge and availability. One news stakeholder was thus, chosen from each of the selected stations and interviewed. The researcher assured confidentiality during the interview and therefore, assigned the respondents acronyms of their official titles in the following order:

M/SS/MR: A male senior news division staff from Madonna University Radio FM, Okija, Anambra state.

M/SS/EBBC: A male senior news and current affairs division staff from Ebonyi Broadcasting Corporation, Abakaliki, Ebonyi State.

M/SS/BCA: A male senior news and current affairs division staff from Broadcasting Corporation of Abia, Umuahia, Abia State.

F/SS/DFM: A female senior news division staff from Dream FM, GRA, Enugu State.

M/SS/IBC: A male senior news and current affairs division staff from Imo Broadcasting Corporation, Owerri, Imo State.

F/SS/ESBS: A female senior news and current affairs division staff from Enugu State Broadcasting Service, Enugu, Enugu state.

M/SS/ABS: Male senior news and current affairs staff from the Anambra Broadcasting Service, Awka, Anambra state.

M/SS/HFM: A male senior news division staff from Hot FM, Owerri, Imo state.

M/SS/RFM: A male senior news department staff from Rhema FM, Aba, Abia state.

It is significant to observe that the interviews were held differently in the nine selected stations, but the responses were merged as shown below for purposes of simplicity and for easy thematic analysis in line with the questions asked against each research question. The responses from the interviews were transcribed and summaries of the researcher are presented below. The researcher adopted the executive summary thematic approach in the analysis of the In-depth interview questions whereby the arrangement of each IDI response to questions was followed by notations by the researcher to summarize the results. This approach gives an added advantage of showing and explaining firsthand the respondents' direct views on each theme without necessarily going to the appendices for details at the end of discussions. The notations or an executive summary in each case comes last with each respondent's response to each research question.

4.3.1.1 Research Question 1: Which New Media Technology is Predominately Available in Each Broadcast Newsroom in South East, Nigeria?

This question probed the type of new media technologies available to use at each station as a basis for determining the case of the broadcast system found in South East broadcast stations. Seven respondents representing seven stations clearly proved that new media technologies are predominantly available and used for news production in their stations. The other two stations do not have a digital transmitter and most of their broadcast technologies were analogue, so they are regarded as highly using old media technologies. These last two stations, however, use some new media technologies in news gathering and production minimally. From their responses, it was obvious that there are

differences in the type of media technologies, mostly available and used in newsrooms in South East. Below is a summary of the findings:

Question 1: Which Media Technology Is Mostly Used In This Station Today?

The type of available technologies in a station determines the type of broadcasting they practice; whether it is digital (new media) or still analogue (old media). This question attempted to discover the most available media technology at each station so as to categorize the type of broadcasting system practised in that station in the 21st-century journalism era. The respondent at Dream FM revealed that they are entirely using only new media technologies in the station. The respondent noted:

> If you look around here in the newsroom you will notice that we have mainly new media technologies. We have our systems, our laptops and 3 computer sets for the newsroom. We own our personal laptops and recording facilities as reporters. The station has 2 ZOOM recorders for station use. Meanwhile, every reporter as you must have noticed since your stay here makes use of their own laptops, iPad, recorders, Smartphone as news collection and editing devices with which they send in news to the base station while on the beat (F/SS/DFM).

The response showed that new media technologies are predominately available in this newsroom as there was no sighting of any old media technologies at Dream FM, Enugu (see Appendix IV, pix 13, & 17). At Hot FM, Owerri the responses similarly indicated that old media technologies are not predominantly used in the station. F/SS/HFM commented:

> If you look around here in the newsroom you will notice that we do a paperless production. We have mainly new media technologies. We have our laptops and 2 computer sets for the newsroom. The station has Samsung recorders for our reporter's use. Meanwhile, every reporter here as you notice since your stay here knows how to manipulate the laptop, Ipad, recorders, Smartphone as news collection and editing devices with which they send in news to the base station while on the beat(F/SS/HFM).

This also, showed that new media technologies are most predominantly available in the station as there was no sighting of any old media technologies at Hot FM (see Appendix IV, pix 7& 20) as observed at Dream FM, Enugu. At IBC, Owerri the respondent M/SS/IBC indicated that:

> In the area of broadcasting, there have been lots and lots of changes. I remember a time when it was all analogues. Today, we use only digital as the emphasis is now on digital technologies. In those days we have midgets…when we started as reporters. Midgets are tape recorders. It uses mini-tapes. Then, any time you came in from an assignment, you transcribe what was recorded. It was cumbersome. It didn't make for good actualities then. From there we came to the stage where we are today. In those days, if you want to get a SoundBits, each time you came back, you put on the recorder, place it before a microphone. Usually, the output is not very clear. But today, we are in the era of high technology; we use digital midget and not analogue technology. All you need is your computer or laptop, with digital camera or recorder, you go for assignment and come back, you save in CDs; you upload to the computer; do your voice -over, edit or write the story (M/SS/IBC).

This implies that IBC, Owerri has mostly new media technologies; digital camera, recorders, CDs in their newsrooms for news production (see Appendix IV, pix.10 &12) The response from ABS also, apparently implied that the station is 100% digital as M/SS/ABS noted:

> Well, ABS has grown over the years. Before now, we were using the old analogue system some of which we got from the old Anambra State after state creation. You can see some of them packed on that side. But with the recent trend in technology, we joined the wave of digital. Everything is digital now, in both our radio and television sections.

Further, a scrutiny of the station environment and newsroom confirmed the availability of new media technologies at ABS. Similarly, at ESBS, new media technologies were found to be predominantly available. On this note, F/SS/ESBS responded:

> I think we were among the first service station to go digital in the southeast during the administration of Governor Sullivan Chime followed by ABS. We make use of digital midget for audio, digital cameras, and studio for the television, a digital console for radio, laptop for editing and computers for typesetting our bulletin. Every technology in our radio and television section is digital. I think that is what you call new media.

In the same fashion, Madonna University Radio FM has new media technologies more than the old ones. According to responses from M/SS/MR:

> We use new media technologies in the newsrooms and even in the whole station. You see, around 2012, when the NUC came for accreditation exercise and the Mass Communication studio was given a facelift, our radio benefited and today we have digital technologies everywhere and the old ones are packed away, over there. We got our digital transmitter and other new media facilities then.

This reaction demonstrated that new media technologies are mostly available at Madonna FM (see Appendix III, pix 16 &18). Responses from Rhema FM, Aba confirmed that only new media technologies are predominantly used and available in their radio station. M/SS/RFM was quick to mention that:

> Looking at what is trending in the area of communication, the station makes use of purely digital technologies in all departments and news production inclusive. With new media technology, the productions are packaged in a more digital way, unlike what was witnessed in the days of gigantic transmitters. You can see our digital transmitter, portable and neatly packed in one corner there (pointing at the digital transmitter).

This station was started at the zenith of new media technologies, and then all their media technologies were found to be new and digital. In contrary, the responses from the respondents at EBBC and BCA claimed to have both old and new media technologies in broadcasting at varying extents unlike Dream FM, Hot FM, IBC ABS, ESBS, Madonna FM and Rhema FM. On that note, M/SS/EBBC observed:

> Well, in keeping with best practices, we make use of midget for audio, laptop for editing and computers for typesetting our bulletin. We still use some old technology like this (pointing at an old TV set) my television set that is still analogue. Before now we use analogue midget, manual typewriters and reporter's notebook or jotter. News reporting was a tedious task then. Now we are not fully digitalized. We have gone a bit far since 2011 when we started as a result of the fusion of the former Ebonyi Broadcasting Service and Ebonyi Cable Television. But we are working hard to meet up with the digital conversion.

> You see, today if you are still analogue you are still behind. I think the state government has plans for us.

This station has and uses both new and old media technologies. EBBC is still at the incipient stage of new media technology adoption in their newsroom activities in line with the responses above. However, the availability of new media technologies was also found to be at the embryonic stage at BCA, Umuahia. The respondent M/SS/BCA attested:

> Yes, to an extent we use new media technologies. That is the in-thing today. We kind of combine the two types. As you noticed, we use computers to typeset our stories, we use CDs and we have a digital recorder and digital camera. We are also online; we have a Facebook and Twitter account. We still use our old technologies; they are still good and working. We started with old analogue technology. I can remember how we use to spend hours monitoring BBC and VOA on transistor then. The production process was slow and strenuous. You can imagine a situation where a cameraman must be accompanied by another person carrying the heavy recorder. At the end of it, the reporters and technicians are exhausted (M/SS/BCA).

The reaction has shown that BCA has the old media technologies more than the new media technologies for news production. The station is still at the incipient stage of new media technology adoption.

Question 2: What Are The Media Technologies You Use For News Production?

The media technology used for news production and preparation at Dream Fm was reported to be completely digital and new. The respondent F/SS/DFM indicated that**:**

> We don't have any old technology at this station. We use a ZOOM4 recorder which is 2014 made and I personally have a ZOOM6 which is the 2016 edition. Since we started operations in 2012, every technology we own have been new and of the state- of –the- art starting from the computers, internet connectivity, digital HD television sets, digital microphones, DSTV cables, Digital home theatre radio, iPads, laptops etc. We also carry our device around with us. For instance, when it became clear that there is a sit-at-home today (30th May 2017), I called the office and as soon as I got in here, a car and driver was ready and I zoomed off to the field for situation reports. I was able to do my work hitch free and fast because I had my devices (recorder, iPad and smartphone) with me (F/SS/DFM).

The response here showed that all the news production technologies mentioned were new media technologies. The station newsroom outline was quite unlike that of other newsrooms visited. Every part of the building was air-conditioned showing that the owner of the private station has greater affluence unlike in the state-owned broadcast stations like EBBC, IBC, and BCA. This might be a reason for the availability of only new media technologies in the station.

The F/SS/HFM indicated that Hot FM uses only new media technologies for news production just like Dream FM. The station newsroom outline is similar except for the non-availability of printer and papers. According to the respondent:

> For instance, you see me producing news now. I used USB and copied it to the iPad. It is more economical, faster and it's wonderful! In new gathering, we use midget for our recordings. Its digital and as soon as the reporters come back, they use the USB on the midget, they plug in on the PC and it (the information recorded) comes out of the laptop or PC. We also use a program called Adobe audition to do the audio transcription from the recorder. It's very fast and easy, unlike the ordinary transcription on paper. In fact, I can say that new media has changed everything in broadcasting (F/SS/HFM).

At IBC, Owerri, the respondent affirmed that the station uses only new media technologies in news production today. According to M/SS/IBC:

> What we use today in the television unit is a memory card because of new developments in technology; we use the digital camera for TV. So, the era of the bulky camera is over. You use the digital camera with a memory card; you upload with a USB cord to the editing room and start editing on computers. We also use mini DVDs. In radio unit, we have digital recorders, audio CDs, and digital microphones. Generally, we have digital transmitters for our radio and television stations (M/SS/IBC).

The kinds of technology used in this newsroom for news production were mostly new media technologies. Also, at ABS, only new media technologies are used in their newsroom according to respondents report:

> We use mainly digital recorders now. The old recorder we have uses cassette tape and the recording was limited by space. We use digital cameras for television which has a memory card, the camera has USB as well as the recorders for editing and, interview. In production, we use computers, CDs, DVDs, digital microphones, digital transmitter, iPad, internet, digital printers, scanners, everything here is digital (M/SS/ABS).

At ESBS, Enugu, the respondent also affirmed that the station use only new media technologies in news production and management. The F/SS/ESBS observed that:

> Today you can just make your video with a digital camera, edit your report, send to the control room and it will be easier to read. Our editing suite is also digitized or you use computer software and nonlinear editors to edit your stories on laptops, especially TV stories (F/SS/ESBS).

Nevertheless, the respondent at Madonna FM identified and even showed the researchers all the media technologies presently used in news department which were completely digitalized and new media technologies. M/SS/MR further pointed out**:**

> News work is easier now. We are ICT compliant and our digital transmitter has made the production of news less cumbersome. There is one technology donated by BBC to this FM which is the Hand ZOOM5 that is used for recording and editing. It has simplified radio journalism since you can record and store in a memory card. You can connect the recorder to a laptop for editing and actualities. We also have our digital microphone, smart television for monitoring other station and computer editor. In fact, everything in our station now has a new media version even the UPS.

This suggested the availability and use of new media technologies at Madonna FM as shown in the reaction. Likewise, at Rhema FM all the media technologies used for news department were new media technologies. M/SS/RFM replied:

> Everything about news production, packaging, collection and even dissemination has changed. We are new media compliant and our digital facilities have made the production of news less cumbersome. There is one important technology for radio news production, the digital Sony recorder that is used for recording and editing. It has simplified radio journalism since you record and store in a memory card. It also uses a USB to connect directly to the computer for editing and actualities. We also have our digital microphone, smart television for monitoring other station and computer editor. In fact, everything in our station now has a new media version even the UPS. We cast our news on iPad and it's easier for the newscaster than the paper format (M/SS/RFM)

The paper format basically entails having a script while casting the news. In a follow-up question concerning the use of script in news production today, the respondent explained:

> No ooh! We write on papers, but only for record purpose. In fact, we use soft copies always since we use the iPad in newscasting. Everything we do is computerized. See our reporter that just came back from the field, he is typing his report on a laptop. We don't have a typesetter here. Once you come back you type your stories and submit to the editor. I can say that from experience, new media technologies are better, it is cheaper, faster and easier (M/SS/RFM).

On the other hand, there was a different situation at EBBC. At the point of the interview, the respondent was watching an analogue television set in his office. M/SS/EBBC replied that:

> We use a digital Sony recorder now. The old recorder we had used cassette tape and the recording is limited by space. But this new recorder uses a memory card of 1000GB and can record so many things. We use digital cameras for television news coverage which has a memory card instead of the old video tapes that are bulky. We can use the Sony recorder for editing and, interview. We have three of them: one for the office, another for Government House reporters and the other for the House of Assembly reporters.

The main news production technologies identified by this respondent were digital and new media technologies, but the presence of the old TV suggested that there were old media technologies in the newsroom. Nevertheless, the response from the respondent at BCA was different from responses received from other places. Explaining the state of technologies in use at the station, M/SS/BCA:

> Our problems are the old transmitters we are using. At times, the signals are poor, but there is hope for a change. We still have other old equipment like this radio set, we have the digital and analogue camera which we use alternatively. We have two recorders, microphone, computers, CDs- audio and video. We have so many technologies here.

Therefore the presence of analogue transmitters, radio sets, recorders and microphones (types not mentioned) apparently shows that old media technologies abound in this station.

In summary, responses in relation to research, question one above showed that seven of the respondents representing seven broadcast stations which are Dream FM, Hot FM, IBC, ABS, ESBS, Madonna FM and Rhema FM responded to having only new media technologies in their newsrooms. Seven of them equally agreed that only new media technologies were used in their newsrooms. All the same, the remaining two respondents representing two broadcast stations which are EBBC and BCA were of the view that both new and old media technologies are used in their stations. Although the respondent from EBBC agreed using only new media technologies for news production, the researcher observed an analogue TV set in his office during the interview which he uses for station monitoring. This further refuted his claims. The respondent at BCA agreed that they use mostly old media technologies and little of new media technologies in news production.

4.3.1.2 Research Question 4- Which is the Most Popularly Used New Media Technology in Broadcast Newsrooms in South East Nigeria?

Question 3: Which New Media Technology Do You Popularly Use in this Newsroom?

Responses from F/SS/DFM disclosed that in addition to other digital technologies (hardware) social media was most popularly used in news collection and dissemination at Dream FM. This was necessitated by the wide reach of the station. The respondent further observed:

> You see, Dream FM has a wide range of audience even on social media. For example, I used my phone today to do videos of the areas that were locked down, the markets and deserted roads. People were interviewed and we uploaded this on our social media platforms. Before we read the major 1 pm news bulletin, we had already sent out information on Instagram, Facebook and Twitter, That is, we post some of the videos on Instagram and Facebook and sent out some tweets on our official Twitter handle. The social media enable us to break the news as it is unfolding. As you can see, even before we were able to produce the news ultimately, we had given our audiences and users information on social media before major headlines. This will move them to tune in for the main news bulletin at 1 pm.

Social media were also greatly used in conducting interviews to complement news reports in the station. The F/SS/DFM indicates that at Dream FM:

> We use the social media for the interview as is done at BBC. For instance, with Whatsapp, I can do interviews. All I have to do is to type in the question and ask the interviewee to reply as an audio clip. He will record his answers which I will download and insert in my news stories. Back in those days, it was very difficult doing that and reaching another reporter takes time and money.

The use of Whatsapp for news collection by this particular station could be possible because of the fact that the station is a new generation station with the majority of staff members falling between the ages of 25- 55years. Also, observation showed that the station scans the social media for latest new and usually sends their staff for training to other foreign stations where they discover new courses in

digital broadcasting. This indicated that in addition to digital technologies, social media might be the most popularly used new media technology at Dream FM.

Social media was surprisingly not used at all in the news department at Hot FM, Owerri according to responses from F/SS/HFM. It is not deemed reliable as the respondent argues: “we don’t use social media for anything. The stories can be misleading or false. So our journalistic style in this radio has to do with actual reporting.” This actual reporting involves covering assigned areas or beats with the use of digital recorders, laptops, iPads, DVDs, CDs by the practitioners. The F/SS/HFM further commented with regard to the use of online content or blogs that:

> We don't rely on online sites. We only use recognized news organizations as mentioned earlier. The online platform is too open and everybody writes anything. We don't use them here… We don't use sources like that here, but I read blog stories personally. They are not credible and reliable.

This implied that Hot FM does not use social media content in news production processes, although they claimed to be practising a paperless broadcasting that should be digitalized. The reactions of the respondent at IBC M/SS/IBC indicated that they regularly use editing software like Sound-forge, Cool-editing, and others digital hardware. This offers a firm and neatly edited output whether audio or video. The respondent indicated that with new media technologies like smartphones, laptops, internet connectivity:

> You can stay in your home base and report to the station. You can edit at home and send to the studio through Whatsapp, Facebook, and email or through other formats if the station is connected to the internet. We use our new digital camera and recorder for every assignment as well as this computer. We normally save the contents of the audio and video CDs. New technologies enhance news production process today.

However, observation proved that the reporters send in their news reports using mostly email and the station does not use Whatsapp in news gathering like Dream FM. This indicated that there is no particular new media technology that is most popularly used in this newsroom.

Responses of the respondent at ABS equally showed a difference in the most popularly used new media technology. When asked whether the station use social media for news production, M/SS/ABS indicates:

> Yes, ooh they are very important today. We are on social media, on Twitter, Facebook, and YouTube. We post our news and video there. In fact, we have many followers today, unlike when we started. Though it provides a clue, we always try to investigate before we use such stories. Without the social media, you cannot know what is happening in other places.

The respondent affirmed that ABS streams *live* and employ YouTube for news production with the assistance of some media practitioners in the news department. In emphasis, the respondent also observed that their (ABS) radio is online and "we use the YouTube for our video stories. We are

always on StarTimes and people are getting our stations internationally. The scope is wider now and we have a new kind of audience that is purely online"(M/SS/ABS).

Reponses from F/SS/ESBS showed that ESBS use other digital technologies in addition to social media in news production. The respondents attested "we use the computer to gather news, type and use laptops for editing and it is neater, flexible, faster, economical and easier. The days of analogue were terrible." In summation:

> … In the news, we use the PCs. Some of the young reporters use their phone, iPad, and laptops to cover events. The editing was done with nonlinear editors to edit stories after news collection and some workers can comfortably operate the technologies. For instance, all our correspondents at government house, Agwu, Udi, Nsukka, and the house of assembly have their own laptops. They file in their stories directly to the station using online means (F/SS/ESBS).

At Madonna FM, the respondent noted that though the station still has all the necessary analogue technologies with all of them working perfectly in good working conditions, the station currently makes use of new media technologies like digital CDs, ZOOM5 recorder and laptops in the news department. M/SS/MR expressed that:

> We use the social media to monitor which news that is trending and then we go to those two sites I mentioned earlier to check if they have carried that report before we report it. We use only the two sites. Facebook and Twitter are for getting updates. We have a Facebook page and we post news there too.

This suggested that social media contents were used as sources of news in this station just as in Dream FM, ESBS, and ABS. The station equally source news from the other internet sites and their reporters use email technology to send their reports to their base: "we have some correspondents in Onitsha who file in their report via email. Our student volunteers cover the Okija axis. We also visit internet news sites like latestNigerianews.com and newspaperindex.com" (M/SS/MR). This indicated that there is a mix of newsgathering pattern involving new media technologies at Madonna FM as equally indicated at Dream FM, Hot FM, ABS, ESBS, and IBC.

This dispensation also applied to Rhema FM where the respondent affirmed that social media, online news sites, digital non web-based technologies are used in the news production process. M/SS/RFM observed that "since its inception, we have been digitized. We have digital technologies everywhere. We have a digital transmitter and other new technologies- laptop, computers, CDs, DVDs, digital recorders, and iPads. We do everything on soft copies first." The respondent further attested:

> We use the social media to source for news. Social media helps to monitor what news is trending and then we go to those our trusted news sites as mentioned earlier to check if they cover that report before we report it. As a Christian owned radio station, we always verify and report good stories on Facebook and Twitter. We have a Facebook page and we post news there too (M/SS/RFM).

The station also uses other new media technologies, accordingly M/SS/RFM pointed out:

> We have some correspondents at Aba and Umuahia who fills in their report via email. Our student volunteers cover the local axis and we have one reporter at the government house Umuahia. He doesn't come here to submit his reports; rather he prepares his reports every day and sends it online using our drop box. We also visit internet news sites of our national dailies such as guardiannng.com, thenationng.com, thesunnewspaperng.com, and reuters.co. However, we still monitor CNN. BBC, NTA, VON, FRCN, Reuters and; we use their contents. We also use our reporters and the social media to monitor the environment. It is very easy and economical because we use digital technologies. In news collection we also use our digital recorder that is; a midget and when our reporters come back, they will prepare the stories using laptops and PCs and submit to the desk editor on soft copies of CDs. Every technology we use is digital as I said before and all our staffs are skilled in using the new media technology (M/SS/RFM).

At EBBC, with the television and radio stations under one administration, the situation was similar as found in other stations. There was also a kind of mix in the type of new media technologies used in their news department. M/SS/EBBC revealed that the digital cameras and recorders were mostly used because just a small number of the staff can edit news stories with laptops. He continues:

> In our newsroom, only a few people have access to a laptop. They rely on nonlinear editors to edit stories after news collection with the digital recorders and cameras (for TV) and some can comfortably manipulate the technologies. For instance, all our correspondents at government house and the house of assembly have their own laptops. They file in their stories directly to the station. However, over 70% of our employees have gone on various training to update their skills. We recently recruited 21 new female staffs and nine of them have gone on technology training. The state government sponsors this training. We will train the rest in-house.

However, the use of social media was not allowed in this station. The respondent argued that they report mostly government stories and local development event and does not accept any content from the social media. For him:

> Well, it depends, because, most times one can be misled by the sources of information. That is why we don’t accept social media stories. Though it provides a clue, we will always try to investigate before and if we are to use such stories. We do traditional media reporting, so we do beat reporting covering mostly Ebonyi state government activities. But I have Facebook and Whatsapp for my personal use.

The condition at BCA was a bit different as the respondent M/SS/BCA revealed that old media technologies were still actively used in news production at the station due to non-availability of adequate new media technologies. The respondent observed:

> My employees are trying. Most of them are old in the field and used to the analogue technologies, but we have sent some of them for training outside. Some of the new and young staffs are finding it easier to manipulate the new technologies. You know it's not easy for the station at all. We have so many workers here and the technologies cannot reach everybody. So doing beats may demand the reporters using the most available old or new technologies. For instance, some of them even try to use their laptops and Smartphone to cover events since we have only this Panasonic digital recorder. Even in the TV section, the

> digital camera is only one, we complement with the old ones. When my reporters come back they store the stories on CDs. Our problem is the old transmitter we are using. At times, the signals are poor, but there is hope for a change (M/SS/BCA).

This obviously showed that CDs, computers, digital recorder, and camera were the major new media technologies used at BCA, Umuahia although there were heavy uses of the abundant old media technologies.

In summary, responses in relation to research question four above showed that all the nine respondents representing the nine selected broadcast station agreed that they utilize the available new media technologies in their newsrooms in an unpredictable manner. None of the new media technology was the most popularly used; excluding the use of social media, found to be high and most popular at Dream FM. Three stations comprising of Hot FM, BCA and EBBC do not use social media as news sources despite having social media accounts. The respondent at BCA indicated that just a few new media technologies were available in their station; which probably accounts for the poor usage of new media technologies in the station. The respondent representing Dream FM however, agreed that social media is among the most popularly used new technology for news gathering and dissemination in their station.

4.2.1.3 Research Question 5- What Factors Affect The Use Of New Media Technologies Among Media Practitioners In Selected Stations In South East, Nigeria?

Question 4: **What Problem/s do you think affect Practitioner's Use of New Media Technologies in this Station**?

This question was intended to find out some of the militating factors that affect the practitioner's use of new media technologies in broadcast stations in South East, Nigeria. At Dream FM, the respondent did not regard lack of skill or finance as hindrances to new media technology use. For F/SS/DFM, working with their station demands complete knowledge of most broadcast new media technologies before recruitment and even more:

> Every staff of this newsroom and even the entire station is new media compliant. That is a condition of employment here. For instance, when I started work here in 2012, I was using one China phone, but my boss demanded that we must have smartphones. So I was forced to buy one, a Blackberry though, I have not received my first salary and others changed theirs too. Here, our staffs have their personal technology to make the work easier. You can see my colleague that just greeted us; he is carrying his own iPad. However, some practitioners are more compliant than others. They manipulate different technologies and platforms at different levels (F/SS/DFM).

The situation at Dream FM demands that one must have a passion for the job before joining. To meet their demands, one also needs to be self-equipped, unlike in government-owned station where they

wait for the government to provide all the new media technologies. So, it can be deduced that interest in the job is a major factor in the use of new media technology here. For instance, on a follow-up question on the use of social media concerning the use of blogosphere in news practice, the respondent revealed that:

> Yes. I have a blog on news and lifestyle. Only two staff here operates blogs. At times we direct people to our blog during programmes; I also post some stories on my blogs based on certain conditions. My reason is that considering all the money I invested in training myself in this career, I want to have an international recognition on the web; and since some stations have linkages with political office holders, I am not always free to report everything. So I use my blog to express myself as a trained journalist. It doesn't have anything to do with Dream FM (F/SS/DFM).

This further implied that having an interest in the job and passion for the career were regarded as contributory factors against the use of new media technologies by this respondent. Cost and skill were also identified by Hot FM respondent as challenges of the new media technology adoption in spite of its numerous potentials.

> Every staff of this newsroom and even the entire station are new media compliant… It's easier of course! Before, for broadcast news production you will be struggling with the heavy analogue technologies that are cumbersome and slow. But here, as we started in the new media age, 2010, we use only new media technologies. Though it is costly to buy and needed skill, new media is better. We do what is called paperless production today. You'll notice that apart from the newspapers here, there is no paper or copier here. I use a laptop to prepare news and send for the newscast to the iPad in the studio. Even our correspondent sends in their reports via the internet. That is paperless, we don't write with papers. It is from one system to another. We don't have a printer or copier. Back in those days, it was very difficult doing that and reaching another reporter takes time and money. Using new media is also easier and less expensive. What would have taken days to research is easier now with the internet. It makes the work easier (F/SS/HFM).

This apparently indicated that employing new media technologies might not be deemed cost intensive regardless of its obvious high cost of purchase. At IBC, the respondent M/SS/IBC observed that lack of skill and computer literacy were major challenges with new media technology use:

> It's only a matter of adoption. For instance, in nonlinear editing, we brought in experts to teach our staff and even sent some staff outside for training to learn how to edit with the new technology. Basically, when something new comes, you require someone to teach you how it works.

The emphasis was basically on retraining of staffs for skill, literacy and easy manipulation of the new media technologies. Finance was not fully regarded as a hindrance by this respondent because, "if you need something nice, it takes money. Broadcast business is capital intensive. For you to meet the modern standard you must spend money"(M/SS/IBC). Similarly, the ABS respondent affirmed the notion of M/SS/IBC but added that:

> Most of our staff members are trained in new media use, I think over 60% of our staffs has gone on various training to update their new media skills. Workshops and seminars were also held to further update them on technology use, though some are quick at learning on the job. You can see that today, everybody is working at ease under the new dispensation. Getting the new media tech is expensive, that's why some stations are still using the old ones (M/SS/ABS).

At ESBS, the respondent also believed that technology skill acquisition was essential to new media technology use:

> You know, the station is the oldest in the south-east and most of our staffs are old- schooled broadcasters. So we send over 50% of our staff members on various training to update their skills. We recently recruited some new young staffs and most of them are acquainted with the new media technologies, though some have gone on technology training, some older ones also trained themselves to remain on the job. You know our economy is bad and so you have to keep your job (F/SS/ESBS).

This implied that government-owned stations are sending their staffs on technological retraining to obtain new media literacy and skill. This might help cover the lapses in new media technology use discovered among practitioners in government station; which probably kept cropping up as they were generally hired as civil servants. The Madonna FM respondent also argued that its primary problems with new media technology use were lack of skills and monetary value of technological acquisitions:

> One is the cost of acquiring the technologies. Old media are cheaper while the new media technologies are very expensive. Though new media technologies are easier to manipulate, it requires retraining which is also expensive. But we must move on with the new trend to deliver fast like other stations (M/SS/MR).

It was surprising that some of the old staff members of the radio station were found using the new media technologies at ease. On that regard, M/SS/MR commenting on a follow-up question surmised:

> It was not easy. Our station has some members of staff that retired from other stations and they are analogue people. So we started by training them in the use of new media technologies and within some months they can manipulate the equipment. Also, some of the young ones are ICT people before employment, so it was easy for them. You see, about 15 of our workers here are student volunteer staffs and most of them can operate the new technologies (M/SS/MR).

This apparently showed that age might not be a major factor against the use of new media technologies in news practice as observations showed that some elderly staff members were comfortably using some new media technologies in the other stations visited. The respondent at Rhema FM corroborated the view of Madonna FM respondents to note that:

> Hmmm, there are some challenges, the cost of acquiring the technologies is high and developing the skill requires training. Old media might be cheaper while the new technologies are very expensive to buy but new media are easy to manipulate and requires retraining. But it is the in -thing today so as to move on with the new trend; to deliver fast like other stations (M/SS/RFM).

To ensure effective production and delivery in the station, M/SS/RFM revealed some additional efforts:

> Actually, the new media skill is important for the smooth running of our station as all the technologies are digital. So, we train the new workers and our student volunteers who may not be new media skilled. We must do that for about two months before we start sending them to cover beats for news. They learn on the job and those ones that passed through this system developed the skills easily. We also teach our students in this manner (M/SS/RFM).

Respondents at EBBC and BCA likewise, believed that lack of skill, finance, and literacy were major challenges to the use of new media technologies in broadcasting. M/SS/EBBC was of the view that:

> New media can be regarded as a great revolution. Most of us started from the analogue days, so we are still finding it hard to use the new technologies, even this smartphone. For example, as a duty editor then, you woke up by 5 am to monitor VON, monitor FRCN by 7 am and at the end of the day, you use manual tape to record. In editing, you fast forward and rewind to make up a story which might consume like 45minutes especially for our Global News at 1 pm which we started since 1997. The computer age has changed all that. But we are into in-house training for some staff and the government is training more than 70% as I said earlier (M/SS/EBBC).

This shows that EBBC might become completely digitalized in the near future due to the government intervention in training most of the staff member- maybe in preparation for new media technology acquisition. At BCA, the respondent M/SS/BCA further concurred with some other respondent's opinion that:

> One problem is lack of skill. We had to start training our staffs which involved a lot of money. We had to do in-house training. Buying the new technologies is costly too. That is why we are managing the ones that are available for now. Some of them are not computer literate and finds it hard working with digital gadgets.

In summary, interview responses to research, question five indicated that deficiency of new media technology skills, new media literacy and finance were regarded by eight respondents representing eight stations of Hot FM, IBC, ABS, ESBS, Madonna FM, Rhema FM, EBBC and BCA as major factors hampering the utilization of new media technologies in broadcast newsrooms in South East. Nevertheless, the respondent from Dream FM had a different opinion that lack of interest and passion for the job were hindrances to new media technology use in newsrooms.

4.2.1.4 Research Question 6- What are the Dispositions of Media Practitioners towards the Use of New Media Technologies in Newsrooms Activities in South East, Nigeria?

Question 5: How do you explain the disposition of media practitioners towards the use of new media technologies in doing their work?

This question tried to find out the value and importance placed on new media technologies as playing a key role in journalism as well as the general characters of the staffs when using such technologies.

The respondent at Dream FM could not, nevertheless, state old experiences with using old media technologies because she joined broadcasting recently (2004) just like most of their other staff members. For F/SS/DFM everybody should be happy working with new technologies considering its vast potentialities:

> One unique quality of new media is convenience. If not for new media and social media, there is no way I would have been able to verify what is happening in other parts of the country. I started in 2004, I didn't know if there was a different approach. But I know also know that new media is easier, faster and enhances collaboration. I know that collaboration greatly helps a lot in information sharing globally. It doesn't matter who breaks the news first, but observation has shown that many stories across the world came out as a result of working as a team between journalists and news organizations using mostly the new media technologies. (F/SS/DFM).

F/SS/DFM argued that using new media in the newsrooms is highly important and does not make the staffs become bored easily. The long processes of news collection and editing are equally reduced, especially with content sharing and collaboration as she observed in another follow-up:

> Interestingly, about 50% of our news materials are collected from other sites. We collect information from news outlets like Vanguard, Punch, Guardian and Premium Times. We also do news tracking. By this method, we track news from stations like Channel TV, AIT, BBC and CNN so as to bring different kinds of news content to our audience. Even at that, we do conventional news gathering. As you noticed, today we went out to scout for news following the sit-at-home order by IPOB. We went out to the streets to get opinions and situation reports from the people. We also contacted people in Ebonyi, Anambra, Imo, and Abia through phones and social media recordings to get situation reports from those states too. For example, I know a lot of people called me this morning from Anambra to verify what is happening here and to find out how Enugu is observing IPOB. I have become their sources and they trust me with that information. In such cases, if some information is gotten you don't need to cite the reporter directly. You can say "reports coming in from Anambra reveal that there was a complete observation of today's sit at home by..." You cannot do this job without sharing information; that age has passed! (F/SS/DFM).

Responses from Hot FM showed that the practitioners were also happy working with new media technologies as it has entirely changed the news production processes:

> In this age of new media technologies, news production is very easy, shorter than what it used to be and more economical. In fact, you need to hit the nail on the head. You just go straight to the point and deliver the news. In radio news, you have to be concise because your listeners are in a hurry. You don't need to bore them with frivolities. For instance, "The President of Zimbabwe has resigned" you just hit and leave it. Today, people are using the internet to have access to varieties of information on their own, so you need to be ahead in this age. You must know what is happening before you write any news now because if you cook up anything without much research, you'll be hooked. You need to constantly check the internet for updates. You see, today there is information everywhere; people had so many ways of getting information unlike in those days that when everybody depends on radio and television for getting information. Now if you report falsely, people will know. You must do real investigation for you to function well now.

F/SS/HFM revealed that new media technologies have equally brought changes even in the news collection and editing process, as even collaboration is enabled under this dispensation:

> We have so many ways of getting news materials. As you noticed, she (reporter) just came in from an assignment. We mainly use our reporters in news collection. We send them on beats. Hmm, we have local content- that wherever our reporter is, you must cover your area. It could be commercial news; eyewitness, human angle stories or you just pick something and investigate. Secondly, we have correspondents in other states. Remember that we have other stations so; we do what is called 'interface'. We corroborate reports to get information about happenings in other states. Just like a small network. The new media support this as the reports are sent online. At Lagos, Abuja, Owerri and Delta station we share our news at the national level. We don't rely on the so-called reliable source because they might not be reliable at all. Then internationally, we get news from BBC, VOA, CNN, Reuters, Aljazeera.

Responses from M/SS/IBC pinpointed the features of new media technologies that make him happier: "The new media technology makes for promptness. Everything about news is timeliness. I can prepare and edit a story from the comfort of my home. Unlike in those days when you have to carry the heavy recorder, VHS machines and do other cumbersome activities." The respondent at IBC further indicated that their staffs were also, generally happier using the new technologies and deemed new technologies to be of high importance in news production today:

> Who wouldn't be? You can imagine a staff carrying a heavy camera then, and another carrying the recorder. They are so happy about everything now and the portable nature of the new media. As I said earlier, before now, the recorder was very heavy and the big tapes too. You slot in the tape to the recorder linked to the camera. It is only the cameraman that will record for you. The camera was very bulky. Each time we came back for editing when you go to the editing room, you discover also that you were carrying a big load. In editing, you fast forward, you go back and you cannot upload or download what you need. Whatever material you need for news will be pulled out when you play the tape. Each time you get to the part that you needed, you tell the editing man to cut from there. It was very difficult and time wasting, really! (M/SS/IBC).

The respondent further stated on a follow- up to a question that new media technology brought a lot of difference to broadcast journalism as the media output today is clearer and more interesting:

> But the story has changed completely today. Now, after news collection, you edit and upload to the central room from where it will be aired. For instance, if you are a reporter covering Imo State Government House, after the editing and the script is being read- "Governor Rochas Okorocha did this…", if it is television news there should be a video or tape for radio that will be cued in by the pressing of a button. That is new media at work. When we finish, packaging the news, it is moved into the studio and as the SoundBits are already in the studio in CDs or flash drives, it is easier using them for TV or radio news. The television output is richer now, the signals are clear for radio and there is a high fidelity (M/SS/IBC).

This suggested a positive disposition towards using new media technologies at IBC newsroom. There were similar reactions at ABS and ESBS. The respondent at Anambra Broadcasting Service noted that:

> The people working in the news department are very happy working with the new technologies. In editing section, for instance, they rely on nonlinear editors to edit stories after news collection and some can comfortably manipulate the technologies. For instance, all our correspondents at the government house and house of assembly send in their stories online with their own laptops. They file in their stories directly to the station (M/SS/ABS).

The long hours of news production processes have reduced under the new dispensation compared to the old media technological age of ABS when:

> It was mainly manual operations, tedious and very tasking. We use manual cameras, recorders, heavy lighting and old typewriters. Our OB van was then analogue containing all the gigantic cameras. We do a lot of paperwork and you store in a video cassette. But today, you can just make your video with a digital camera, edit your report, send to the control room and it will be easier to read. You can also use nonlinear editors to edit your stories on laptops, especially TV stories (M/SS/ABS).

The respondent regarded new media technology as a concept that is key and very helpful in broadcasting:

> The new media technology is simply great! It has reduced the long hours of news preparation and production is cheaper and easier. The technologies are so portable that even in radio, all you need to cover a story is the digital recorder and in television, gone are the days of the cumbersome camera. Everything has changed for the best. Our correspondents too are happy working with the digital technologies (M/SS/ABS).

At ESBS, the respondent noted that news department staffs and even the entire employees in the station are very happy with the adoption of new media technologies in the station as "… new media is better. Sure, it makes work easier, we use the computer to gather news, type and use laptops for editing and it is neater, flexible, faster, economical and easier. The days of analogue were terrible." In addition:

> You cannot compare the news production with what it was. Hmm, my dear, you can collect and produce news from any part of the globe and send to your station within a few minutes now. But that was impossible in the age of bulky analogue equipment. Today, news production is brief, fast, colourful and simple. In radio, the audio is very clear because of the digital technologies and in television it is the same, with sharp, natural videos. It is interesting reporting in the digital age (F/SS/ESBS).

At Madonna FM the respondent's feeling was the same. M/SS/MR describing the advantages of working with new media technologies disclosed:

> You see, there are so many advantages of new media technologies and that is why my staffs are very happy using new media technologies in news production. You know that old media is analogue, you use audio tapes, and the process is slow, cumbersome and time-consuming. Today, recording is done differently. Looking back, I will say that the new technologies are far better than the old technologies. The new media is very fast. I can stay in the comfort of my house and write a news report, send to the station and it will be included in the bulletin. For instance, our reporter in Onitsha just sent in this report on the disturbance at Head Bridge, Onitsha. If it were, then, it will take time to cover such report and he will have to rush back here to submit. At times, they might encounter traffic hold- up at Upper Iweka or

> something worse might happen. New media allows you to get the stories on the spot. You can use your phone or iPad to record the audio interview and send in the reports for news. The potentials are numerous (M/SS/MR).

Similar responses were gotten from the remaining three respondents interviewed across the remaining three stations. The respondent at Rhema FM indicated that new media technology is better and their staffs enjoy working under the new dispensation. According to M/SS/RFM:

> There are so many benefits of using the new media. You know that this station started in the new media age, so everything is digital. Today, news production is faster and you must consider your audience choice always. This is because there are many ways of getting information today, so it demands accuracy. But, with the old media, everything was done with analogue technologies, you use analogue recorders to rewind, fast forward during editing and then store in audio tapes; the process is slow, cumbersome and time-consuming. Today, recording is done differently. Looking back, I will say that the new technologies are far better than the old technologies. The new media is very fast. I can stay in the comfort of my house and write a news report, send to the station and it will be included in the news. New media allows you to get the stories on the spot. You can even use your phone or iPad to record the audio interview and send in reports on dropbox or email. The potentials are numerous (M/SS/RFM).

At EBBC, the newsroom staffs are said to greatly enjoy working with new media technologies as indicated by M/SS/EBBC:

> Before now, we use analogue midget, manual typewriters and reporter's notebook or jotter. News reporting was a tedious task then. But today, the new media technologies make work easier. In the days of old technology, after manually typing, you resort to using a pen to edit. This puts the newscaster to a trial, trying to decipher what you wrote. Today, we are using the computer and it is neater and easier.

But at BCA, the respondent could not generally explain how the newsroom staff members feel when working with new media because the available new media technologies are inadequate and just a few staffs use the technologies. Though he admitted that they are still using more of old media technologies, M/SS/BCA, however, recognized some advantages of using the new media technologies against the old media technologies:

> In old media era, for instance, in the television section, for each new assignment, the reporter will go with two other persons; the camera person and other staff carrying the recorder. In the radio section, we use the analogue audio recorder that has audio cassette tapes. That type of tape can only record for about 45minutes or sixty. Unlike the CDs that we are using today, editing news contents with the cassette tape are tedious. There will be a lot of fast forwards, rewinds, and cuts to properly edit a story. Then, at times we use still photos from the library for TV news and transcribe fax content from our subscribed news agencies. We also do beat reporting with correspondents in various parts of the state (M/SS/BCA).

The respondent in a follow-up noted that the staffs used to experience some difficulties when they were using only old media technologies:

> We started with the old analogue technology. I can remember how we use to spend hours monitoring BBC and VOA on transistor then. The production process was slow and tiring. You can imagine a situation where a cameraman must be accompanied by another person carrying the heavy camera stand, light stand, and recorder. At the end of it, the reporters and technicians are exhausted. Today there is a difference with the new media technologies (M/SS/BCA).

This indicated that the respondent understood the opportunities inherent in utilizing new media technologies despite the fact that BCA is, however, in the initial phase of technological acceptance. On further follow-up answer, M/SS/BCA disclosed the variance between the old and new media technology in media practice.

> In terms of timely delivery, new media is better. But the quality of news report matters. More fake news trend in social media. Other technologies like digital recorders, cameras, and so on are reliefs to the news division. I can now get BBC, CNN, VOA contents on the internet without listening to their radio. These stations do news update regularly. The old videotapes and audio cassette are bulky though, very durable archival materials.

In summary, all the respondents representing a majority of the selected sample stated that their staff members are very happy working with the new media technologies. Those respondents representing the nine stations disclosed some of the benefits of the new media technologies which distinguished it from the old technologies, especially ease of use, portability, fast delivery, interactivity, flexibility and multi-purpose. This apparently indicated a positive disposition towards using new media technologies in newsrooms in southeastern Nigeria though; the disposition level varies among respondents.

4.3.2 Analysis of Participant Observations

The observation method formed one of the mixed methods adopted in this work. It was applied to supply responses to research questions 1, 2, 3 and 4 by providing explanations to findings from the survey and IDI; and, equally presented a reliable image of the real state of South East newsroom practices in the 21st-century journalism. Nine newsrooms in the five states of South East were observed simultaneously with interview and survey during the observation periods. Throughout the observation processes, ethical guidelines were of paramount importance and a cause to be stuck to. The researcher ensured the willingness of each station to participate and ensured they were doing so on a voluntary basis. The researcher warranted voluntary participation by leaving each station to choose the convenient days for the direct observations. Some pictures (please see Appendix IV) were taken when necessary, to corroborate some of the reports in the observation diary. The observation, which lasted for three months in nine newsrooms in South East, indicated a lot of disparity in the use patterns and adoption of new media technologies in the 21st-century newsrooms. The nine stations observed in the five states of the South East, Nigeria are: Dream FM, Enugu; Hot FM, Owerri; Imo Broadcasting Corporation IBC, Owerri; Anambra Broadcasting Services ABS; Enugu State

Broadcasting Service ESBS; Madonna University Radio, Okija; Rhema FM, Aba; Ebonyi Broadcasting Corporation EBBC; and Broadcasting Corporation of Abia. Each station was allocated one week to capture the use patterns of new media technologies in the stations as earlier explained in chapter three.

An Observation Diary was opened in each station to record findings in line with the mapped out Observation Guide at critical areas of the newsrooms like the newsroom, news studio, editing room, news control room within the station's premises. At the newsrooms, attentions were paid to the availability of new media technologies; usage patterns of new media technologies; and how they were using them at the point of observation. At other relevant points in the stations, general observations were done with an extra emphasis on identifying existing broadcast technologies in each station and finding out their level of functionality at the point of observation. At the studios, the broadcast technologies were observed to discover whether the practitioners can even manipulate them. An executive summary is presented against each of the nine stations observed in line with the research questions. Below are the findings:

4.3.2.1 Dream FM, Enugu

Dream FM a private radio station, began its operations in 2012 at the summit of technological expansion. The station was observed for seven days starting from Wednesday 24 to Tuesday, May 30 from 9.30am to 4.30 pm each day. The broadcast technologies found in the station were all new and digital gadgets including a soundproof Lister generating set, and especially the digital transmitter which covers almost every state in Nigeria. Observation clearly showed that none of their media technologies were analogue, and the researcher attempted to look into the availability of old media technology, but none was found in the station. The station's newsroom was well air-conditioned and contained two LCD video and two radio sets; four PCs, two printers, and four laptops; internet services and DSTV; two digital ZOOM4 recorders; six desks and 12 chairs. Every technology in the newsroom and studio were new media technologies including a digital console, digital microphones, internet connectivity, audio CDs, computer editor, laptops, iPads, digital TV, and so forth. This clearly showed that Dream FM has predominantly new media technologies.

News production at Dream FM starts with the normal assignment of beats to the reporters. Some of them were in politics, sports, entertainment, education, social lifestyle, health and development beats. The reporters went out every day with their iPads, computers, laptops, and smartphones and came back around 11 am to file their stories. They remained at their desks and typeset their various stories which were sent in soft copies to the editor for checks. The contents were normally checked for legal and ethical infringement; as well as for conformity to editorial policies before the final submission to

the Head of News. If the story has an audio clip after editing, it is stored on a flash drive and sent to the console to be cued in during the newscast. This implied that new media technologies were used to a great extent in news production in this station.

The news production process adopted a similar pattern every day with a minor alteration in the amount of news collected each day. The use of new media technologies did not change at all as the reporters were found to have become routinized to using a particular technology for news gathering which they believed was convenient and easier. When reporters came back they had already typed their stories on their iPads and laptop as no typesetter was observed in the newsroom. Their audio contents are always saved on a flash drive or audio CDs while the typed stories are also saved in a flash and sent to the Manager News who also serves as the editor. Observation revealed that virtually all the reporters have their own digital recorder which they use alternately with the two recorders owned by the station. They always forward their reports to the editor via email with available internet connectivity in the station. This showed that Dream FM usage pattern of new media technologies is very steady and high.

Major sources of news at Dream FM were normal reportage, social media and DSTV channels. Observation showed that news contents were occasionally, derived from national stations like FRCN, Channel television, NTA, AIT, NAN; and international stations like CNN, BBC and, VOA. There was also constant monitoring of national dailies like Sun, Vanguard, Thursday, and Punch in addition to reports gotten daily from the beat reporters in this newsroom. Online pilot studies further indicated that Dream FM has online accounts in at least three common social media platforms used by Nigerians including two Facebook accounts at https://www.facebook.com/DreamFm925Enugu/ and at https://www.facebook.com/925dreamFm/; they stream live at tunein.com/radio/DREAM-925Fm-5268082/ and has a website at https;www.dream925Fm.net/. The station has a Twitter handle at https://twitter.com/dream925fm?lang=en with about 50.6K followers and is on Instagram at https://www.instagram.com/dream925fm/?hl=en with 4741 followers and 185 posts. On 30th May, one reporter was observed conducting the interview with Whatsapp. This was not observed in any other station in the South East. Observation showed that as she types in the questions on the chat, the interviewee will record a voice message as a response. Later she used Bluetooth device or Xender to transfer the audios to her laptop and saved the audio in a flash drive that was later included in the news update on IPOB sit at home for the fiftieth anniversary of the existence of Biafra. This showed that social media is among popular source of news for the station and one of the most popularly used new media technologies in the station.

In summary, observation done at Dream FM showed that only new media technologies were available and utilized in the station. The use of new media technologies was found to be to a very great extent in

the newsroom and the pattern of use of the new media technologies was observed to be very regular and high. Among the new media technologies in their station, social media was found to be most popularly used new media technology for sourcing of news material and dissemination of news.

4.3.2.2 Hot FM, Owerri

Hot FM Owerri is a privately owned, commercial radio situated at Plot 12 Public Building Layout off Onitsha Road, Musa Ya'ardua Drive, New Owerri Imo State. The station was observed from Thursday 23 November to Wednesday 29 November 2017 from 10 am to 4.30pm each day. The broadcast technologies found in the station were equally new and digital including a big soundproof power generating set and a digital transmitter which covers Anambra, Abia, Delta, Enugu, Elele and Imo. Observation showed that all their broadcast technologies were new media technologies as no analogue technology was found in the station and the newsroom. The newsroom was air conditioned with one radio set for monitoring, some print editions of national dailies, three desks, and seven chairs. Every technology in the newsroom and studio were digital new media technologies including a digital console, digital microphones, internet connectivity, audio DVDs and CDs, computer editor, laptops, iPads, digital video, and so on. This clearly proves that Hot FM predominantly has only new media technologies.

News production at Hot FM just like at Dream FM starts with the normal assignment of beats to the reporters covering politics, sports, amusement, instruction, social lifestyle, health, and development. The reporters went out every day with their iPads, laptops, and smartphones and come back around 12 am to file their stories. They always remained at their desks to typeset their various stories which were sent in soft copies to the editor for checks. Some of them use the digital Panasonic recorder to always transfer the audio content through USB to a laptop for editing and later forwarded to the editor for use in the daily bulletin. The contents were normally checked, for legal and ethical infringement as well as for conformity to editorial policies before the final submission to the Head of News. After cross-checking, the head of news normally forwards the final copy to the studio via iPad. Everything was done using the internet which was highly available in the station. This means that new media technologies were employed to a large extent in news production at this station.

News production activities in the station always follow a similar pattern every day with some minor alteration in the amount of news collected each day. The use of new media technologies did not alter at all as the reporters were found to have become accustomed to using a particular technology for news gathering which they agreed was faster, convenient and easier. Whenever they came back they will type their stories on their iPads or laptop as no typesetter was observed in the newsroom. The audio contents in the recorder are transferred by USB to laptops and saved in the flash drive or audio CDs;

while the typed reports on laptops are put on a flash drive and sent to the manager news who serves as the editor too. Observation revealed that some of the reporters also use their phones, alternatively with the two digital recorders owned by the station to cover news beats. This showed that Hot FM usage pattern of new media technologies is very steady and high as equally observed at Dream FM.

Major sources of news at Hot FM were through normal reportage, DSTV channels and correspondents in other states using a means called 'Interface'. Through this process, they corroborate news reports to get information about happenings in other states in the form of a small network. It was observed that Hot FM reporters at branch stations in Lagos, Abuja, Owerri, and Delta share news at the national level on a daily basis and this helps them to cover most parts of the country. Observation showed that news contents were equally gotten from national stations like FRCN, NTA, NAN, VON and international news organizations like the BBC, VOA, CNN, Reuters, and Aljazeera. They also do constant monitoring using smartphones, net or print editions of national dailies like Sun, Guardian, and Thursday. Yet, unlike Dream FM, the station does not use any news content from blogs, social media or user-generated content. Pilot studies also indicate that Hot FM has a functional website at http://www.hotfm.ng/owerri where they stream live; a Facebook account at www.facebook.com/HotFmOwerri34041; a Twitter handle at www.twitter, com/Hot.Fmowerri and a YouTube channel on www.hotFmRadio where they post online updates. This means that the station gathers and disseminates news mainly using selected new media technologies. In essence, social media were not found to be popularly used, although the bulk of the media practitioners were observed to have social media accounts, especially Facebook and WhatsApp.

In summary, observations that were done at Hot FM, Owerri showed that only new media technologies were available and utilized in the station as was equally observed at Dream FM, Enugu. The use of new media technologies was found to be to a very great extent in the newsroom and the pattern of use of the new media technologies was observed to be very regular. Among the new media technologies in this station, social media technologies were found to be the most unpopularly used technology: for sourcing of news material and dissemination of news despite full internet connectivity.

4.3.2.3 Imo Broadcasting Corporation (IBC) Owerri

IBC, Owerri is a state government station whose central objective is reporting the Imo State government and its activities. Observations that were done from Wednesday, February, 22 to Tuesday, February 28, 2017, showed that most of the technologies in the newsroom were new media technologies. The station has a digital radio transmitter, a digital television transmitter, one digital studio for radio and television news and programmes. This is because, the old television complex was abandoned following some issues that arose during digitalization of the station by the past

administration; thus, the second studio serving the television division was not usable. Thus, on that point, only one functional newsroom for radio and TV news production was observed at IBC. The newsroom contained one Sony digital recorder, ten tables, ten chairs, one digital television, two digital cameras, two ceiling fans and one analogue radio set used for station monitoring. The console, digital microphones and video and audio CDs were found in the news studio (used for radio and TV news and programmes) and control room. There was no internet connectivity and access to cable networks in the station (see Appendix IV, pix 10). The findings indicated that new media technologies were somehow predominantly available at IBC, Owerri.

A normal news-week usually begins with beat assignments to the reporters covering various beats such as health, sports, environment, politics, education, and lifestyles. The reporters interchanges roles as one reporter can go for an assignment with both camera and recorder to serve the radio and television units. There was also two OB van parked in front of the old television complex, but none was used during the period of observation. The Manager of News and Current Affairs units remarked that "the OB vans has been overtaken by smart device" and has gone obsolete. Some of the reporters went on assignments with the station vehicles as done at EBBC and came back to file their reports around 11am-12pm each day. The remainder of the staff at the stations did some monitoring of other stations to get more contents for news. When going on event reporting, the TV reporters were observed carrying a digital camera and a digital microphone. They usually came back with their actualities saved on audio CD and video CD. Observation showed that video and audio cassettes were no longer used in the station due to the type of technologies in use. This indicates that new media technologies are employed to a large extent in the news and current affairs department of IBC, Owerri.

Social media or internet contents were also not used as news sources at this station as observed in Hot FM though some of the staff members have smartphones which give them personal access to social media and the internet. A reporter indicated that "the station covers only government news and therefore, cannot use general contents found on Facebook". Pilot studies showed, however, that the station has social media accounts on Facebook and Twitter where they occasionally post updates. Online observation showed that the station has a website at www.ibc.ng/orientfm/; a Facebook account at https://www.facebook.com/IbcOrientFmTvOwerr*;* and streams live at tunein.com/radio/IBC-Orient-FM-s283481/; with a twitter handle at *https://twitter.com/ibcorientfmtv?lang=en*. The station occasionally post mostly programmes advert and few news items already broadcast on radio and television to their social media pages; especially popular stories though, this generates few online comments. Despite their online visibility, social media was not the most popularly used new media technologies for news production process in this station.

At the end of the daily news gathering, news production activities always commence from the newsroom down to the news control studio where the news editor takes over. At this stage, the reporters must have written their stories. It was noticed that some of them wrote out their news reports on paper and submitted to the station's typesetter who uses the PC to typeset the stories. This takes a little time as there were three PCs in the news division: one in the general newsroom and two in the news control studio. After that, the bulletin already compiled in one CD will be sent for editing and broadcast along with the audio or video attachments saved in audio and video CDs respectively. During the newscast, the audio or video is cued-in to the digital console. Observation showed that newscasters use a digital TelePrompTer which makes the news broadcast a novel experience in the station. This showed that the pattern of new media technology usage in the station was irregular and moderate as observed at ESBS and ABS.

The news crews met during the observation period were found to be very happy using the new technologies. One of them, a lady disclosed that seven years ago when she started working at the station every technology was analogue and she was always assigned to monitor Radio Nigeria network. She attested that it was so difficult working with old media technologies: “listening and dubbing; then transcribing and writing the news report.” For her, using new media technology was the best thing that happened to her and she is now enjoying her career. Another staff disclosed that he was even learning to manipulate the technology as he was not picked out during the retraining exercise on new media technologies. He expressed hope that it will get to his turn one day. This staff was using a cell phone that doesn’t offer internet connectivity. This indicated that there were positive dispositions among the staff towards using the new media technologies in the news production process in this station.

Observation also showed that the news staffs were happily doing their responsibilities under the new media dispensation. Some of them, however, played dual functions as news department staff and broadcast producers. One of them who normally read the Igbo news equally produces a programme on mixed language. She performs her duty without any of them interfering with the other and was observed to happy doing that. A discussion with the head of the programme revealed that the station swaps roles twice in a twelve month, which ensures that staffs became competent in every area of radio broadcasting. This finding showed that the staff members have positive dispositions towards the use of new media technologies in news production at the station.

In summary, at IBC, Owerri, the seven-day observation revealed that the station predominantly has new media technology. Despite the lack of internet connectivity and cable TV, new media technologies were employed to a large extent in this newsroom. An irregular pattern was also noticed

in the utilization of new media technology in news production; while new media gadgets like digital cameras, digital recorders, PCs, CDs, and smartphones were found to be most popularly used in the newsroom more than social media. Nevertheless, the extent of use of new media technologies in news production was irregular and poor when compared to what obtained at Dream FM and Hot FM; because most of the reporters at IBC still file in their news reports on paper to a typesetter.

4.3.2.4 Anambra Broadcasting Service (ABS)

Anambra Broadcasting Service is another state government-owned station observed in this study (see Appendix I). The station operates in a similar administrative structure like IBC and operates two radios and two televisions at Awka and Onitsha respectively under one central management structure. Newsroom observations were done at ABS, Awka between Wednesdays 8 to Tuesday 14 February 2017 showed that the station had adopted digital broadcasting to a large extent. The station has two digital transmitters- for radio and television; and two digital studios for radio and TV news and programmes. At observation time, the television section was not working as the television section was seriously enjoying refurbishment due to the digitalization of the television section of ABS. Observation showed that ABS are using YouTube and Facebook to post news and videos occasionally and this served as a makeshift video broadcasting platform for the station. Therefore, only one functional newsroom was available for radio and TV news production at ABS, Awka during the observation point. The newsroom contained digital recorders, digital camera, six tables, ten chairs, one digital television, three PCs, two laptops, one radio set, two ceiling fans. A digital console, digital microphones, video and audio CDs were seen in the news studio (used for radio and television news and programmes) and control room. The station has internet connectivity which will be switched on on-demand as well as access to a cable network. This showed that new media technologies are predominantly available at ABS, Awka.

News production at ABS begins with the daily assignment of beats to the reporters in areas of politics, sports, agriculture, gender, entertainment, education, social lifestyle, health, and development. The reporters went out every day and came back to file their reports between 10.30am to 1 pm. They would remain at their desks to write their reports and submit to the typesetter; while some normally submit their reports in soft copies to the editor for checks. The contents are normally checked, for legal and ethical infringement as well as for conformity to editorial policies before the final submission to the Head of News. In addition, if the story has audio or video clips after editing, it is stored on a flash drive and sent to the console to be cued in during the newscast. This indicated that new media technologies are employed to a large extent in news production at this station.

During the observation days, major sources of news at ABS were found to be through normal reportage, DSTV channels and use of correspondent reporters in other regions of the state. Observation equally showed that news contents were obtained from some national stations like FRCN, NTA, NAN, VON and international news organizations like the BBC, VOA, CNN, Reuters, and Aljazeera. The media practitioners were observed to be doing daily constant monitoring of national dailies like Sun, Guardian, Vanguard, and Thisday using smartphones, internet or print versions of newspapers. However, unlike IBC and Hot FM, the station uses news contents from social media after thorough verification just as was done at Dream FM. The station has also adopted streaming technologies as they stream live on their web site Channel URL http://www.absradiotv.com; ABS 88.5FM streams live with constant updates since July 21, 2015, offering the same broadcast version as done in their traditional radio. ABS Radio / TV also have a Facebook account at www.facebook.com/AbsRadioTv; a YouTube account at https://www.youtube.com/channel/Ucgm/BIR93arXW31mM_Ubuprg and a twitter handle at https://twitter.com/absradiotv. Their social media accounts were operated as links to their audience while the YouTube channel was used to rebroadcast most of the ABS Television programmes and films. This was necessitated by the temporary closure of the television station for some months as earlier mentioned. Because the station has innovated staff members, they resorted to broadcasting their television programmes on YouTube and Facebook and even other platforms for wider reach. ABS also broadcasts on Star Times channel 113. This clearly showed that ABS uses varieties of new media technologies.

The news production followed a similar pattern every day with some modification in the amount of news collected each day. The use of technologies did not change at all as the reporters were found to have become accustomed to using new media technology for news gathering and dissemination which they found to be convenient and easier. However, it was observed that the media practitioners were slowly manipulating the digital technologies, perhaps because; some of them were passing through a transitional period from analogue to digital. This made news production a bit slower unlike at Hot FM and Dream FM; because they still use typesetter and even hard copies of the newscast. This proved that ABS usage pattern of new media technologies is very irregular and moderate.

In summary, the seven days observation at ABS revealed that the station predominantly have new media technology in their news department and new media technologies were greatly utilized to a large extent in the newsroom for news gathering, processing, and production. An irregular pattern was observed in the use of new media technologies in news production and new media technologies like camera, recorder, PC, CDs, social media and smartphones were found to be more popularly used in the ABS newsroom. Nevertheless, the extent of use of new media technologies in news preparation was

moderate as also discovered at IBC because the reporters at ABS still file in their reports on paper to the typist.

4.3.2.5 Enugu State Broadcasting Service (ESBS)

Enugu State Broadcasting Service is a state government station whose central objective is reporting the Enugu State government and their actions. Observation done from Saturday 6 May to Thursday, May 12, 2017, showed that most of the technologies in the newsroom were new media technologies. The station has a digital radio transmitter, a digital television transmitter, two central functional newsrooms and two digital studios for radio and television news and programmes. The radio newsroom is located beside NTA, Enugu premises with an editor heading that unit; while the television newsroom is sited along the main ESBS premises opposite INEC, office, Independent layout, Enugu. However, observation showed that news production commences from the television site where the news director stays and after preparing bulletins for television; the radio version is prepared and sent down to the radio site for broadcast. This made the researcher to frequently stay in this central television newsroom to observe the newsroom activities. The newsrooms contained digital recorder, eight tables, twelve chairs, digital television, digital cameras, laptops, personal computers, scanners, photocopier, printers, ceiling fans and one analogue radio set used for station monitoring. The console, TelePrompTer, digital microphones and video and audio CDs, and DVDs were seen in the news studios and control rooms. There were no internet connectivity; and access to the cable network in this station. This indicated that some new media technologies are predominantly available at ESBS. Technologically, digital broadcasting facilities abound at ESBS and some of the staff members were observed to be compatible with manipulating the new media technologies. The old broadcast technologies were seen parked in an enclosed area of the station compound looking gigantic and heavy.

At ESBS, a normal news week begins with beat assignments to the reporters covering various beats like health, sports, environment, politics, education, and lifestyles. The reporters interchange roles as discovered at IBC where a reporter can go for an assignment with both camera and recorder. Some of the reporters went on assignments with the station vehicles as done at ABS, IBC, and EBBC and came back to file their reports around 11am-12pm each day. The rest of the staff at the stations did some monitoring of other stations like NTA, CNN, AIT, VON, and the BBC to obtain more contents for news. When going on event reporting, the reporters were observed carrying a digital camera and a digital microphone. They usually come back with their actualities saved on audio CD and video CD. Observation showed that video and audio cassettes were no longer used in the station due to the type of new technologies in use. This indicated that new media technologies are employed to a large extent in the news and current affairs department of ESBS, Enugu.

The news production process followed a similar pattern every day with minor alterations in the amount of news collected each day. The use of technologies did not also change at all as the reporters were found to have become habituated to using a particular new media technology for news gathering which they believe is convenient and easier. One reporter commented that "news production is faster now with digital technologies and even social." The practitioners were happy working with the new media technologies unlike in the days of the analogue and heavy facilities. However, observation showed that they still write their news report on papers and submit to the typesetter whenever they come back from coverage. Some of them, especially younger ones type their reports with their laptop and submit the CD to the typesetter for inclusion in the bulletin. The audio contents are always recorded on the flash drive or audio CDs and the typed stories are printed in hard copies and sent to the editor news. Observation revealed that almost all the reporters have smartphones, which they use in checking for news trends on social media. This assisted the station in researching news items and doing investigative journalism. They would also forward their reports to the editor via email with available personal internet connectivity to the station. This showed that ESBS usage pattern of new media technologies is very irregular and moderate.

Major sources of news at ESBS were through normal reportage and DSTV channels. Observation showed that news contents were equally gotten from national news organizations like FRCN, Channel television, NTA, AIT, VON, NAN and international stations like CNN, BBC and, VOA. At that station, constant monitoring of national dailies like Sun, Vanguard, Thursday, Guardian, and Telegraph was done in addition, to daily reports from the sectional correspondents at Nsukka, Agbani, and Ngwo. A pilot study supported that the station has three studios with digital facilities for digital transmission and broadcast. ETV Channel 50 and Sunrise FM Enugu have facebook accounts at https://www.facebook/page/Sunrise-fm ETVchanne50/328183787374307; http://www.facebook,com/pages/ESBSenugu/438769806180445; and https://www.facebook.com/Sunrisefm961.The FM has a Twitter handle at https://twitter.com/sunrisefm961; and a YouTube channel at https://www.youtube.com/channel/UCSggbu_6rLm2bbZshH4oFcQ. The social media platforms were mainly used for social and advertising purposes as observation showed that no news item was updated on the sites during the observation period. There is presently no *live* streaming by their radio station though, their social media page was used for audience interactions, and the station is digitalized. Since, the television broadcasts on StarTimes, it implies that there are some traces of new media technology use and even media convergence at ETV Channel 50 and Sunrise FM Enugu. This clearly showed that ESBS uses varieties of new media technologies in newsroom activities.

In summary, the seven days observation at ESBS, Enugu revealed that the station predominantly has new media technology. Despite the non-availability of internet connectivity, new media technologies were greatly used to a great extent in the newsrooms. An irregular pattern of use was observed in use of new media technology in news production; and new media technologies like camera, recorder, PC, CDs, and smartphones were found to be more popularly used in the newsroom more than social media. However, the extent of use of new media technologies in news preparation was lower in comparison to what obtained at Dream FM and Hot FM because; the reporters at ESBS still file in their reports on paper to the typesetter.

4.3.2.6 Madonna University Radio 93.3 FM

Madonna University radio 93.3FM was the first radio visited on Thursday 2 to Tuesday, February 7, 2017, and observations were done for seven days between 9 am- 6 pm daily. The station is owned by Very Rev. Fr. EMP Edeh and is one of oldest private radios in Nigeria though located within the Madonna university premises at the Okija Campus. It starts its daily operation by 6.30am to close by 8.10pm, offering listeners in Anambra, Asaba, and Imo, a variety of programmes. On a normal day, the station has two main news schedules: the Madonna main news at 3 pm and the Akuko Uwa at 5 pm. They always hook up to the Federal Radio Corporation of Nigeria twice every day for the FRCN Network News at 7 am and 4 pm in compliance with NBC directives. They broadcast news update 3 times daily.

Observations showed that the station which commenced operation in 2007 has gradually transited to digital broadcasting though, most of the analogue broadcast facilities were still found in the station (see Appendix IV, Pix 1-4). Two masts were observed on entering the station: the radio mast and Internet mast and one Mikano 1000KVA soundproof generating set as an alternative to EDDC power supply. The newsroom contained four tables and four chairs, two air conditioners, 2 laptops, 4 personal computers, one LCD television, internet connectivity, broadcast archival material; the news studio contains digital console, digital microphones, 2 laptops, CDs, some labelled Flash drives, etc. All the technologies in the news studio were digital. This suggests that new media is predominately used in the station.

The news production process always begins at 5.30am each day with the collection and sourcing of news material by the journalists on duty. The station has two correspondents at Onitsha who normally file in their reports via the email every day. Two other student-volunteer journalists cover the immediate Okija, Nnewi, Ihiala and Ihembosi communities and prepare their stories which they normally submit in soft copies with accompanying audio attachments on CDs. The reporters covering local beats use the station's only digital hand ZOOM5 recorder for interviews and recording of live

events. On one occasion (February 3, 2017) one reporter was forced to use his smartphone to cover an event in the school. The researcher queried this and was informed by the reporter that whenever the need arises, a reporter normally uses his phone to cover the event. For him, "it's more convenient than carrying the ZOOM H5 handy recorder and even more portable."

The ZOOM H5 (see Appendix IV, pix 16) hand recorder is a new digital technology with much functionality which has replaced the analogue audio recorder. The XY microphone of the ZOOM H5 can be swapped according to your need with another input device. This has two crossing directional microphones. The reporter noted that the recorder has provisions for SD cards (external memory). The two XY inbuilt microphones can be adjusted to suit the user in the following ways: Shock mount structure minimizes external vibration noise; the microphone can handle sound pressure input of up to 140 dBSPL, allowing it to capture sounds that previous recorders could not; and it has three-dimensional sound with natural depth and width. The H5 recorder serves as an editor and sound mixer as a result of the double features of having two recording modes called the multi-file and stereo file. The file types and formats of recordings differ according to the mode. Further editing can be achieved when the recorder is connected to a computer through a USB. By connecting to a computer, a journalist can check and copy data on the SD card. This implies that new media technologies are used to a great extent in the news department than old media technologies.

The station, however, sources news items from national stations (FRCN and NTA); news agencies and even the internet. It was further observed that the station also generates news contents from two main internet news sites: latestnigerianews.com and newspaperindex.com. The manager of the station emphasized that the two news sites were chosen based on the fact that they carry credible news and do objective reporting of events. Social media and user-generated contents are not accepted as news sources because they are not deemed as credible sources by the editor. Online pilot observation indicated that the station, however, tries to maintain a web visibility in other programme formats through social media networks at http:www.facebook.com/pages/MADONNA…okija…/130280990336122 which was powered by the producers of specific programmes (mainly volunteer students of the university). There was no live streaming of the radio online. This further suggested that social media was not the most popularly used new media technology in the news department of the station.

The news editing process starts even as the reporters were still on the field. Actually, when the reporters came back to the station, some of them have already typeset their stories using their laptops while some will submit to the typesetter for typing. The station has two laptops and four PCs in their newsroom. The typed bulletins were usually submitted to the desk editor for editing along with the

CDs or flash drive containing the audio contents. After editing for errors, legal and ethical entanglements, the bulletin will be arranged and taken to the news studio for broadcast at the appropriate news time. The station has only one studio for news and programmes. The audio contents were stored in flash drive ready to be cued-in in ascending order in the digital console during the broadcast. If there is a need for voice –over, the reporter stays behind to do that. However, on the second day of observation, one reporter was rushing to cover another beat at Nnewi Catholic Diocese, record his voice-over using the ZOOM5 recorder and saved on a flash drive. This processes, which were done using a laptop did not last more than one hour thirty minutes before the major news hour. Updates were broadcast from the studio for the daily news. The station prepares the Igbo version using the same approach, but another newscaster handles the news this time. This showed that there were constant use and irregular patterns of use of new media technologies in news preparation, editing, production, and newscast; which affects editorial policies in the station.

In summary, observation done at Madonna FM, Okija revealed that new media technology was the most predominant available and used technology in the station. In the newsroom, new media technologies were observed to be used to a great extent in news production and editing. The pattern of new media technology usage was observed to be moderate and irregular within the seven days of observation. In addition, social media was not the most popularly used new media technology in the newsroom as other digital devices were found to be mostly used.

4.3.2.7 Rhema Fm, Aba

Rhema FM owned by a Christian institution called Rhema University Aba started operation on March 1, 2016. The station is situated on the third floor of the academic complex of Rhema University Aba. The station was observed from Friday 17 to Thursday 23 November 2017 from 10 am to 4.30pm each day. The broadcast technologies found in the station were all new media technologies and digital including a digital transmitter which covers wide areas like Umuahia, Aba, Owerrinta, Imo and Abia states. The newsroom contained three tables and six chairs, two air conditioners, 2 laptops, one personal computer, one LCD television, internet connectivity; the news studio contains digital console, digital microphones, 2 laptops, one iPad, DVDs CDs, some labelled and flash drives. All the technologies in the news studio and newsroom were new media technologies (see Appendix IV, pix 14). This suggested that new media technologies were predominately available in the station.

The news production process begins at 5.30am each day with the collection and sourcing of news material by the journalists on duty. The station has two correspondents at Umuahia who normally file in their reports via the email every day; while two journalists cover the immediate Aba and Aba-Ngwa communities and prepare their stories which they equally submit in soft copies with accompanying

audio attachments. The reporters covering local beats use digital hand recorder for interviews and recording of live events. This shows that new media technologies are used to a great extent in the news production process.

The news production followed a similar pattern every day with minor modifications in the amount of news collected each day. The use of technologies did not change at all as the reporters were found to have become accustomed to using new media technology in the news production process. Observation showed that they typeset their report and submit as soft copies on CDs and flash drive whenever they come back from coverage; while the audio contents were recorded in the flash drive or audio CDs sent to the news editor. They also use digital recorders for interview and news reporting, which is highly USB compatible and makes for easier editing. Observation revealed that almost all the reporters have smartphones, which they use in checking for news trends on social media and internet. This showed a somehow regular pattern in the use of new media technology in this station unlike what obtains at Madonna FM but yet, does not reach up to the level of Dream FM and Hot FM.

Major sources of news for this newsroom included internet news sites of national dallies such as guardianng.com, thenationng.com, thesunnewspaperng.com, and reuters.co. Observations also revealed the constant monitoring of CNN, BBC, NTA, VON, FRCN and use of reporters, correspondents plus the social media. There was a high use of digital new media technologies comprising recorders, iPad, laptops, editing software, DVDs, CDs, and internet in the sourcing and production of news. Pilot studies showed that the new radio station uses only one social media platform, Facebook at https://www.facebook.com/rhema93.3fmaba/ where they post information concerning the station with a few updates on news and current affairs. The station does not stream *live* but is fully commercialized to serves the commercial city of Aba as an accessible advertising medium. However, this has not affected their news and current affairs section as the station still performs its social responsibility role to the society. This further showed that social media was not the popularly used new media technology at Rhema FM as observation showed that different digital hardware technologies were used in the station.

In summary, observations done at Rhema FM revealed that the young station predominantly has and uses only new media technology. In addition to the availability of internet connectivity and cable television, new media technologies were greatly used to a greater extent in the newsroom. A somehow regular pattern was observed in the use of new media technology in news production and new media technologies as the internet, social media, camera, recorder, iPad, laptops, CDs and smartphones were found to be more popularly used in the newsroom. However, the extent of use of new media technology in news preparation was higher in comparison to what obtained at Madonna FM, ESBS,

ABS, EBBC, BCA, and IBC because; the reporters at Rhema FM file in their report on soft copies to their editor.

4.3.2.8 Ebonyi Broadcasting Corporation (EBBC)

Ebonyi State Broadcasting Corporation newsroom was studied for a period of seven days between the hours of 8 am to 6.30pm on Wednesday, 31 May to Tuesday, June 6, 2017. The station was observed to be operating with an analogue transmitter and reports mainly the activities of the Ebonyi State government being a state government-owned station (see Appendix I). Both radio and television sections are located in one premise. The television station shares virtually everything with the FM including staffs and equipment. The newsroom played a dual role serving the radio and television stations at the same time, though the station has a separate news division for radio and TV operations. The newsroom contained four tables, eight chairs, one Pentium 5 computer, one analogue television set, one analogue radio set, one laser jet printing machine and a small shelve for archival news material. Some of the staffs were seen using smartphones while four of them were observed using ordinary mobile phones at the observation point. There was no internet access at the station unlike at Dream FM, Hot FM and Madonna FM where Wi-Fi and Internet connectivity was not found available. In the news director's office, an Etisalat modem was seen while he uses an old analogue television to monitor the station. The news department operates in a hierarchy and the Director of News and Current Affairs oversees the activities in the newsroom. The broadcast journalists employed as civil servants were assigned beats in line with the newsroom duty schedule on a weekly base, though; an emergency situation that warrants ad-hoc decisions might crop up from time to time. Some reporters were assigned to cover the government house and the state houses of assemblies. This showed that both old media technologies and new media technologies were used complementarily in this station.

The station still operates analogue broadcasting and prepares both audio and video version particularly the same time. The news was prepared in the central newsroom in both radio and television format. As a result of this arrangement, the researcher was compelled to study the news, activities of both station same time. Unlike the practice in Madonna radio, Salt FM news production activities centred on covering state activities and happenings in the state. The procedure is such that reporters usually go out to cover events and incidence within the Ebonyi environs and writes their stories which they might submit in CDs or paper with accompanying sound recording or television clips. Some of the radio units reporters go out with the Sony digital recorder while some were seen returning with the old analogue Sony recorder. This delays newsgathering at times and; on the fourth observation day, two reporters filed in their account without any actualities. When the researcher spoke with them, they disclosed that whenever the two recorders are not available, they can cover a story without audio. They disclosed that similar experiences occurred in the television units where the reporters share two

analogue cameras while the only digital one is used by the government house correspondents. Observation showed that most reporters write their news reports on pieces of paper which they all submit to the typesetter for typesetting on that single PC (see Appendix IV, pix 11). This wastes time and usually creates a queue up of papers on her desk as she typed the manuscript according to entries. This suggested that EBBC newsroom uses new media technologies to a greater extent in news production than old media technologies.

After typesetting and proofing by the reporter who stands aside as the typing was ongoing, the manuscript will be printed out and submitted to the editor, who will normally edit manually and give back to the typesetter for corrections and final print out (on radio and video format) for the newscast. Observation at the television/ radio studio showed that there was no TelePrompter as observed at IBC in the station. The console was not digital as in Madonna FM and some of the microphones were still analogue. This implied significantly, that there was an irregular pattern in the usage of media technologies in this newsroom.

The station equally, sources news contents from news outlets like NTA Abuja, FRCN, BBC and, CNN; internet sites like Sahara Reporters and naijanews.com; and newspapers like Guardian, Thursday and Sun newspapers. The station does not use any news content from the social media, though pilot online observation shows that they have a Facebook account at http://facebook.com/ebbcdigital/?ref-py_c where they occasionally post some updates on the station social activities (just as in public relations activities) and does not stream live. The editor revealed that even as the accepted news sites were deemed credible, the station has to double check their information before use in radio or television news. This implied the use of varieties of technologies, and social media was not the most popularly used new media platforms in this station. However, unlike the reporters at Madonna FM, the EBBC reporters usually go out on some beats with their official vehicles along with a cameraman if it was the television division. Some of the reporters of EBBC were older people as in Madonna Fm; about five of them were female; while Madonna FM does not have a female reporter.

In summary, observation done at EBBC for seven days revealed that the station practically uses both old and new media technologies in a complementary way in the newsroom. New media technologies were found to be utilized to a greater extent more old media technology in news production and there was an irregular pattern in the utilization of the two technology type in the newsroom. Among the new media technologies available in the station, digital devices such as recorder, camera, CD, laptop, and computers were found to be popularly used in the newsroom more than social media.

4.3.2.9 Broadcasting Corporation of Abia (BCA)

Broadcasting Corporation of Abia (BCA) located at Broadcasting House, Government Station Layout, PMB 7276, Umuahia, Abia State was visited and observed between 9 am and 6.30 pm from Wednesday 15 to Monday 21 February 2017. Unlike other stations observed, BCA has separate news managers for radio and television, though the stations are located in the same compound. BCA like EBBC is equally a state government-owned station that concentrated mainly on reporting the actions of the Abia state government (see Appendix I). The station was discovered to have two analogue transmitters for the radio and television stations respectively, with their two masts mounted inside the station compound. In the central newsroom, some reporters were seen writing their news accounts on paper every day. The central newsroom contained eight desks, ten chairs, two fans, one analogue television set, one analogue radio set, one PC and one printer. Observation proved that the studio (serving for radio and TV news and programmes) contains one mixer, two new air conditioners, one analogue console, two analogue amplifiers, four analogue microphones and no TelePrompter. This means that old media technologies were, somehow, predominantly available and used at BCA.

News production at BCA was done centrally and each department (radio and video) will subsequently edit the reports in the appropriate format for use in bulletins. Every week, reporters are assigned beats and each reporter files in their story around 4.30 for the major news at 5.30pm (radio) and 7 pm (television news). The reporters on beat come in ahead of time in the morning to sign out broadcast facilities from the technological unit. They may request for CDs, TV cameras, tape recorder. The TV unit has two analogue cameras which reporters usually use in covering beats. The two reporters are assigned to cover government house and one assigned to the house of assembly. The television reporters are usually accompanied by a cameraman and a driver on news coverage. Their camera was not digital but it has an inbuilt recorder; so it's was a bit more portable. It was always observed that their digital audio recorder was Panasonic and not ZOOM as found in Madonna Fm, and Dream FM, though similar to that of EBBC and IBC. On the third observation day, two reporters had a row on whose turn it was to use the digital recorder in the newsroom. Further investigation revealed that the new recorder came as a relief to the old analogue recorder which the station has been using, and then everybody wants to employ it. The digital recorder was borrowed at times by the programmes department who uses it for production. This suggested that old media technologies were used to a large extent in the production of news at BCA.

The reporters normally return back to the station around 11.30 am and 3.30 pm each day to write their news story. Since the newsroom was central, every reporter stays on his/her desk to write the news story. They were observed writing their news reports with pen and plain sheets; after manual proofreading, they will send the manuscript to the computer typesetter who begins to typeset in order

of first come-first serve. The television reporter heads to the editing suites for voice over and editing of the tapes as well as the radio audios. Thereafter, they will collect the typed manuscript and submit to their separate editors who would edit and return back to the typesetter for final correction; from there it will be sent to the newscaster who begins to rehearse since the studio does not have a TelePrompter. This means that there was a steady pattern in the use of new media technologies in the station.

The station generates most of their news content through monitoring of stations like NTA, BBC, FRCN, CNN, and NAN. Observation showed that social media contents were not used as news. Some of the reporters were seen using their smartphones for social media, especially Facebook and Whatsapp but their editorial policy was not in support of using the content. The pilot study showed that though the station still uses some analogue broadcast facilities without live streaming; they are making attempts to stay afloat in this epoch of new media technologies and might even become fully digitalized in the near future. BCA has a website at http:// www.bcanigeria.org/ where they do online publishing of daily news and current affairs broadcast. They also reach out to their audience on Facebook at https://www.facebook.com/page/BCA-881fm.../1483289695233660. The station BCA 88.1 FM/TV UHF47 does update almost on a daily basis on crucial news matters on Facebook where they have about 1,032 followers. Their Twitter handle is @Bca Umuahia with only 26 followers and few tweets; while the YouTube account has only six subscribers. This clearly showed that BCA is nonetheless at the incipient stage of new media technology use and further shows that social media was not the most popularly new media technology used for news production in the station.

In summary, observations carried out at BCA revealed that old media technologies were predominantly available and used in the station, It was discovered that in newsroom practice, old media technologies were used to a greater extent more the available new media technologies in the station. Even so, a regular pattern was noticed in the usage of both old and new media technologies in the newsroom and the most popularly used new media technologies were observed to be just camera, recorder, PC, and CDs. Social media use was not popular at all in news production.

4.4. Research Questions, Cross-Station Comparative Analysis and Discussion of Findings

Having presented all the findings from the three methodologies, this section attempted to review, compare and discuss the findings from the mixed methods across the six research questions as appropriate. The executive summaries and test of hypotheses were used at this point to bring together all the emerging themes in the findings in the course of the discussion against each of the research questions. The cross station analysis equally comes during the discussions. The following research

questions were formulated from the six key objectives to address the research problems raised in the study:

1. Which new media technology is predominately available in each broadcast newsroom in South East, Nigeria?
2. To what extent does each broadcast newsroom use new media technologies in their operations in South East Nigeria?
3. What is the differential in the usage pattern of new media technologies in selected newsrooms in South East, Nigeria?
4. Which is the most popularly used new media technology in broadcast newsrooms in South East Nigeria?
5. What factors affect the use of new media technologies among media practitioners in selected stations in South East, Nigeria?
6. What are the dispositions of media practitioners towards the use of new media technologies in newsrooms activities in South East, Nigeria?

4.4.1 Cross Analysis of Research Questions

This section focused on a cross-analysis of the six research questions based on the study findings and identifying possible correlations across the methods.

4.4.1.1 Research Question One: Which New Media Technology Is Predominately Available In Each Broadcast Newsroom In South East, Nigeria?

The first research question as expressed above was centred on finding out the new media technology that is usually available in most broadcast stations in South East, Nigeria. This analysis is important because there was an international directive for Digital Switch Over (DSO) of every broadcast station before June 17, 2017, in the world by the international telecommunication union and it is thus significant to recognize the degree of preparedness of broadcast stations in South East, Nigeria towards achieving this aim. In addition, new media technology usage has become so pervasive in different sectors of the Nigerian economy that it is apt to explore the condition of our newsrooms. The analysis of the findings in tables 8, 8b, 9 and 10 and the Sample T-Test on table 11, as well as the interview section 4.3.1 and observation reports on section 4.3.2 of the qualitative analysis, were the relevant data that explained this first research question.

The summary result on table 11 of Sample T-Test on the media technology that is most predominantly available in broadcast stations in South East, Nigeria showed that p is <0.05. From the result we saw that the media technology most predominantly available in broadcast stations in South East, Nigeria is significantly different as our p-value accounts 0.000 which is less than 0.05 with t_{cal} = 44.105. The

report on table11 showed that the media technology most predominantly available in broadcast stations in South East, Nigeria differs among broadcast stations and the most predominant type was reported to be new media technologies as the mean difference accounts 1.195 which was skewed towards digital broadcasting.

This confirmed the interview section 4.3.1 where responses in relation to the questions regarding the most commonly available media technologies showed that Dream FM, Hot FM, IBC, ABS, ESBS, Madonna FM and Rhema FM responded to having only new media technologies in their stations and equally agreed that only new media technologies were adopted in their newsrooms. Qualitative data showed that EBBC and BCA are using both new and old media technologies in their station's operations.

Yet the response from EBBC was an indication of the misconception among Nigerian media practitioners on whether a station is digital or analogue. In this instance, though M/SS/EBBC agreed that they use more of new media technologies for news production; he still mentioned the analogue television set they use in monitoring during the interview. This further refuted his claims and showed that using two or three types of new media technologies is not a pass mark for digitization. The station does not have a digital transmitter and even their newsroom arrangement was still old patterned with an analogue TV, old ceiling fan and only one old computer set; coupled with piles of works waiting to be typed by a typesetter. The respondent at BCA agreed that they use mostly old media technologies and little of new media technologies in news production, probably because the station just introduced digital new media technologies in broadcast operations and was still experimenting. Lievrouw &Livingstone (McQuail, 2010, p. 39) posits that new media is a union of three elements: "technological artefacts and devices; activities, practice and uses; and social arrangements and organizations that form around the devices and practices". Grounded in this assertion, stations like EBBC and BCA cannot be termed as being completely new media technology compliant. They belong to the technological stage called laggards in Rogers’s diffusion of innovation theory

Observation data revealed that Dream FM, Hot FM, IBC, ABS, ESBS, Madonna FM and Rhema FM were using new media technology most predominantly in their station while EEBC uses more new media technologies than old media technologies in their newsrooms. During the distribution of questionnaires, five newsroom staffs of EBBC could not distinguish whether the station was digital or still analogue. One of them asked a colleague: "are we analogue or digital?" while another had replied: "I think we should be digital, we even use computers to type our reports." This clearly showed that some of them do not understand the meaning of being digital or using the new media technologies. On the other hand, data from BCA revealed that old media technologies are predominantly used in the

station. Observations done among the nine stations in the qualitative research sums up that Dream FM and Hot were the only station that falls within McQuail (2010, p. 39) definition of new media or its compliance as none of their media technologies were produced earlier than 2011.

The pilot survey on the entire nine stations was able to prove that the selected South-East stations have significant differences regarding the most predominantly available new media technologies. ABS broadcast on Star Times and streams live; ESBS broadcast on Star Times; Dream FM streams live as well as Hot FM, and the remaining five stations studied have social media presence only. Cordeiro (2012, p. 495) pinpoints that streaming is the access technology, making radio broadcasting available via digital devices (computers, mobile phones, tablets). Live streaming is a new digital broadcasting that allows a radio station to produce multi contents and reach a wide audience. This confirms Vobic (2009, p. 8) position in his study of newsroom convergence in Slovenia that with the new media convergence, 21st-century newsrooms were "completely redesigned so that journalists can move freely between print, television, radio and online outlets and meet the demands of the new media environment". This, of course, might have informed the decisions of most stations that could not stream live to be posting their news content to the social media. This, however, is an indication that new media technology determines the newsroom tradition and, thereby, fosters content transformation. Pavlik and Bridges (2013) agree that the significance of this content transformation is that it has the potential to engage journalism audiences and the media. This makes the traditional media audiences to become disengaged from traditional news forms and turn to social media and mobile communications to get news and information about their world. This apparently was the reason for every station having an account on social media; even if it is to send cooperate pictures as observed on the BCA, EBBC, IBC, ESBS, Rhema FM and Madonna FM Facebook pages.

Middleberg and Ross (2001) also found a dominant use of new media technology in their chronicled study of journalists' use of the Internet for 10 years exploring the symbiotic relationship between the media and the Internet. Their findings indicate that journalists' use of the Internet has increased. In the United Kingdom, another study reported that all major national newspapers currently provide online versions of some type (Stanyer, 2001). This further resonates with Garrison, 2001 finding that since 1999 nearly 90 percent of U.S. daily newspapers were actively using new online technologies to look for articles and most of them blew their own news Web sites to reach new markets (Garrison, 2001).

In summation, the nine stations studied in the qualitative research do not have a different manager for the multimedia segment. Their structure was such that online and traditional were managed under one head. In Portugal, Cordeiro (2012, p. 295) notes that most radios have a management structure with departments in different business areas and activities like programming, music, presenters, sales,

marketing, and multimedia. The situation in Nigeria is entirely different as government and privately owned stations operate centralized management and this probably, might affect decision makings such as the purchase of new media technologies, usage of the technologies and even the extent of use.

4.4.1.2 Research Question Two: To What Extent Does Each Broadcast Newsroom Use New Media Technologies in Their Operations in South East Nigeria?

The second research question as stated above tried to measure the extent of use of the new media technologies in the respective stations. The assumptions as already identified from available literatures (Pavlik &Bridges, 2013, p. 5; Tabernero, 2009; Himelboim & McCreery 2012, p. 1) was that new media technologies should transform how journalists do their study, that includes how they collect, edit, and produce the news and has the potential to improve productivity, efficiency, and reception of information. So, being in the digital age, new media technologies should be employed to a great and significant extent in newsrooms; as we recall Kur &Essien (2014, p. 59) viewpoint that since new media has become a power to count within media communication considering its overwhelming force in the Nigerian society today, every journalist has to brace up to these challenges so as to survive the 21st century journalism trends. The psychoanalysis of the extent of use of new media technologies in newsrooms in tables 12 and 13 showed that 60.5% of the respondents agreed that old media technology were rarely used; 16.3% and 15.8% of the respondents agreed that old media technology was used sometimes and always respectively while 7.0% of the respondents noted that old media technology was never employed in their broadcast stations' newsrooms. Table 12 also reported that 78.6% of the respondents observed that new media technology were regularly used in their broadcast newsrooms while 8.4% of the respondents suggested that new media technology were never used in their broadcast station. This obviously shows that there was a disparity in the extent of new media technology use in South East, broadcast stations.

In addition, the result of Sample T-Test on table 14 on the extent to which broadcast stations in South East, Nigeria use new media technology in their operations was calculated to ($p<0.05$). This was because, the extent to which broadcast stations in South East, Nigeria use new media technology in their operations was significantly different as our p-value accounts 0.000 which was less than 0.05 with tcal = 19.739. This means that Ho was rejected and it was determined that there was a substantial divergence in the extent to which broadcast stations in South East, Nigeria use new media technology in their operations ($p<0.05$). This affirmed that the extent to which broadcast stations in South East, Nigeria use new media technology in their operations is significantly different among selected broadcast stations.

However, qualitative data from the interview in relation to research question two above showed that respondents from seven broadcast stations comprising of Dream FM, Hot FM, IBC, ABS, ESBS, Madonna FM and Rhema FM responded to using only new media technologies in their station. This agrees with the survey findings that a majority of respondents agreed to be using mostly new media technologies to a large extent. Some respondents who also agreed to using old media technology to some extent, falls in line with responses from EBBC and BCA who indicated that their stations use both new and old media technologies to some extent. The respondent from EBBC agreed that they use only new media technologies for news production, but the researcher observed an analogue television, which proved that old media technologies are equally used in the station. The respondent at BCA agreed that they use mostly old media and little of new media technologies in news production.

Interestingly, the observation was also able to show the reality on the ground concerning the extent of use of new media technology in the newsrooms. At Madonna FM and Rhema FM newsrooms, it was noted that new media technology such as digital: recorder (ZOOM5), mini DVD, flash drive, laptop, internet were observed to be utilized to a large extent in news collection, production, and editing. Dream FM and Hot FM were also discovered to be using only new media technologies to a very big extent for all the news production activities in their newsrooms. At IBC, ABS, and ESBS, observations revealed that despite the non-availability of internet connectivity in their newsrooms, new media technologies were greatly employed to a considerable extent in news production activities like newsgathering, interview, editing, and newscast. EBBC newsroom was found to be using new media technologies to some extent more than old media technologies in news gathering and typesetting of bulletins at the period of observation. This was a different model of the news business and a similar experience was witnessed at BCA where it was observed that old media technologies are utilized to a greater extent more the available new media technologies in the station for news collection, editing, broadcast. Also, the qualitative findings aimed to further build up the quantitative report that showed that the extent of use of new media technologies in the selected newsrooms differs significantly. The findings were, however, a deviation from the findings of Nyekwere (2009), Olley (2009) and Gurumnaan (2009) works that discovered that the internet was the most commonly used new media technology in Nigerian broadcast stations. Media practitioners in the selected station use digital hardware devices as well as the internet and social media, which they personally access on their mobile phones.

The implication probably showed dependency on traditional old media technology in few newsrooms and selective use of new media technology in most. The new generation FM stations were likely to be using new technologies as there is apparently, a phasing out of most old technologies in the market. But the older generation stations are prone to having mostly old technologies, considering that most of

them were established before 2006 which was before the introduction of new media technology in Nigeria.

4.4.1.3 Research Question Three: What is the Differential in the Usage Pattern of New Media Technologies in Selected Newsrooms in South East, Nigeria?

Data in tables 15 and 16, as well as observation reports from the five South East, states demonstrated that there are irregularities in the pattern of use of new media technologies in the selected newsrooms. This reflected the result of the Sample T-Test of table 17 concerning patterns of use of new media technology in selected newsrooms in South East, Nigeria which was ($p<0.05$). It was demonstrated that the patterns of use of new media technologies in selected newsrooms in South East, Nigeria was significantly different as our p-value accounted 0.000 which is less than 0.05 with tcal = 32.743. Out of the nine stations studied, results proved that three state-owned stations have regular patterns of new media technology use in newsrooms while two state-owned stations were found to be irregular using both old and new media technologies. This reflected the findings of Agbenson (2011), in his study of Ray power and FRCN which establishes that private stations were better placed than public stations in their use of new media technologies.

Observation reports showed that Dream FM and Hot FM were found to possess very regular usage patterns of new media. At every process of their news production, new media technology remains the only technology used while it was difficult to fully categorize the new media technology use patterns in stations like BCA, IBC, ESBS, ABS, Madonna FM, Rhema FM and EBBC due to its irregular nature. This reflected the findings in Ganiyu (2011), Nyekere (2009), Olley (2009), Gurumnaan (2009) works that confirmed that; though some of the Nigerian broadcast stations have begun enforcing the new media technologies in the running of their programmes, the usage patterns in newsrooms remain blurred.

4.4.1.4 Research Question Four: Which is the Most Popularly Used New Media Technology in Broadcast Newsrooms in South East Nigeria?

As established by literature and research (Baran, 2010; Deuze 2004; Erdal, 2011; Quinn, 2005; Cordeiro, 2012) new media technologies greatly enhance media practice when properly adopted by practitioners. The quantitative and qualitative data obtained in the field have established that most of the selected stations popularly use other digital hardware devices more than web-based technologies like social media, streaming technologies, and the net. This, probably, showed a disparity in the level of acceptance and adoption of new media technologies in South East newsroom practice. This was corroborated by the tables 18,19,20 and 21; the Sample T-Test results in table 22 which showed that p-value accounted 0.000 which is less than 0.05 with tcal = 16.179 and the interview result on table

4.3.1.2. The data generated, therefore, showed that the most popularly used new media technology in a broadcast newsroom in South East, Nigeria was significantly different.

The data also revealed that social media, digital broadcasting, and blogs have not gained popularity in the South East newsrooms. Blogs according to Hansen (2013, p. 679) "constituted a new platform where non-professional writers could (and sometimes did) reach a larger audience, thus thrusting themselves into an attention space previously monopolized by the analogue mass media." This apparently indicates that if professional journalists could employ the use of blogs and social media in sharing news content, there will be a better audience management that might even attract advertisers.

Hansen (2013, p. 679) further reveals that the traditional (pre-Internet) journalistic institutions, after initially either ignoring or deprecating the blogosphere, has been attempting to integrate Internet platforms into their standard operating processes. Observation from IBC, EBBC, BCA, and Hot FM revealed that the most popularly used new media technologies were camera, recorder, PC, laptops, DVDs, CDs and smartphones. At Madonna FM as well as at ESBS, Rhema FM, and ABS, similar observations were made though; social media and the internet were found to be utilized to some extent. It was only at Dream FM that social media use was found to be very proactive and most popularly used for sourcing of news material and dissemination of news. This further reflected findings from the works of Davenport, et al (2002) in America that almost all state dailies in 2000 used one or more computerized source in order to receive data for news stories and that most journalists used the Internet, social media, compact discs and public records in order to elicit data.

This further signifies that popular usage of social media in some stations has apparently relegated the traditional model of communication to the background and replaced it with the online model of communication. This phenomenon could have prompted media scholars to believe that the traditional model of media communication is no longer equal to represent online media; and merging the traditional media model and online communication model may suffice as an increasingly more accurate representation (Perry, 2002). The result of this merger, however, is called media convergence as earlier stated. This is evident as the responses of seven respondents representing IBC, ABS, ESBS, EBBC, Rhema FM, Madonna FM and BCA showed that available new media technologies were used in an irregular pattern in their newsrooms. Responses from BCA indicated that only a few new media technologies were available in their station. Only responses from Dream FM disclosed that social media were among the most popularly used new technology for news gathering and distribution in the station. This trend and patterns of new media technology usage clearly reflected Middleberg and Ross (2001) survey findings on journalists' use of the Internet for more than a decade that offered a comprehensive representation of media outlets to date which discovered that journalists are using the

Internet more than ever; and things are changing so rapidly that typical newsrooms have far more internet connections than phone lines.

Dream FM was, therefore, observed to be utilizing user-generated content as a news source after verification. Their use of blogs, social media, and UGC complementarily in news production was a strong indication that they clearly understood the potentials of social and new media technologies. This key understanding of social media is essentially derived from the user-generated content itself, which has obscured the distinction between consumers and marketers (Cooke and Buckley, 2007). This, probably, accounted for the heavy audience participation in Dream FM news and current affairs programme 'Political Voices.' Quantitative data from other stations have also shown little or no use of social media as news sources, which means that they were still hooked up to the traditional model of communication.

The opportunities offered by new media technologies are apparently immense as reflected in Westlund (2013) and Quinn (2009) works (in Drulă, 2014, p. 50) established that mobile media and news has gained more popularity, and journalistic practices constantly use this technology for news publication or for collecting information in recent years. This could likely explain the rush to send updates on social media by South East stations, as they believe that through social media commonly accessed on mobile technology in Nigeria, they might be able to garner more audiences. However, Erjavec and Polar Kovacic work (Drulă, 2014, p. 53) posit that the audiences have a participatory role in news production for mobile devices; that journalists create the structure and the content of the mobile news, but audience produces mobile news items as a 'denunciatory participatory practice'. This explains that the audience is more preoccupied to browse news, and then to react in a denunciative way. But making news items available online will help hold audience interest to participate in news gathering; maybe as eyewitnesses or as a feedback mechanism.

4.4.1.5 Research Question Five: What Factors Affect the Use of New Media Technologies Among Media Practitioners in Selected Stations in South East, Nigeria?

This research question five sought to find out the factors affecting the use of new media technologies among media practitioners in South East, Nigeria. Quantitative data on tables 23 and 24 plus qualitative data on section 4.3.1.3 were relevant in answering this question and established that a lot of diverse factors hinder the use of new media technologies in South East Nigeria. In addition, Sample T-Test result in table 25 showed that factors that affect media practitioners use of new media technology in broadcast stations in South East, Nigeria were significantly different as our p-value accounted 0.000 which is less than 0.05 with tcal = 24.714 and the null hypothesis was rejected. Similarly, data on section 4.3.1.3 showed that Interview responses to research question five indicated that lack of new

media technology skill, new media literacy, availability of the technologies and lack of finance were regarded by the eight respondents representing eight stations of IBC, EBBC, ABS, ESBS, Hot FM, Rhema FM, Madonna FM and BCA as major factors hindering the use of new media technologies in broadcast newsrooms in the South East.

Nevertheless, the respondent from Dream FM had a different opinion. F/SS/DFM indicated that lack of interest and passion for the job was hindrances to new media technology use in newsrooms. Likewise, the lack of interest was noted during the observation point in some of the newsrooms (especially in government stations) as some of the practitioners were feeling that as civil servants, they don't hold any stake and that they would invariably be paid salaries at the end of the day; not minding the implication on their overall productivity. Furthermore, their lack of interest and passion meant that they don't care about the quality of production, reliability, and commitment. This contradicts the expected role of the journalist to be socially responsible and a watchdog of the society (MacBride et al, 1981) and; equally affects broadcast operating strategy that deems employees to yield in their best as company stakeholders (Nwanji, 2009).

Literature and research have also evidenced the import of using most especially, new media technologies in the news business, but the extent of utilization and adoption always depend on enabling environment. Convenience and ease of use is one factor that influence media technology use. Most of the new media technologies are more portable and, therefore, more convenient to use compared with older mass media, (Chaffee & Metzger, 2001, p. 369). This was also affirmed by the responses of the nine respondents during the interview. Observation showed that smartphones are commonly used by the South East broadcast practitioners for internet access, to read the news report and check the latest update because it is more portable than carrying a laptop about. This corroborated Bosomworth's view (Drulă, 2014, p. 48) that more people increasingly use their mobile telephone or other mobile devices to access sites and to read the news.

The use of new media technologies in the South East region was hindered by many factors as shown in table 23 and section 4.2.1.3 but research shows that “a person’s decision to adopt or reject an innovation is often determined by the innovation itself” (Rogers, 2003). In addition, Pavlik& Bridges (2013, p. 11) posit that the rate of adoption of an innovation is influenced basically by at least five factors, including the perceived relative advantage of the innovation, compatibility, complexity or simplicity, trialability, and observability.

4.4.1.6 Research Question Six: What are the Dispositions of Media Practitioners Towards the Use of New Media Technologies in Newsrooms Activities in South East, Nigeria?

Research question six was used to find out the general disposition of South East broadcast practitioners to the use of new media technology was apt because practically, we are in a global village. The in-thing now is new media and it is expected that Nigeria broadcast practitioners should understand the place of new media technology in media development. Tables 26, 27 and section 4.3.1.4 provided quantitative and qualitative supports that there were divergent dispositions among the practitioners towards using new media technologies in South East Nigeria. The table 28 of the Sample T-Test shows that the disposition of broadcast practitioners towards the use of new technologies in South East, Nigeria was significantly different as our p-value accounted 0.000 which is less than 0.05 with tcal = 27.168. Information from the qualitative interview showed that eight of the respondents representing a majority of the sample expressed in different opinions that some members of their staffs are very happy working with the new media technologies. Observation showed that some respondent who could not manipulate the new media technologies feel frustrated especially in government stations. The respondents representing IBC, ESBS, ABS, Rhema FM, Hot FM, Dream FM, EBBC and Madonna FM attested to some benefits of the new media technologies which distinguished it from the old media technologies, especially: ease of use, portability, fast delivery, interactivity, flexibility and multi-purpose. The respondent from BCA could not fully indicate the worker's disposition as M/SS/BCA bitterly complained about the need for the provision of adequate new media technologies. This report showed that the disposition of broadcast practitioners towards the use of new media technologies in South East, Nigeria differs among broadcast stations.

4.5 Discussion of Findings

The data analyzed in this study was obtained from 215 media practitioner respondents spread across the nine broadcast stations in South East, Nigeria; including findings from the news and current affairs directors/managers of the nine stations as well as data obtained from participant observation in the same nine newsrooms of the five South East states. As stated earlier in the section for the statement of the research problem, the study was important at discovering the patterns and extent of use of new media technology and; in mapping out the technological state of each broadcast station in South East, Nigeria.

The discussion of new media technology use patterns in this work was hinged on two significant new media theories which are diffusion of innovation theory and technology acceptance model. These theories demonstrated the pattern of use and adoption of new media technologies which showed it aptness to the study. Available literature and empirical studies showed that new media technology use and adoption are still at the early point of acceptance in broadcast newsrooms in southeastern Nigeria.

4.5.1 Findings

The study employed more than one research design, therefore, the findings moved from quantitative to qualitative designs.

4.5.1.1 Quantitative Data Findings

1. The result has shown that about 60% of the respondents were male, while 40% of the respondents were female. This means that there were more of the male respondents than the female in broadcast newsrooms in South East stations.
2. We also found that majority of about 35.8% of the respondents were middle-aged, followed by younger 14.2% and the rest 40% are older people. The 79.5% majority aged 18- 55 years showed that media practitioners constituted more of matured strong adults who if they were new media compliant would be of high productivity and efficiency in the broadcast news delivery.
3. The survey likewise found a high level of availability of new media technologies 80.5%, while the old media technology (analogue) accounted for 19.5% in the stations. This means that new media technology is the most predominantly available media technology in most broadcast stations in the South East.
4. The findings further indicated that seven stations comprising of ESBS, ABS, IBC, Dream FM, Hot FM, Madonna FM and Rhema FM make use of new media technologies which are digital new media technology as the result generally accounted and 100% of the respondents from these stations also attested to this assertion.
5. Two stations BCA and EBBC made use of both new media technologies (digital) and old media technology (analogue) complementary. The BCA station uses more analogue technology (accounting 64.3% of the answers from the stations attested to this statement) than new media technology (accounting 35.7% of the respondents from this station attested to this statement). However, EBBC balanced the extent of usage of the two types of media technology with nearly 53.1% of the respondents from EBBC broadcasting station attesting to this statement and 46.9% of the 32 respondents from EBBC reported that analogue system was more applicable in their newsroom. This implied a differential in the new media technology use patterns in the south-east.
6. We likewise found that new media technology improves the news production process to a greater level as majority 79.1% of the respondents agreed to this; nonetheless, a minority 0.9% of the respondents suggested that their work performance has been enhanced by their selection of new media technology to an average extent.
7. New media technologies were found to be utilized to a larger extent in most broadcast stations in South East, Nigeria as 78.6% of the respondents suggested that new media technology was greatly used while majority 60.5% of the respondents suggested that old media technology was rarely utilized. As a measure of extent, 16.3% and 15.8% of the respondents suggested that old media

technology was used sometimes and always respectively; while a minimal 7.0% of the respondents suggested that old media technology was never utilized in their broadcast newsrooms. Also, a minimal 8.4% of the respondents indicated that new media technology was never used in their broadcast newsrooms.

8. New media technologies were found to be useful in newsrooms activities as 81.4% of the respondents were of the view that this technology has highly helped in news production, 9.8% of the respondents indicated that it has averagely helped in news production, only about 7% and 1.9% of the respondents indicated that new media technology have been poorly and unimpressive respectively in helping with the news production process.
9. There was an irregular usage pattern of new media technologies across the nine stations. The roles new media technologies are used for were considered and findings uncovered that a majority 40.9% of the respondents indicated that ease of use, interactivity, participation, multimedia, multiplatform and fluidity are the predominant qualities of new media technology; 17.7% of the respondents noted that multimedia/multiplatform was a dominant feature while fluidity had the least representation with 1.9%. Also, majority 89.3% of the respondents noted that new media technology influence editorial processes in their stations always; and 10.7% indicated that its influence on the editorial process was found to be minimal.
10. Dream FM and Hot FM were found to have only new media technologies in their newsrooms, though only Dream FM respondents agreed to a regular usage of social media for news gathering and dispersal.
11. The result of the most preferred new media technology showed some differentials in the usage patterns of new media technologies. A majority 85.1% of the responses indicated that new media technology was trending to a high extent while 14.9% of the respondents showed it was trending to an intermediate extent. The outcome showed that majority 34.2% of the respondents preferred Facebook, while 22.8% of the respondents use Facebook, Twitter, Whatsapp, YouTube and Instagram together. The least preferred social media platform was Instagram with 3.4% of the respondents indicating its usage in the newsroom. A majority 72.1 % indicated a personal usage of UGC as sources of news while 24.7 percent of the respondents disagreed; and a majority 84.2% of the respondents showed that they do not use blogs while 15.8% of the respondents showed that they use blogs in news production.
12. Financial constraint (20.5%) was found to be a major challenge to new media technology use in South East broadcast stations. Likewise, 30.2% of the respondents suggested that factors such as finance, interest, availability, literacy, internet access were the major hindrances; while 2.8% of the respondents indicated that accommodation space was the encumbrance to the use of new media technologies in broadcast stations in the South-East.

13. A majority of the respondents (60.1 %) exhibited a positive disposition towards using new media technologies in newsrooms while 20.0% of respondents strongly disagreed that there was a confident disposition and 5.8% of the respondents showed that they were not sure if they have a positive disposition or not. Also, a majority 69.3% agreed to be compatible with the usage of new technology; while 31 percent disagreed with this and 5.6 % were undecided.

4.5.1.2 Qualitative Data Findings

1. We found that there was a predominant and mixed use of new media technology in broadcast stations in Southeast, Nigeria.
2. BCA, Umuahia was found to be using old media technologies more than new media technologies in the news section.
3. It was revealed that six stations of Dream Fm, Hot FM, ABS, Madonna FM, Rhema FM, and ESBS, Enugu have more available new media technologies more than any of the other three stations.
4. Findings showed that four stations stream live on the internet. ABS, Anambra streams live; and offers digital TV broadcasting on Star Times Channel 113 along with ESBS; while Dream Fm and Hot FM, Owerri also stream live on the Internet.
5. We likewise found that seven stations comprising of IBC, Hot FM, Rhema FM, ABS, ESBS, Dream FM, and Madonna FM mostly used new media technologies in their newsrooms while BCA and EBBC used a combination of old and new media technologies.
6. Seven stations comprising of Dream FM, Hot FM, IBC, ABS, Madonna FM and Rhema FM have digital transmitters and studios at the observation point while two stations of EBBC and BCA still operates with analogue transmitters.
7. Six stations comprising ABS, ESBS, EBBC, Madonna FM, IBC, and BCA have irregular patterns in their utilization of new media technologies; while Dream FM, Rhema FM, and Hot FM had regular practices in the use of new media technology in their newsrooms.
8. Skill deficiency, new media literacy, internet access and inadequate finance were found to be major hindrances to the use of new media technologies in almost the entire nine selected stations.
9. Positive dispositions were found to be the general perceptions of the respondents in the majority of the stations, though few showed some uncertainty.
10. Digital recorders, digital cameras, CDs, laptops, smartphones, printers, DVDs, and computers and other digital hardware technologies were the most popularly used new media technologies in South East newsrooms.
11. Social media, blogs, user generated contents were proactively used as news sources in only one station, Dream FM, Enugu.

12. Internet connectivity was found lacking in the five governments broadcast stations of EBBC, IBC ABS, ESBS and BCA while the four privately owned stations: Dream FM, Hot FM, Rhema FM and Madonna FM had internet connectivity.

13. Pilot studies showed, however, that all the nine stations have active social media accounts.

A close assessment of the findings of the quantitative and qualitative data revealed significant levels of correlation between these data. In sum, the findings from the qualitative data supported and authenticated earlier findings from quantitative data almost entirely.

A critical analysis of the findings in this study points to the direction that new media technology use patterns in Nigeria were irregular and practitioners do not fully harness the potentials of the new media technologies especially web-based technologies such as social media and citizen reports in broadcast newsrooms. This was caused by a lot of militating factors which included financial issues; non-availability of technologies; inadequate internet connectivity; new media illiteracy; poor access to technology; and user indifference or lack of interest. These factors were discovered across the three methods in the triangulation process, especially among the government-owned stations.

As the Internet changes the face of communication, media practitioners are beginning to adopt a new way of packaging and disseminating news to the public. Though few practitioners in Nigeria have access to the Internet and most of them do that in their respective places of work (without personal internet access) because Internet connections were limited to senior people, especially managing editors and senior staff notwithstanding, they were not left out of the global village. The emergence and development of citizen journalism in the world today, especially with the trend of uploading current news, is an indication of prospects available in broadcast media reportage. But unfortunately, user generated contents, blog and social media were not generally accepted as a reliable source of news in most of the stations studied according to the findings.

This implied that Nigerian broadcast stations are in the early stage of the new media technology adoption in line with Roger's diffusion of innovation process. This was evident as the findings showed that the most popularly used new media technologies were mostly not web-based ones (digital hardware) like digital cameras, smartphones, printers, digital recorders, CDs, DVDs, computers, laptops, digital console and editors, digital transmitters and other digital broadcast technologies. These digital technologies and high-speed Internet access have empowered, particularly broadcast practitioners, to utilize such technology to be eyewitnesses to unfolding events and interest. This actually reinforces Lindsey Hilsum's (Lee, 2016, para2) viewpoint that

> Connectivity has had a significant impact: reshaping global communications and transcending national boundaries. The world is being remapped in terms of connections…;

> there are less than 500,000 kilometres of borders across the world, but more than one million kilometres of internet cables. However, technology can never replace a journalist's primary role as an eyewitness.

New media technology was also proven to be the most predominantly available technology found in the newsrooms as the observation was borne out by the survey findings to map out clearly the state of technologies in southeastern Nigeria newsrooms. The absence of analogue media technologies in the majority of the stations showed that media owners actually understood the significance of new media technologies in the 21-century journalism despite the challenges in its acceptance. Pavlik and Bridges (2013, p.5) mindsets that the new technological forces could alter how journalists and other media professionals do their work—that includes how they gather, edit, and produce the news and also the potential to improve productivity, efficiency, and access to information; transforms news and media organizations and business practices and models and; restructure the delivery of news which would greatly reduce the cost of delivering news, which ultimately change the news business model, captures the new media technology use benefits concisely.

The findings also indicated a diminished level of indifference among the media practitioner as the bulk of the respondents indicated a positive inclination toward the application of new media technology in their workplace. Perhaps, the perceived usefulness of new media technologies and its inherent potentials especially among the younger practitioners was a principal factor. In fact, during the survey, most of the practitioners appreciated the role of new media technologies in the area of news production and likened the new media technology gains to qualitative news reports they see on other online media organizations such as BBC, CNN, and other cable television news. Some practitioners were, however, lukewarm on revealing their true disposition towards the use of new media technologies in news media production. This was particularly perceptible in public stations where most respondents were indifferent, hesitant, and reluctant to comment on the technological application and on the level of advancement in the news production probably because they are afraid of losing their jobs or due to apparent apprehension from their boss.

Some of the practitioners even felt afraid to encourage interviews or fill the questionnaires. It was exclusively in the private stations, however, that the respondents opened up on the influence of new media technology. Most of them were happy to give out information because they were already using the digital new media technologies prior to the interview and felt they have benefited from it. This implied that there was a knowledge gap with regards to new media literacy and skill, particularly among practitioners in government stations who should have empowered the practitioners and boost their new media technology usage patterns and work performances. When this happens, their dispositions will change and they can then; appreciate the veritable role of new media technology in

the news business. This further aligns with Rogers (1995) and Li (2003) positions that technology ownership, adopters' characteristics, and innovation attributes, are the three sets of variables that make up the diffusion process; and each has enduring impacts on the adoption of new technologies. Along these assertions, the three instruments used for this study were most helpful in fully assessing the use patterns of new media technology in the newsrooms. In fact, the findings revealed that availability (technology ownership), militating factors, perceived usefulness (based on functions of technology), users dispositions (based on individual differences) were major determinants of the patterns of use of new media technologies in newsrooms in southeastern Nigeria.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This exploratory regional study of **New Media Use Patterns in Broadcast Newsrooms: A Study of Selected Stations in South East, Nigeria** has provoked a vortex of issues that were mainly documented in the literature on new media technologies. The results of the study would be a significant contribution to the very limited references on the use of new media technologies in newsroom practice specifically in the developing world, sub-Saharan Africa and Nigeria. The study employed the mixed method which comprises of survey research, in-depth interviews, and participant observation.

The respondents of the study were broadcast practitioner working in the nine selected broadcast stations in South East, Nigeria. The data were gathered through copies of questionnaire (see Appendix II) distributed to the news staff at the nine selected radio and TV stations. In-depth interviews were conducted with nine key news stakeholders in the nine newsrooms representing the five states in the South East, Nigeria using a tape recorder and an interview aide-memoire (see Appendix III). Participant observations were carried out in the nine selected stations for qualitative research and data were recorded in an observation diary for a period of three months with relevant photographs (see Appendix IV). SPSS package 19; Microsoft Excel 10 and Sample T-Test were used in analyzing the data and testing the hypotheses.

The diffusion of innovation and technology acceptance model provided the framework for the discourse in this study. These theories have tended to form a general part of past and ongoing studies on new media technology usage in broadcast media. Their relevance to this study was shown in the perceptive elucidation of the functions and uses of new media technologies in broadcast media as supported in chapter two. Other areas reviewed that were relevant to the study centred around the application of new media technologies in the broadcast newsroom and news media globally.

The findings from the study confirmed that 60 percent of the respondents were male, while 40 percent were female, therefore meaning a high margin in the figure of females in broadcast journalism. The demographic data further revealed that there were more respondents with less than 5 years of experience as it accounts 35.3% of the respondents, followed by respondents with 6-10 years and above experience accounting 31.2%. The survey respondents with 21-30 and more than 30 years of experience were the least respondents considered as they accounted 7.0% respectively. This means that most of the practitioners in South East newsrooms were between one to five years in practice which indicates that they joined the profession at the pinnacle of new media and technological

evolution. The findings from the different research instruments of the survey, in-depth interviews and participant observation used in the study as shown in chapter four showed a relationship with each other and tend to substantiate the result of the study.

As found in the study, the pattern and extent of use of new media technologies in newsrooms in South East, Nigeria is different and still developing. New media technology means the application of digital technologies to mass media, specifically in broadcast news production, distribution, storage, and use, but some stations presented a mixed model of usage of old and new media technology in the newsrooms. The mixed research method results also reaffirmed the challenges inherent in using new media technologies in newsrooms in emerging nations like Nigeria, where technology and basic infrastructures are in short supply.

5.2 Conclusion

The importance of new media technologies in news production was demonstrated in the findings for qualitative and quantitative methodologies. This probably reflected Di Rienzo, Das, Cort, and Burbridge (2007) view that access to digital information increases information flow in such a way that creates a more open and free society. Internet access was found to be not easily accessible, especially in state government stations probably as a form of gate-keeping. Although the 2011 Freedom of Information Act in Nigeria guarantees the free flow of information in government organizations, not providing free internet access to the government stations actually hinders the use of the new media technology in Nigeria, thereby disregarding the concept of freedom of the press. For Yin (2008), the Internet‘s potential to generate discussions on issues overlooked by the traditional media is producing a better informed, more vocal public and a more open society.

The technology acceptance model which was one of the theoretical frameworks for this study conceived by Davis et al (1989) suggests that perceived ease of use and perceived usefulness are beliefs about a new technology that influence an individual’s attitude toward the use of that technology. The theory has demonstrated sufficiency in developed countries as the reviewed studies suggested. Interestingly, this was found to be contrary in a developing country like Nigeria. The major findings and a definite contribution to knowledge was the minimal use of social media in the news production activities of the newsrooms in Nigeria despite its perceived usefulness and ease of use. The finding also showed that the pattern of use of new media technologies in newsrooms were found to be affected by factors like skills, media literacy, interest, finance, and availability of the technologies despite the perceived potentialities of the new media technologies. This further controverts the assumptions of this theory in Nigeria and was thus a contribution to knowledge.

The diffusion of innovations by Everett Roger was another theory used in this study. This leading theory for analyzing technological characteristics in relation to technological consumption is called diffusion of innovation theory (DIT) (Pavlik & Bridges, 2013, p. 11). Basically, this theory proposes that when a concept is perceived as new, an individual utilizes communication tactic within their social systems to arrive at a decision level of either acceptance or rejection of the invention. Pavlik & Bridges (2013, p. 11) notes that Rogers's research delineated five stages in the process of acceptance of an innovation which is: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation. Findings showed that most of the respondents have knowledge of the new media technology potentials; while some stations were persuaded to try the use of social media for instance, because others are doing the same. All the same, some stations had decided to opt for full adoption while others like EBBC and BCA are still experimenting. Just a few stations like ESBS, ABS, Hot FM and Dream FM could be said to have reached the full implementation and confirmation stage. Therefore, this disparity in usage pattern as shown in the findings has been able to demonstrate the viability of this theory in a developing country like Nigeria and is thus a contribution to knowledge.

However, Taplin (2005) believes that the fruition of a transition from the world of bandwidth scarcity to a new world of media abundance could not have happened without the seminal transition from analogue to digital (p. 241). Only two stations, Dream FM, Enugu and Hot FM, Owerri were found to be structurally and fully digitalized in terms of new media technology. Stations like ABS and ESBS were almost there, but their physical arrangements and operations are still within the tenet of the traditional model of old media communication. Three other stations: Rhema FM, Aba; Madonna FM, Okija; and IBC, Owerri was found to be in the first-half stage of digital broadcasting and new media technology adoption. However, BCA, Umuahia and EBBC, Ebonyi were still in the early stage of new media technology adoption as they use both old and new media technologies in newsroom operations.

Surprisingly, the above-discovered patterns of media technology use fall within the tenet of media convergence called technological convergence (Pavlik &McIntosh, 2013) which Okoro (2006) described as the continuous development in media technology aimed at bringing about a blend in technologies in the process of message delivery. Pavlik & McIntosh (2013, p. 12) had categorized the implications of media convergence on traditional media into eight areas of change: media organization changes; media type changes; media content changes; media use changes; media distribution changes; media audience changes; media profession changes and attitude and value changes (p. 12). They noted that many of the ramifications of the alterations taking place today through convergence will likely not be recognized or fully known for years to come, while others seem to suffer to have immediate and striking effects (p. 31). Apparently, most of these eight changes were discerned in some of the newsrooms studied while some had already witnessed just a few changes. Dream FM had

actually witnessed seven of these changes except that the media organization did not change. It is still a radio station with a physical location in Enugu despite streaming live. This generally connoted that Nigeria newsrooms are even slowly transiting into the age of media convergence, according to Pavlik & McIntosh (2013, p. 12).

Pavlik and McIntosh (2013) assume that digitization is transforming both how and when a media organization distributes their content. Digitization, as portrayed, is, therefore, vital to media development and democracy. Castells (2005) concludes; "this is why… governments are ambiguous vis-a-vis the uses of the Internet and new technologies. They praise their benefits, yet they fear to lose the control of information and communication in which power has always been rooted" (p.20). This further explains the low utilization and accessibility of new media technologies, especially the internet in some of the government-owned stations studied in Nigeria. Therefore, the findings of this survey resulted in the researcher's proposal of a new model of new media usage in Nigeria as indicated in fig. 2 below.

5.2.1 New Media Technology Reflective Use Model (NMTRUM)

This model proposes that the pattern of use of new media technologies among media practitioners is completely a reflection of the media sociology and ecological components of a particular media industry. The NMTRUM model originates from the research finding of this work; the concepts of media ecology postulated by Marshall McLuhan (1964); and Lee Loevinger’s Reflective-Projective Theory of broadcasting.

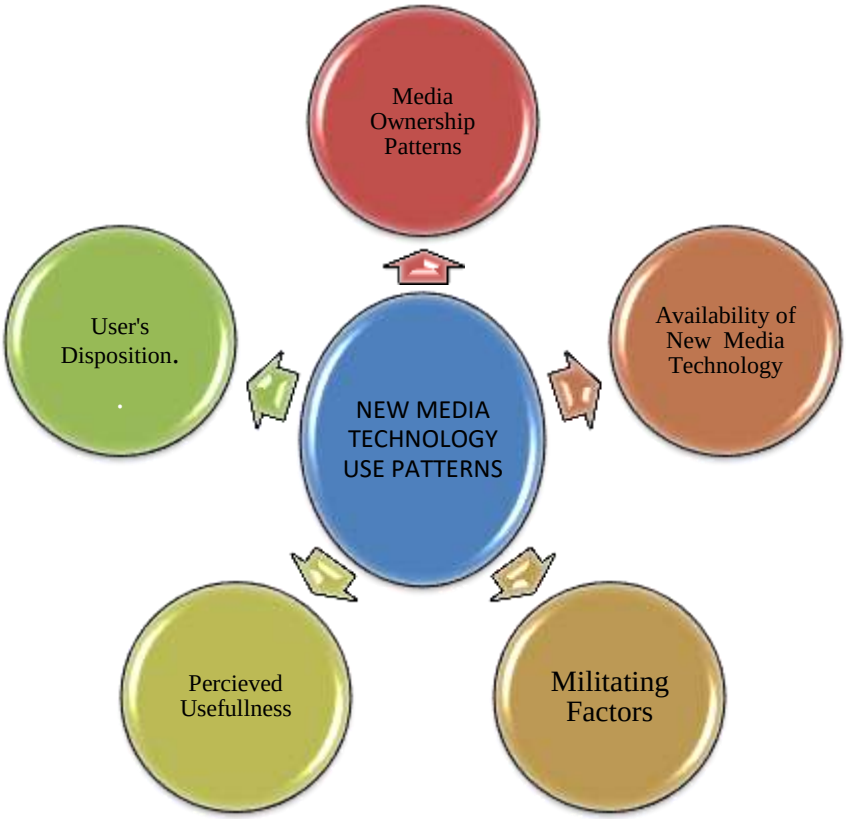

FIG. 2: Proposed New Media Technology Reflective Use Model (NMTRUM)

The proposed model suggests that availability (technology ownership), militating factors, perceived usefulness (based on functions of technology) and users dispositions (based on individual differences) are major determinants of the patterns of use of new media technologies in newsrooms in southeastern Nigeria. These determinants of new media technologies use patterns in broadcast stations are principally a mirror of the ownership pattern of the media organization. This implies that stations owned by the government, for instance, which are disposed to official bureaucracy, might be slow to adopt and use the new media technology. On the other hand, the private stations that are mostly owned by influential and wealthy people who want to remain the leader in every competition in the broadcast industry might be fast in upgrading and acquiring every new media technology and digital broadcast technology so as to remain on top. The findings of this study further buttressed this point as out of the nine selected stations in South East, Nigeria with five being owned by the government and four owned by private individuals; only two government stations have attained nearly -completed digital upgrade (ABS and ESBS) of new media technologies. The rest (EBBC, IBC, and BCA) are still combing the old and new media technologies in the news sections. In the private stations, however, two of them (Hot FM and Rhema FM) have almost new media technologies in their station; while Madonna FM though equipped with new media digital technologies, are still using some of the analogue ones in news production. Dream FM was the only station in southeastern Nigeria with 100% availability and use of new media technology. This reflected in the use patterns as well as the extent of use of the new media technology in Dream FM.

The proposed new media technology reflective use model believes that the Nigerian public will get much broadcasting service leading to the media and national development with the enabling new media technology. We can thus state that: (1) availability (technology ownership); militating factors; perceived usefulness (based on functions of technology); and users dispositions (based on individual differences) are major determinants of the patterns of use of new media technologies in newsrooms in southeastern Nigeria. (2) The major determinant, when provided by media ownership patterns and with user's positive disposition, determines the patterns and extent of use of new media technologies in broadcast newsrooms in Nigeria. (3) The patterns and extent of use of new media technologies determine the level of media and national development in a country, because; abundant information influences the lifeblood of every nation which led to development. It further implies that technology use is reflective of the sociocultural existence of an individual or organization. In newsrooms when there are high utility and availability of new media technologies, there will be a new culture, contrasting with the old newsroom culture (Vobic, 2009), and the practitioners have to work with the new culture for robust efficacy in the journalistic practice. This actually portrayed the observed data and findings of this study. Therefore, there is a need to give more empirical foundation to this model in other regions of the country.

5.3 Recommendations

Based on the findings of this study, the following recommendations are therefore put forward:

1. State governments should invest money in technology procurement to upgrade the analogue media technologies in state government radio and television stations in South East, Nigeria.
2. There is a need for a complete training of broadcast news department personnel who are still not compatible with using new media technology in the various stations in the country, especially in government stations.
3. There is also a need for a retraining workshop on the potentialities of new media technologies in news production in every station in the country.
4. Retraining should be performed in each department in every broadcast station on the characteristics and advantages of using social media and smartphones in several sections of the broadcast station.
5. There is also a need for the Nigeria Broadcasting Commission (NBC) to review the criteria for the grant of broadcast licenses to make compulsory the full technological digitization of the stations and provision of internet connectivity as a prerequisite.
6. The researchers suggest and demand the formation of a new independent body called the New Media Technology Compliance Practitioners NMTCP. Their duty should be a constant updating of registered media practitioners on the latest evolutions in new media technologies. The body shall

also monitor strict adherence and compliance to new media professional ethics and the Cyber Crime Act.

7. New media literacy should be included in communication schools, in universities, polytechnics, television college, and radio college curriculum contents. The inclusion of new media and social media technology literacy at every level of education will greatly enable the development of in-depth knowledge/ skill in the role and pragmatic application of new media technologies in the industry.
8. The government should also introduce health and life insurance policy for all media practitioners both contract and permanent employees as criteria for awarding licenses to new broadcast stations. The idea is to increase the degree of dedication and flair for media practice and to enhance more investigative reporting and the power of media practitioners to judiciously and responsibly act without fear or favour.

5.4 Suggestions for Future Research

Ethnographic research on broadcast newsroom with focus on the use of new media technologies is relatively new, especially with regards to the Nigerian experience and as such, insightful opportunities thrive for more research in this area. The future research could examine many different aspects of new media technology use patterns in newsrooms based on the findings of this study:

1. The study suggested that the Digital Switch Over (DSO) campaign be extended to state and private owned radios and televisions by the NBC. It is only DSO that will bring the reality of media convergence to the Nigerian broadcast station. Therefore, studies should be done to find out as well as establish the need for DSO as a development strategy; and find out the actual new media technological conditions in various stations in every region of the country.
2. The findings also confirmed that social media content was not popularly accepted as sources of news in most stations; as such, user-generated contents were shunned and considered unreliable. Further research could establish the impact of social media as a news source in an evolving new media technology audience era.
3. Some other areas that the survey did not focus on and where future research could be conducted are funding, availability and new media literacy. These three areas were major challenges identified as hindering the use of new media technologies in newsrooms in South East, Nigeria.
4. There should be a comparative study of the broadcast and print media use pattern of new media technologies in Nigeria to further put the issue of the global digital divide in media practice on the empirical radar.
5. The study could be replicated using state government owned and privately owned stations in other regions of the country to strengthen the findings. There is a need for a follow-up analysis in the next five years to determine changes that might have occurred in the selected stations.

6. There should be further research on the proposed ‘New Media Technology Reflective Use Model’ (NMTRUM) for empirical validation in other regions of Nigeria and use in new media research globally.

5.5 Limitations of the Study

The study is not without some limitations. The study of the new media technology use patterns in newsrooms concentrated on broadcast stations in South East, Nigeria; and should have included the federal government owned radio and TV stations in the South East and even stations in other regions. Another limitation is that the study should have extended its scope to include broadcast media Digital Switch Over which is currently a very important issue in the Nigerian broadcasting terrains.

Getting access for the study was almost difficult in some situations in both public and private stations and some respondents felt like doctoring their responses to suit their bosses. Lastly, some of the respondents, especially those from the public sector were afraid and cynical in answering questions on the questionnaire and during the observation points.

To mitigate some of the above limitations however, some of the respondents were contacted by some colleagues and social media contacts to reduce the fear of answering questions. The stays in the newsrooms during observation equally, helped to familiarize the researcher with the participants in addition to the introductory letter from school through the supervisor. Ethically, the participants were assured of confidentiality to further ensure their commitments and voluntary participation.

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APPENDIX I: PROFILE OF THE NINE SELECTED BROADCAST STATIONS

Enugu State Broadcasting Service

Enugu State Broadcasting Service, (ESBS) as we know today initially commenced operations on October 1, 1960, as Eastern Nigeria Broadcasting Corporation, (ENBC) serving as a regional radio. The station is a state-owned radio and TV station and is located at Independent Layout, Enugu. At the embryonic level, the radio system consisted of a single continuous studio with a medium wave and shortwave transmitter at the Hill Top, Ngwo and an FM link relay signal from the ACB building housing the television station to the transmitter. The ENBC Television had a double camera studio and control room, one Television room and one slide projector, with a 100-watt gates transmitter that could only cover Enugu capital territory on inception.

In 1980, Anambra Broadcasting Cooperation ABC II opened the Onitsha commercial station while the ABC TV channel-50 building was commissioned in 1981 and the station experienced "a heavy deal of metamorphosis" subsequently (ESBS publication, 1998, p. III). Chief Jim Nwobodo's administration saw the inclusion need of the television station started her first media transmission tour on the 1st October 1981 and officially transmitted statewide on the 27th of March 1982. The Navy Captain Alison Madueke's administration merged the Radio/TV Station into one autonomous transmitting station resulting to Anambra television (A.T.V) and Anambra Broadcasting Services (A.B.S) Enugu.

Thus, with the creation of Enugu State in 1994, ABS became Enugu State Broadcasting Service (E.S.B.S) for the radio and E.T.V. Channel 50 for television, having channels and frequencies, such as: Enugu Television (ETV), channel 50 UHF, ESBS Radio, AM, 585KHz in the medium Wave Band and ESBS Radio, Fm, 96.1 MHZ in the frequency modulated Band. The station's FM band is otherwise recognized as "Sunrise FM station" or "star station". Mr Chukwuma Ogbonna is the current Managing Director of ESBS.

Anambra Broadcasting Service (ABS)

Anambra Broadcasting Service also started its television and radio broadcasting on 1st of October 1960 in Enugu, the Eastern Nigeria capital under the then Eastern Nigeria Broadcasting Corporation. With the foundation of the new Anambra and Enugu State in 1991 and the disengagement of staff on the 16th of March 1992, the Anambra Broadcasting Service, Enugu gave birth to the Anambra Broadcasting Service, Awka, (ABS) and Enugu State Broadcasting Service Enugu (ESBS). The station has over the years undergone various developments and today takes in four working substations. The four substations are centrally controlled by one head: two radio FM stations and two television stations

located at Awka and Onitsha respectively as ABS FM 88.5 Awka, ABS TV Channel 24 Awka, ABS FM 90.7 Onitsha and ABS TV Channel 27 Onitsha. The entire station is managed by a general management structure, which has various managers of different sections working under it. ABS 88.5 FM, Awka won the South East Entertainment Award (SEA) as the Best Radio Station South East of the Niger in 2016. The television wing initially has a two-camera studio, control room, and a 100-watt television transmitter while the radio system contains one recording and a continuity studio with a medium and a shortwave transmitter.

Broadcasting Corporation of Abia (BCA)

BCA is located at Broadcasting House, Government Station Layout, PMB 7276, Umuahia, Abia State. With the station's slogan as "the station born to pass" the BCA uses two channels of communication, namely Radio and Television. The BCA radio, which is on 88.1FM came on air on 16th November 1992, while the television arm broadcasting on Channel 47 UHF band went on air on 14th August 1994.

The station is made up of different departments structured to ensure effectiveness under the headship of the director general, Mr Mike Alaukwu. The sections 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, developing as well as Finance and supplies. They are making efforts to remain afloat in the era of new media technologies as it has a web presence at www.bcanigeria.com.

Madonna University Radio 93.3 FM, Okija Anambra State.

Madonna FM is one of the second batches of campus radio stations given license by NBC after the promulgation of the 1993 NBC Act 38 (as amended) deregulating broadcasting in Nigeria. The station, which started in 2007 is located inside Madonna University Okija campus and is run for commercial purposes covering Anambra West, Onitsha, Ihiala, Owerri, and Asaba. The radio is owned by the founder of the school, Very Reverend Father Professor EMP Edeh and managed by Engr. Lucky Emesibe.

Dream FM

Dream 92.5 FM is one of the new private stations in the country today. It is recognized by the slogan "my dream, my reality". Started in 2012 by Senator Ike Ekweremadu, Dream FM has come to remain with its broad scope of programmes planned to edify, develop, inform as well as to entertain the south-east region. It has a number of young staff members who are poised to upgrade dynamism in the area of radio broadcasting. The station is managed by a managing director who is a veteran broadcaster, Mr

Antoni Cruiz and has various departments as found in the conventional station. With its level of dynamism, Dream FM is regarded by many as a replacement of Cosmo FM which ceased transmission in 2008. It is located at No. 1, Temple Avenue, G. R. A. Enugu.

Ebonyi State Broadcasting Service

Salt Television and Salt FM started in 2011 after the fusion of Ebonyi broadcasting service and Ebonyi Cable television. The Service which is owned by the Ebonyi state government is situated at Nkaliki Road behind Ebonyi state house of assembly complex. It houses both the radio and television outlets in one compound with one Director General, Engr. Timothy Nwachi. EBBC has two directorates for radio and television, though the staff runs a double purpose in line with job assignment especially in the news and programmes department.

Imo State Broadcasting Corporation

Orient FM/TV is the government radio and television services of Imo Broadcasting Corporation formally known as Imo Broadcasting Services that was instituted in 1976 by edict no. 15. This occurred as a consequence of the creation of Imo state from the Eastern central State. It was originally an Amplitude Modulation station, which transmitted on channel 721 kilohertz in the medium wave band until 1994 when the FM channel transmitting on 94.4 megahertz frequency modulated wave band was established. This FM channel is today known as Orient 94.4 FM Owerri and broadcasts on 30-kilowatt capacity transmitter acquired by former Governor Achike Udenwa.

Following the directive of the National Broadcasting Commission for all broadcast stations to be digitized, another former governor, Chief Ikedi Ohakim awarded a contract for the digitization of the station to the Harris / Pinnacle firm. This contributed to the initiation of a 30kw transmitter for radio, two 30 kilowatt transmitters for television, two Outside Broadcasting vans for radio and TV, modern Digital High Definition Cameras for outside and studio coverage and other studio coverage as good as other studio and allied equipment. He also constructed two buildings for the transmitters and engaged the services of media advisers to train the staff. Orient FM operates through: Administrative department, News and Current Affairs department, Programmes department, Commercial and Business Enterprise department, Finance and Technical Service department-which also manage various types of equipment thereby seeing to their services and maintenance. Orient FM is located at Chief Achike Udenwa Avenue, Aka Nchawa road, New Owerri.

Rhema FM, Aba

Rhema FM Aba is an educational private radio station owned by Rhema University Aba. It started full operation on March 1, 2016, and is situated at 153-155 Aba-Owerri Road, Aba . The station transmits

to Aba, Umuahia and its surroundings though it was initially started in the department of mass communication. Today, the radio that is managed by Mr Chijioke Nwogu has garnered audience interest around the Aba metropolis and even at Umuahia especially with regards to their news and exciting programmes and has thus become a house name in Abia state.

Hot FM, Owerri

Hot 99.5 FM, Owerri affiliated to Hot FM, Abuja is a private radio station owned and operated by Spectrum broadcasting Nigeria Limited. The station obtained a license in 2011 and broadcast a mixture of music and continuous news and current affairs programmes on the slogan "*Blazing the Trail*". The station streams live at http://www.hotfmnigeria.com and have Twitter, Facebook and Instagram account on social media. It operates a music-led format of broadcasting with interesting programmes such as People's assembly, Birthday show, P.M Magazine, Evening showers, Request show, linking Owerri and its environs to the entertainment master grid. It operates managerial sections like engineering department, which handles technical equipment like transmitter and generator; news section which sees to news reporting and presentation; programmes and production section which ensures to the efficacious and efficient production and presentation of programmes and marketing unit which sees to the various ways through which funds can be sourced from the post. Others are the maintenance department, traffic department, and accounts department. Hot FM radiates on 99.5 FM megahertz and is located at Umaru Musa Yar'Adua Drive off Onitsha road, Owerri, Imo State. The station is managed by Mr Celestine Okechukwu Ugwuanyi and covers Abia, Enugu, Imo, Port Harcourt, Anambra and Cross River state.

APPENDIX II: QUESTIONNAIRE FOR BROADCAST PRACTITIONERS

I am Doris Ngozi, Morah, a doctoral student in the Department of Mass Communication, Nnamdi Azikiwe University. I am conducting a study of new media technology use patterns of broadcast stations in South East Nigeria. Kindly reply to the following items to the best of your knowledge. Your responses shall be handled with extreme confidentiality. Thank You

Instruction: Kindly circle, tick or write the answers that apply to you**.**

1. **Sex: (a)** Male (b) Female
2. **Age: (a)**18-25 (b) 26-36 (c)36-45 (d) 46-55 (e) 56-65 (f) 66-75
3. **Years of Practice: (a)** <5 **(b)** 6-10 years **(c)**11-20 years **(d)**21-30 years **(e)** >30 years
4. **Educational level: (a)**FSLC (b) SSCE (c)OND/NCE (d) HND/BSC (e) PGD/MSC Others (specify)_____
5. **Rank: (a) Junior Rank (b) Mid Career (c) Senior Rank**
6. **Nationality: _____**
7. **Marital Status: (a) Married (b) Single (c) Divorced**
8. **Which type of broadcasting system is applicable to your station?**
   (a)Digital broadcasting (b) Analogue broadcasting
9. **Which technology are you conversant with?**
   (a)Old media technology (b) New media technology (c) Both of them
10. **Which is your most popular new media technology?**
    (a)Digital technologies (Hardwares gadgets) (b) Social Media (c) Internet (Online) based .
11. **Which media technology is more useful to your profession?**
    Old media technology (b) New media technology (c) not sure
12. **Which media technology has ease of use?**
    Old media technology (b) New media technology (c) not sure
13. **To what extent does your choice of technology help in improving your work performance?**
    (a)Small extent (b) Average Extent (c) Large Extent (d) No extent
14. **How does your choice of technology meet your expectation as a broadcaster?**
    Low Expectation (b) Average Expectation (c) Full Expectation (d) No impact
15. **How regular do you use the old media technologies?**
    (a)Always (b) Often (c) Sometimes (d) Rarely (e) Never
16. **How often do you use new media technologies?**
    Always (b) Often (c) Sometimes (d) Rarely (e) Never
17. **What are your choice technology used for in your station?**

News editing (b) News monitoring (c) News coverage (d) News broadcast (e) Current affairs programmes (f) Sourcing of news materials (g) Audience feedback mechanism (h) a-d (i).a-f (j) All of the above

18. Does your technology of choice help you to organize information contextually in your work place?

Yes (b) No (c) Not sure

19. How well does it help you organize contextually?

Highly (b) Averagely (c) Poorly(d) Unimpressively

20. **Does your preferred media technology help package information for news comprehensively?**

Agree (b) Strongly agree (c) Disagree (d) Strongly disagree (e) Not sure

21. How well does your preferred technology help in news production?

(a.)Highly (b) Averagely (c) Poorly (d) Unimpressively

22. You use media technologies for more of professional tasks than personal?

(a)Strongly agree (b) Agree (c) Strongly disagree (d) Disagree (e) Not sure

23. Which dominant feature does your selected media technology possess with regard to your duty?

Ease of use (b) Interactivity (c) Participatory (d) Multimedia/Multiplatform (e)Fluidity (f) All of the above (g)others_____

24. How much do you agree that the features of a technology determine your use of it?

Strongly agree (b) Agree (c) Strongly disagree (d) Disagree (e) Not sure

25. How often does the type of technology influence the editorial process in your work place?

Always (b) Often (c) Sometimes (d) Rarely (e) Never

26. How trendy is your selected technology?

Highly (b) Average (c)Poorly (d) Unimpressively

27. How do you rate the quality of your choice technology?

(a) Excellent (b) Very good (c) Good (d) Fair (e) Poor

28. Do you use social media for your professional work?

(a) Yes (b) No

29. Which social media is the most preferred for doing your work?

(a) Facebook (b) Twitter (c) Whatsapp (d) You Tube (e) Instagram (f) Skype (g) LinkedIn (h)Snapchat. (i) a-e (j) a-h (k) **Others (Mention) ……..**

30. If your answer to item no. 28 is positive, how often do you use the social media in your work?

Very often (b) Often (c) Scarcely (c) Rarely

31. What is your reason for always using this particular social media in doing these tasks?

_____

32. What do you use social media for in your station?

(a)To break a story (b) To direct readers to the website. (c)To see what issues are trending. (d)To find news sources (e) To communicate with followers (f) To promote a story (g)To promote the organization.(h)To get suggestions from followers (i)To read what people are saying about a story (j)To determine how popular a story is (k)To find different viewpoints (l) To get information from followers about events they witnessed (m)a-d (n)e-l (o) i-l (p) All of the above

33. Does your station use user generated content(UGC) as sources of news?

(a) Yes (b) No (c) Not sure

34. If yes, why does the station accept news reports from other persons other than its reporters?

a.To get detailed information (b) To beat deadline (c) To retain audience interest (d) To attract advertisers (e) a-c (f) a-b (g)All of the above

35. What is your perception on UGC?

Positive (b) Negative (c) Indifferent

36. Has your usage of UGC made the work any easier?

a. Yes (b) No (c) Not Sure

37. How often does your station accept user-generated content (UGC) from persons besides staff reporters?

Always (b) Often (c) Sometimes (d) Rarely (e) Never

38. What is the station's reason for not fully adopting user-generated contents (UGC)?

_____

39. Do you do blogging?

Yes (b) No

40. Do you use a personal blog as journalist to disseminate your stories?

Yes (b) No

41. If you use blog(s), how important is it in fostering good audience relations?

Very important (b) Important (c) Somewhat important (d) Not at all important

42. Has the blog ever yielded advertisements to your station?

Yes (b) No (c) No idea

43. If yes, how often does your blog attract advertisements?

Always (b) Often (c) Sometimes (d) Rarely (e) Never

44. What hindrances do you have on the use of technologies in your workplace?

Financial (b) Interest (c) Availability (d) Literacy (e) Internet Access (f) Space (g) a-d (h) d-e (i)All of the above

45. How did you acquire the technological skill you use in your work place?

Self trained (b) Company Staff development (c) Learning on the job

46. Why would you choose either the old or new technologies?

_____

47. How important would you then say your choice technology is to your profession?

(a) Very important (b) Important (c) Somewhat important (d) Not at all important

48. How much are you compatible with the new technologies?

Strongly agree (b) Agree (c) Strongly disagree (d) Disagree (e) Not sure

49. In your opinion, what do you think that there is a positive disposition by broadcast practitioners towards the use of new technology in professional practices?

Strongly agree (b) Agree (c) Strongly disagree (d) Disagree (e) Not sure

50. Before the adoption of the new technologies, were you having problems with using the old technologies?

Yes (b) No

51. Which factor/s poses a threat to the use of new media technology in Nigeria?

(a)Epileptic electricity supply (b) Poor media infrastructure.

(c) Skill acquisition (d) Lack of interest (e) Phobia to use technology

Financial constraints (g) Policy issues (h) Accessibility (i) Availability (j) All of the above

52. New technologies are better than the old technologies?

Strongly agree (b) Agree (c) Strongly disagree (d) Disagree (e) Not sure

53. The use of new technologies has made my work any easier?

Strongly agree (b) Agree (c) Strongly disagree (d) Disagree (e) Not sure

54. Kindly indicate some of the features of the new technologies that were not possible with the old technologies

(a)It saves time (b) it enables community (c) it enhances audience relations

(d)It is cost effective (e) It helps in easier content generation (f) It fosters development

(g)It is more cumbersome working it (h) I have issues mastering the skills (i) a-f (j) i-h

THANK YOU VERY MUCH FOR TAKING OUT TIME TO FILL OUT THIS QUESTIONNAIRE

APPENDIX III: QUESTIONS FOR THE IN-DEPTH INTERVIEW AIDE MEMOIRE FOR NEWS/CURRENT AFFAIRS DEPTMARTMENT HEADS/MANAGEMENT

I am a PhD student undertaking a study of broadcast newsrooms in Nigeria. I would like you to participate in this study on the use of new media technology in newsrooms. Kindly allow for the recording of this interview as well as jotting when necessary. You are free to choose whether or not to participate in this study and non-participation will have no impact on you. You can choose to answer of refuse to answer any question about which you are uncomfortable. All information given would be used strictly for academic purpose and your responses will be handled with utmost confidentiality.

1. Please as a senior staff member of the news section of this station, can you explain the technologies in use at this newsroom?
2. Which new media technology is predominately available in this newsroom?
3. Which new media technology is mostly used in this station today?
4. What is the usage pattern of new media technology in this newsroom?
5. What are the available sources of news materials to this station?
6. In your own thinking, which is the most popularly used new media technology in this newsroom?
7. Do you use social media as news sources?
8. Can you identify some factors affecting the use of new media technologies among media practitioners in this station?
9. What problem/s do you think affect practitioner's use of new media technologies in this station?
10. How do you explain the disposition of media practitioners towards the use of new media technologies in doing their work?
11. Is every media practitioner in the station new media compliant?
12. How do you describe news production and reporting in the digital age?

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS INTERVIEW

APPENDIX IV- PHOTOS FROM THE FIELD OBSERVATION

Broadcast Technologies Used In The Newsroom

PIX. 1 Analogue Transmitter

PIX. 2 Analogue Mixer

PIX. 3. Tuner, Amplifer & Playback (analogue)

PIX. 4 Voltage regulator (analogue)

PIX. 5 Analogue Microphone

PIX. 6 Analogue Radio Cassette Player

CROSS SECTIONS OF BROADCAST NEWSROOMS IN SOUTH EAST, NIGERIA

PIX. 7 Hot FM, Owerri, Newsroom

PIX 8 MADONNA FM, OKIJA NEWSROOM

PIX 9 DREAM FM, ENUGU NEWSROOM

PIX 10. IBC, OWERRI NEWSROOM

PIX 11. EBBC , Abakaliki Newsroom

CROSS SECTIONS OF NEWS STUDIO IN BROADCAST STATIONS IN SOUTH EAST NIGERIA

PIX 12. IBC, Owerri Television and Radio News Studio

PIX 13. DREAM FM News and Programmes Studio

PIX 14. Rhema FM, Aba News Studio

PIX 15. MADONNA FM OKIJA NEWS STUDIO

PIX 16 Digital Zoom5 Recorder

PIX. 17 Digital Hd Television And Dstv Decorder

PIX 18. Digital Technologies in Radio Studio

PIX 19. Old Ob Van in A Television Station

20.Digital Panasonic Recorder

PIX 21. Radio set in a radio station

PIX 22. Digital Studio Camera

PIX 23. Digital AudioTransmitter

PIX 24. ANALOGUE NEWSROOM ARCHIVE

PIX 25. Analogue audio recorder

PIX 26. Analogue audio cassette tape