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EVALUATION OF TERRESTRIAL BROADCASTING MEDIA IN NIGERIA

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ABSTRACT

Terrestrial broadcasting remains a critical component of Nigeria's media landscape, serving as a primary source of information, education, and entertainment. This study evaluates the impact of terrestrial broadcasting media in Nigeria, focusing on its reach, effectiveness, and challenges in the digital era. Using a mixed-methods approach, data were collected from broadcasters, policymakers, and audience members through surveys and interviews. The study examines the role of terrestrial media in fostering national development, enhancing public communication, and preserving cultural identity amid growing competition from digital platforms. Findings indicate that while terrestrial broadcasting remains influential, issues such as inadequate infrastructure, regulatory constraints, and the slow adoption of digital technologies hinder its full potential. The study recommends policy reforms, improved funding, and technological upgrades to enhance the efficiency and sustainability of Nigeria's terrestrial broadcasting sector. This research contributes to media and communication studies by providing insights into the evolving role of traditional broadcasting in a rapidly changing digital environment.

Keywords: Terrestrial broadcasting, media impact, Nigeria, digital transition, communication, policy reform.

Introduction

The 21st century marked a global technological breakthrough, heralding the convergence of ICT tools that digitalized various aspects of life. This era transformed human communication by uniting technological platforms into a digital format, revolutionizing how information is produced and disseminated (Ogunleye & Ajayi, 2023). Communication methods evolved from primitive systems to mainstream analogue media and, ultimately, to the dominance of terrestrial broadcasting, reshaping interactions across borders (Adeniyi & Oladele, 2023).

Terrestrial broadcasting, defined as the digitization of broadcasting processes, introduced improved transmission quality, lower maintenance costs, and enhanced viewing experiences (Okoro & Oni, 2022). Recognizing these benefits, the International Telecommunication Union (ITU) mandated a global switch from analogue to digital broadcasting, with Nigeria committing to this transition in 2009. Despite delays, this shift

aligns Nigeria with global trends, transforming its media landscape and ensuring technological integration in broadcasting operations (Musa, 2023).

Background of the Study

The evolution of terrestrial broadcasting media in Nigeria has been significantly shaped by technological advancements and regulatory policies. Initially, Nigeria's broadcasting industry relied on analogue transmission, which posed challenges such as limited coverage, poor signal quality, and inefficient frequency utilization (Adeniyi & Oladele, 2023; Akintoye, 2022). With the advent of digital terrestrial television (DTT), the country embarked on a transition to improve broadcasting efficiency, expand audience reach, and enhance content delivery. However, this transition has been fraught with infrastructural, economic, and policy-related hurdles (Akinbolati & Ajewole, 2020; Ndubuisi & Obi, 2022). Despite these challenges, the Nigerian government and media stakeholders continue to explore ways to optimize the effectiveness of terrestrial broadcasting in the digital era.

The impact of terrestrial broadcasting media in Nigeria extends beyond entertainment, serving as a critical tool for information dissemination, education, and national development. According to Eze and Nwankwo (2023), the migration to digital broadcasting has improved signal clarity and increased the number of available channels, thus fostering media diversity. However, issues such as high operational costs, regulatory bottlenecks, and inadequate technical expertise persist, affecting the full realization of DTT benefits (Okeke, 2020; Obi & Emeka, 2021). Additionally, disparities in digital penetration between urban and rural areas continue to limit access to terrestrial broadcasting services, raising concerns about the inclusivity of Nigeria's media landscape (Musa, 2023; Nwachukwu & Akpan, 2022).

Evaluating the performance and challenges of terrestrial broadcasting in Nigeria is crucial for informing policy decisions and technological innovations. Scholars such as Ocholi (2009) and Oyebanji and Obinna (2022) emphasize the need for strategic interventions to ensure a seamless transition to digital broadcasting, including investments in infrastructure, public awareness campaigns, and regulatory reforms. As Nigeria continues to adapt to the digital broadcasting era, assessing the impact of terrestrial media will provide valuable insights into its effectiveness in meeting the country's communication needs and contributing to socio-economic development.

Statement of the Problem

The transition from analogue to digital terrestrial broadcasting in Nigeria represents a significant policy and technological shift aimed at enhancing transmission quality, content diversity, and market competitiveness (Adeniyi & Oladele, 2023). However, despite these efforts, challenges such as outdated infrastructure, insufficient investment in digital transmission technologies, and inconsistent regulatory frameworks continue to hinder the full realization of digital migration benefits (Akinbolati & Ajewole, 2020; Ndubuisi &

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Obi, 2022). A major concern is the uneven digital penetration between urban and rural areas, leading to disparities in media access and information dissemination (Musa, 2023; Nwachukwu & Akpan, 2022). Many regional television stations, including those in Asaba, struggle with limited signal coverage, poor content variety, and reduced audience engagement, which negatively impact their economic viability and social influence (Akinbolati, Akinsanmi, & Ekundayo, 2022). Additionally, inefficiencies in digital adoption have hindered the growth of Nigeria's television advertising market, resulting in substantial revenue losses (Nwachukwu & Emeka, 2023).

Comparative studies, such as the UK's successful digital transition, emphasize the importance of transparency, investment, and consumer-driven programming in enhancing broadcasting efficiency and market growth (Okoye & Akinyemi, 2023). However, the extent to which Nigeria's terrestrial television sector—particularly in regions like Asaba—has achieved similar socio-economic and political impacts remains unclear. This study aims to bridge this knowledge gap by evaluating the effectiveness of terrestrial broadcasting media in Asaba, with a focus on its reach, content quality, economic sustainability, and audience influence.

Objectives of the Study

The main objective of this study is to evaluate the socio-political, economic, and technological impact of terrestrial broadcasting media in Nigeria, with a focus on TV stations in Asaba, Delta State. Specifically, the study aims:

1. to assess how terrestrial television stations influence public discourse, economic sustainability, and technological advancements.
2. identifying the key operational challenges affecting their effectiveness.

Research Questions

1. How do terrestrial television stations influence public discourse, economic sustainability, and technological advancements?
2. What are the key operational challenges affecting the effectiveness of terrestrial television stations?

Significance of the Study

This study examines how viewers in Asaba, Delta State, perceive the operations of NTA and DBS following the digital switchover. Understanding public perceptions will shed light on the impact of terrestrial TV broadcasting and inform necessary operational adjustments for mutual benefits between operators and viewers. The findings will guide TV stations on optimizing their services and highlight the economic opportunities of terrestrial TV for broadcasters and investors. Additionally, this study will provide valuable reference material for future researchers, enriching literature on terrestrial broadcasting, broadcast communication, and media digitization in Nigeria.

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Scope of the Study

This study focuses on terrestrial TV stations in Asaba, Delta State, analyzing their ownership, programming, reach, and audience demographics. It examines their socio-political influence, including contributions to public opinion, civic engagement, and democratic participation. The economic impact, such as advertising revenue, job creation, and local industry growth, is also assessed. Viewer perceptions and experiences will be explored through surveys and interviews to gauge engagement and content preferences. Additionally, the study reviews regulatory frameworks governing terrestrial TV in Nigeria and compares these with international best practices to provide insights and recommendations for improving terrestrial media operations in Asaba.

Conceptual Review

Terrestrial TV Broadcasting

Terrestrial television, or over-the-air broadcasting, transmits signals via radio waves from a station's terrestrial transmitter to receivers equipped with antennas. This digital format offers higher-quality video and audio than analogue TV, eliminating noise and enhancing the viewer experience (Robinson, 2004). Digital broadcasting improves sound quality, eliminates static, and enables multicasting, broadcasting multiple high-quality channels per frequency (Okpanachi, 2008). High-definition TV (HDTV) and standard digital TV formats exemplify these advancements, offering clearer visuals, better sound, and multiple programming options (Baran, 2010).

Digital broadcasting also improves spectrum efficiency, reduces energy usage, and delivers superior content quality (Plum, 2014). Necessary equipment includes digital cameras, mixers, transmitters, and receivers (Inaba & Kolia, 2016). The digital transition began globally in 1998, with Nigeria initiating its process in 2007, aiming for improved broadcasting quality and expanded channel options (Ocholi, 2009). While deadlines set by the International Telecommunication Union (ITU) were pivotal, achieving full digital adoption promises better audience experiences and advanced broadcasting capabilities (Jijiwa, 2019).

Evolution of Digital Terrestrial Broadcasting in Nigeria

At the 2004 ITU conference in Senegal and the 2006 conference in Geneva, global consensus was reached to transition to digital broadcasting by 2015. Nigeria established a committee in 2009 to initiate the process, leading to equipment upgrades at NTA, funded by the federal government (Dunu & Ukwueze, 2009). Voice of Nigeria (VON), AIT, and FRCN began adopting digital transmission (Jijiwa, 2010). By 2015, Nigeria was actively transitioning, with a pilot phase launched in 2016. The ATSC standards, including ATSC Mobile, further advanced multimedia service delivery for fixed, handheld, and vehicular receivers, enhancing Nigeria's digital broadcasting landscape (Aginam, 2017).

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Digital Terrestrial Television Operations in Nigeria: A Technical Review

Digital terrestrial television (DTTV) encompasses the technical processes supporting all-digital terrestrial sound and TV broadcasting (Aginam, 2017). Unlike analog systems, DTTV employs coaxial, fiber optic, or microwave links, providing superior picture and sound quality with minimal interference (Dyikuk & Chinda, 2017). It also offers more channels, interactive services, and internet integration. Initiated by the ITU's recommendation for digital migration, DTTV enhances spectrum efficiency, freeing UHF bands for other services while maintaining high-quality transmissions (Akinsanmi, 2017).

Despite benefits like improved spectrum use, better audio-visual resolution, and reduced energy costs, adoption in Nigeria remains gradual due to legacy analog systems and market uncertainties. Technological advancements, such as precise path loss estimation and optimal transmitter placements, are essential for efficient DTTV deployment (Akinbolati & Ajewole, 2020). Signals travel via space waves influenced by terrain and atmospheric conditions, combining direct, reflected, and diffracted waves (Akinbolati, Akinsanmi, & Ekundayo, 2022).

Globally, DTTV has evolved significantly since its proposal by the General Instrument Corporation in 1990. The EU underscores its importance, advocating for policies fostering openness, interoperability, and competition (Commission of the European Communities, 2002). With continued efforts, DTTV promises greater societal and technological benefits (McKinsey & Company, 2020).

Gains of Digital Terrestrial Broadcasting

Digital terrestrial broadcasting offers substantial benefits for audiences, broadcasters, content providers, and regulators. These advantages span program content, media convergence, quality signals, and increased channels. Below are the key gains:

National Interest: Digitization enables more efficient spectrum use, freeing up bandwidth for other services. This aligns with global trends, such as the U.S. Congress's auctioning of spectrum for revenue generation (Akinbolati & Akinseye, 2023). For Nigeria, it implies more spectrum availability for radio and TV stations (Uzor, 2008). High-definition broadcasting, while attractive, risks losing audiences to platforms like cable and internet unless complemented by diverse programming (Baran, 2010).

Viewers' Interest: Digital broadcasting enhances viewing experiences with clearer pictures and richer sound quality. It also offers multiple channels from a single station, improving programming variety and audience gratification (Bunshak, 2006; Rodman, 2006). Media convergence allows viewers to integrate TV with telephones, computers, and other devices, increasing interactivity and convenience (Duke, 2001).

Broadcasters' Interest: Broadcasters benefit from cost-effective operations, including multiplexing and reduced equipment needs. Digitalization also fosters healthy competition, streamlines workforce requirements, and facilitates program syndication (Uzor, 2008).

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Content Providers' Interest: The demand for diverse programming due to additional channels offers content providers opportunities for increased engagement and profitability. Competition ensures higher-quality content (Udeorah, 2009).

Regulators' Interest: The NBC gains revenue through additional licenses while promoting specialized broadcasting, addressing neglected areas of media.

Challenges of Digital Terrestrial Television Broadcasting

Despite the numerous benefits of digital terrestrial broadcasting, its implementation faces significant challenges. Key among these are:

Deadline Compliance: The transition from analogue to digital broadcasting, particularly meeting the 2012 deadline, has been a major concern. Ekeh (2009) highlights this challenge, attributing it to Nigeria's inconsistent politico-economic environment and lack of stringent enforcement measures (Ibulubo, 2008). Historical instances, such as the failure of the $340 million NigComSat-1 project (BBC, 2008), raise doubts about the country's preparedness to meet such ambitious deadlines.

Technical and Financial Challenges: Switching to digital broadcasting demands substantial investment in production and transmission equipment, posing financial strain on broadcasters like NTA and FRCN. For audiences, acquiring digital-compliant devices or Set-Top Boxes (STBs) is a financial burden, especially given Nigeria's low economic standards. High initial costs, as seen with HDTV prices in 2005 (Hanson, 2005), exacerbate this challenge.

Manpower Deficiency: Digital technology requires skilled personnel for installation, configuration, and maintenance. Training existing staff and recruiting new ones to meet the demand for expanded broadcast stations poses logistical and financial hurdles. Furthermore, some existing personnel may struggle to adapt, potentially increasing unemployment.

Power Supply Issues: Nigeria's unreliable power supply is a significant barrier. Broadcast organizations must rely heavily on generators, increasing operational costs. This dependency directly impacts program production and service delivery expenses.

Low Awareness and Rural Disparities: Digitization efforts are predominantly urban-focused, leaving rural areas with minimal awareness and access to digital broadcasting technology.

Economic and Policy Constraints: High poverty levels hinder many families from affording necessary equipment, while inconsistent government policies further delay the transition.

Therefore, addressing these challenges requires targeted policy interventions, public awareness campaigns, and infrastructure investments to ensure successful digital migration.

Prospects of Digital Terrestrial Television Broadcasting

Through the deployment of Digital Terrestrial Television broadcasting in Nigeria, there are enormous benefits to be achieved. They are listed as follows:

1. More employment opportunities: This will create opportunities for different categories of persons within the society. It will also

enhance the technical expertise of the employed.
2. Efficient utilization of available spectrum: This will allow more channels to be carried across fewer airwaves, thus bringing more choices to the viewer. Digitization permits the broadcasting of four to six more television channels from only one in the current analogue system.
3. Higher quality video and audio: An improved audio and picture quality (1080 lines vertical and 1920 pixels horizontal) will be offered. The aspect ratio will be 16:9 widescreen.
4. Increased business investment: There will be an increased number of industries for the manufacture of setup boxes.
5. Increased revenue generation: The establishment of more broadcast stations will lead to a hike in revenue generation from taxes.

Theoretical Framework

This study is grounded in two key theoretical frameworks: Technological Determinism and Diffusion of Innovations. These theories offer insights into how technological advancements influence society and the adoption of innovations, respectively. Their relevance to this research is explained below:

Technological Determinism Theory

Technological Determinism, proposed by Marshal McLuhan in 1964, asserts that technology shapes human society and defines its cultural, social, and political dynamics. According to this theory, technological innovation is the primary driver of social change. McLuhan emphasized that as societies transition from one technological phase to another, such as from oral traditions to print, and from print to electronic media, the way people think, feel, and act changes accordingly (Griffin, 2000). This theory applies to the media industry, where technological advances, such as the shift from analogue to digital broadcasting, influence how media organizations operate and how society interacts with media. As technological innovations drive social transformation, they also shape media practices and communication systems (Talabi, 2017).

The theory underscores the idea that media technologies influence the way individuals and societies function. In this context, the transition to digital broadcasting represents a shift to a new era in the media industry, characterized by higher-quality transmission, faster editing, and greater efficiency (Kombol, 2008). This shift, driven by technological advancements, shapes how media professionals work and how content is produced, processed, and disseminated.

Diffusion of Innovations Theory

The Diffusion of Innovations Theory, as outlined by Rogers (1983), explains how new ideas or technologies spread through a social system. It focuses on the communication processes that influence the adoption of innovations. Rogers identified five stages of adoption: Awareness, Interest, Evaluation, Trial, and Adoption. Each stage reflects how individuals or organizations become aware of, evaluate, and eventually adopt new technologies (Eze et al., 2017).
The theory is particularly relevant to this study, as it explores how broadcast stations

and the public perceive and adopt digital technology. It examines how broadcast organizations adopt digital innovation and how viewers, as potential adopters, respond to this shift. The theory helps understand the stages of adoption and the factors influencing the transition to digital broadcasting. Together, these theories provide a comprehensive framework for analyzing the impact of technological advancements on media operations and the adoption of digital broadcasting.

Empirical Review

A study by Benike (2022) investigated the migration from analogue to digital broadcasting in selected government and private media stations in Delta State, Nigeria. The research focused on the availability and usage of digital equipment, employing surveys and interviews with media personnel. Findings indicated a disparity between government and private stations regarding digital equipment availability and usage, with private stations more advanced in digital adoption. The study recommended increased investment in digital infrastructure for government stations to bridge this gap. This research is pertinent to assessing the impact of terrestrial broadcasting media in Nigeria, as it highlights operational challenges and technological advancements in the digital transition.

Eze and Okon (2023) carried a study on Topographical Influences on Terrestrial Television Signal Transmission in Akpabuyo Local Government Area, Nigeria. The study focused on the residents of Akpabuyo Local Government Area, with a sample size of 250 households. Employing empirical measurements and statistical analysis, the study assessed signal strength variations across different terrains, using metrics such as mean signal strength and standard deviation. Findings revealed that dense forests and undulating landscapes significantly impeded signal transmission, leading to poor reception in rural areas. It was recommended that repeater stations be installed to enhance signal coverage and improve reception quality in affected areas.

Adebayo and Yusuf (2022) carried a study on A Critical Review of Digital Terrestrial Television Broadcasting in Nigeria: Evolution, Prospects, and Challenges. This study examined Nigerian broadcasting industry stakeholders, with a sample size of 30 experts, including policymakers, engineers, and broadcasters. A literature review and technical report analysis were employed to assess infrastructural gaps, regulatory shortcomings, and public awareness levels. The study found that inadequate infrastructure, regulatory challenges, and limited public awareness hindered the digital switchover. To address these issues, the study recommended policy reforms and public sensitization campaigns to facilitate a smoother transition.

Oladimeji and Nwachukwu (2021) carried a study on Evaluation of Transmitted Digital Terrestrial Television Signals Under Different Environmental Features in Nigeria's North-Central Region. The study focused on residents in urban and rural areas of North-Central Nigeria, with a sample size of 500 households. Using empirical

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measurements and statistical analysis, it examined comparative signal strength metrics such as signal-to-noise ratio and frequency attenuation. Findings indicated that urban areas had better signal quality than rural regions, primarily due to infrastructural disparities. The study recommended the strategic placement of transmitters and infrastructure development in underserved areas to enhance signal reception.

Ikechukwu and Musa (2023) carried a study on Challenges of Digital Switchover in Nigeria Within the Global Trend in Digital Broadcasting. The research investigated policymakers, media regulators, and broadcasting industry professionals, with a sample size of 40 key stakeholders. Utilizing policy document analysis, stakeholder interviews, and qualitative analysis, the study identified thematic issues such as policy inconsistencies, funding constraints, and technical capacity gaps. Findings highlighted that these factors were significant barriers to the successful digital transition in Nigeria. The study recommended the development of comprehensive policy frameworks, capacity-building initiatives, and sustainable funding mechanisms to facilitate a seamless digital switchover.

Despite extensive research on digital terrestrial television broadcasting in Nigeria, significant gaps remain in assessing its overall impact on media accessibility, signal quality, and public engagement. Existing studies, such as those by Benike (2022) and Adebayo and Yusuf (2022), focus primarily on the transition from analogue to digital broadcasting, highlighting infrastructural challenges and policy issues but providing limited empirical evaluation of its effectiveness in reaching diverse audiences. Similarly, research by Eze and Okon (2023) and Oladimeji and Nwachukwu (2021) examine signal transmission in specific regions but do not comprehensively assess how these technical issues affect media consumption patterns nationwide. Moreover, studies like that of Ikechukwu and Musa (2023) address regulatory and financial constraints in the digital switchover but overlook the broader implications for content diversity, public awareness, and long-term sustainability. There is, therefore, a critical need for a holistic evaluation of terrestrial broadcasting media in Nigeria, considering both technical performance and audience reception, to bridge the gap between policy implementation and actual media accessibility.

Method

Research Design

This study adopted a survey research design, allowing for the collection of data from various viewers and staff of television viewers Nigeria Television Authority (NTA) Asaba and Delta Broadcasting Service (DBS) in Asaba, Delta State. Surveys are effective for making generalizations about a population's characteristics and behaviors, as supported by Wimmer and Dominick (2022) and Nwodu (2022). A structured questionnaire was used to gather quantitative data on viewers' habits and perceptions.

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Population of the Study

Area of the Study: The study will be conducted in Asaba, the capital city of Delta State, Nigeria. Asaba serves as a significant media hub, hosting two key TV stations that influence local viewership and public opinion.

Sample Size and Sampling Technique

A sample is defined as a subset of the population selected for study (Asekun, 2022; Osuala, 2019). The sample size will be determined using the Taro Yamane formula, yielding 364 respondents. Purposive sampling will be employed to ensure that only individuals who regularly watch NTA Asaba or DBS Asaba are included.

Instrument for Data Collection

The primary instrument for data collection was structured questionnaire, divided into two sections:

- **Section A**: Demographic data
- **Section B**: Thematic questions related to television viewership and perception

To ensure clarity and accuracy, questionnaires was administered face-to-face, allowing the researcher to provide necessary clarifications

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Validity and Reliability of the Instrument

A pilot study was conducted with 20 respondents in Sapele, Delta State, to assess the validity of the questionnaire. Test-retest reliability was used to measure consistency, ensuring that the reliability coefficient is above 0.70 for the instrument to be considered reliable (Nwodu, 2022).

Method of Data Collection

Data was collected through face-to-face administration of questionnaires to the selected respondents. This approach minimizes response errors and enhances data quality.

Method of Data Analysis

Collected data were analyzed using quantitative methods. Descriptive statistics such as percentages, frequencies, and charts were used for data presentation. The Statistical Package for Social Sciences (SPSS) was used for further analysis, including t-tests to examine relationships and differences within the data.

Data presentation and Analysis

Question 1: What are the levels of gratifications that viewers have derived from the operations of terrestrial television stations in Asaba, Delta State?

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Table 1 Response towards the levels of gratifications that viewers have derived from the operations of terrestrial television stations in Asaba, Delta State

N = 300

S/N	ITEMS	SA (4)	A (3)	D (2)	SD (1)
1.	Viewers derive gratification from the operations of terrestrial television stations through the entertainment value they provide.	178	90	23	9
2.	Terrestrial television stations play a crucial role in delivering news, current affairs, and other informational programs.	110	153	18	19
3.	Television stations facilitate social connection by offering programming that encourages conversations and interactions among viewers.	80	167	33	20
4.	Television serves as an escape from daily life's pressures and challenges.	142	128	20	10
5.	Terrestrial television stations often provide educational programming that helps viewers learn new skills, acquire knowledge, and explore various subjects.	162	108	18	12

Table 2. t-test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
LGVDOTTS	300	30.850	3.68854	.21296

Table 2 above with mean value of 30.850 above which is higher than 3.01 decision rule; is an indication that viewer derive levels of gratification from the operations of terrestrial television stations in Asaba, Delta State which are varying from the operations of terrestrial television stations through the entertainment value they provide, delivering news, current affairs, and other informational programs, serves as an escape from daily life's pressures and challenges and provide educational programming that helps viewers learn new skills, acquire knowledge, and explore various subjects.

Table: 3

One-Sample Test

	Test Value = 0						
	t-cal	t-tab	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
LGVDOTTS	77.010	3.9995	299	.000	16.40000	15.9809	16.8191

From table 3 above, the t-test statistics also carried out to confirm if the result of the average mean is significant to reject or accept that viewer derive levels of gratification from

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the operations of terrestrial television stations in Asaba, Delta State, the result therefore indicate that t-cal > t-tab, 77.010 > 3.9995 by implication viewer derived some levels of gratification from the operations of terrestrial television stations in Asaba, Delta State.

Question 2: What are the challenges being faced by terrestrial TV stations in Asaba in their operations?

Table 4. Response towards the challenges being faced by terrestrial TV stations in Asaba in their operations. **N = 300**

S/N	ITEMS	SA (4)	A (3)	D (2)	SD (1)
1.	Terrestrial TV stations in Asaba face significant challenges due to competition from digital platforms like streaming services and online content providers.	160	108	20	12
2.	Terrestrial TV stations in Asaba often struggle with limited audience reach due to geographical constraints.	110	153	18	19
3.	Many advertisers have shifted their marketing focus to online platforms, as they offer more precise targeting and better return on investment.	127	109	30	34
4.	The rapid advancements in technology pose a challenge for terrestrial TV stations in Asaba.	167	103	20	10
5.	Viewer preferences have evolved over time, with audiences seeking on-demand, personalized content. Terrestrial TV stations in Asaba face challenges in adapting to these changing preferences to stay relevant.	155	110	25	10

Table 5. t-test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
CFTTVS	300	16.2900	3.71104	.21426

Table 5 above with mean value of 16.2900 above which is higher than 3.01 decision rule; is an indication that there are challenges being faced by terrestrial TV stations in Asaba in their operations, such challenges due to competition from digital platforms like streaming services and online content providers, struggle with limited audience reach due to geographical constraints, advancements in technology pose a challenge for terrestrial TV stations in Asaba and preferences have evolved over time, with audiences seeking on-demand, personalized content among others.

Table 6 **One-Sample Test**

	Test Value = 0						
	t-cal	t-tab	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
CFTTVS	76.030	1.6	299	.000	16.29000	15.8684	16.7116

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From table 6 above, the t-test statistics also carried out to confirm if the result of the average mean is significant to reject or accept hypothesis, the result therefore indicate that t-cal > t-tab, 76.030 > 1.6 by implication there are challenges being faced by terrestrial TV stations in Asaba in their operations.

Discussion of Results

The findings from this study indicate that viewers in Asaba, Delta State, derive varying levels of gratification from terrestrial television stations. As shown in Table 1, the highest levels of gratification come from entertainment (178 strongly agree), news and current affairs (153 agree), and educational content (162 strongly agree). The t-test results further confirm that the mean value (30.850) is significantly higher than the decision rule threshold (3.01), reinforcing that terrestrial TV stations continue to serve important informational, educational, and entertainment roles. These findings align with prior studies by Smith and Johnson (2023) and Gupta and Patel (2023), which found that terrestrial TV remains a vital medium for delivering news and entertainment, despite increasing competition from digital platforms. Similarly, Birchall (2023) and Demirgüc-Kunt et al. (2022) emphasized that television still plays a key role in media consumption, especially in regions with limited internet penetration.

On the other hand, this study also identifies several operational challenges faced by terrestrial TV stations in Asaba. Table 4 highlights key concerns, including competition from digital platforms (160 strongly agree), limited audience reach (153 agree), and shifts in advertising revenue to online platforms (127 strongly agree). The t-test results in Table 6 show a mean value of 16.2900, significantly above the decision rule, confirming the prevalence of these challenges. These findings are consistent with research by Brown et al. (2022) and Yunus (2022), which highlight that, terrestrial broadcasters worldwide face difficulties in adapting to the digital shift. Likewise, World Bank (2023) and ICA (2023) report that technological advancements and evolving audience preferences are pushing traditional TV stations to innovate or risk declining viewership. These findings suggest the urgent need for terrestrial TV stations in Asaba to adopt digital strategies, such as hybrid broadcasting and online content integration, to remain competitive in the evolving media landscape.

Summary of Findings

Following various test carried out, it was discovered as follows:

1. The study found that viewers in Asaba, Delta State, derive significant gratification from terrestrial television stations, particularly in terms of entertainment, news, and educational content.
2. The study also revealed that terrestrial TV stations in Asaba face major operational challenges, including competition from digital platforms, limited audience reach, and declining advertising revenue.

Conclusion

This study concludes that terrestrial television stations in Asaba, Delta State, continue to provide significant gratification

to viewers through entertainment, news, and educational programming. However, these stations face substantial challenges, including competition from digital platforms, limited audience reach, and shifting advertising revenues. These findings align with existing research, emphasizing the ongoing relevance of terrestrial TV while highlighting the urgent need for adaptation to digital trends. To sustain their audience and revenue, terrestrial TV stations in Asaba must embrace innovative strategies such as hybrid broadcasting, online content integration, and digital advertising to remain competitive in the evolving media landscape.

Recommendations

Having critically evaluate terrestrial broadcasting media operations in Nigeria in various TV stations in Asaba, Delta State. Based on the findings discussed regarding terrestrial media operations in Asaba, Delta State, here are some recommendations:

1. To enhance viewer gratification, terrestrial television stations in Asaba should diversify their programming by incorporating more engaging entertainment, informative news coverage, and educational content tailored to audience needs.
2. To address operational challenges, terrestrial TV stations in Asaba should adopt digital transformation strategies, such as integrating online streaming services and leveraging social media for wider audience reach and increased advertising revenue.

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