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# Influence of Digital Media Technology Usage on Newspaper Readership in Rwanda: A Case of the New Times in Gasabo District

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***Abstract:*** *This article examines three related dimensions of digital newspaper readership in Gasabo District, Rwanda: patterns of digital media technology usage, perceived changes in print and digital readership following digital adoption, and reader-identified strategies for enhancing digital readership of The New Times. Guided by Uses and Gratifications Theory and Media Dependency Theory, the study adopted a descriptive cross-sectional survey with a mixed-methods orientation. Structured questionnaire responses from 76 non-probability-selected respondents were summarized using frequencies and percentages in SPSS. The most frequently selected usage pattern was that digital media changed access to news (26.3%), followed by mobile and social media use (19.7%). Regarding perceived readership change, increased digital access (23.6%) and declining print readership (21.0%) were the most frequent responses. Improving mobile application navigation (27.6%) and offering personalized content recommendations (23.6%) were the leading proposed strategies. The findings document respondent perceptions rather than independently verified readership trends or tested intervention effects. The study recommends mobile usability improvements, careful experimentation with personalization and comparison of print and digital audience analytics. Findings are not generalizable beyond the non-probability sample.*

***Keywords****: digital media technology; newspaper readership; The New Times; Gasabo District; digital news; Rwanda*

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## 1. Introduction

The rapid advancement of digital media technologies has significantly transformed newspaper publishing, distribution, and consumption worldwide. The emergence of online news platforms, mobile applications, and social media has diversified the channels through which audiences access information, creating new opportunities and challenges for traditional newspaper publishers. These technological developments have reshaped news consumption practices by enabling readers to access information more conveniently, interact with news content, and engage with multiple digital platforms. Newman et al. (2024) observed that contemporary news consumption is increasingly distributed across digital channels, particularly social media, search engines, and video-based platforms. Consequently, newspaper publishers are increasingly required to adapt their content delivery strategies to evolving audience preferences while maintaining the relevance of traditional print publications.

In Rwanda, the transformation of the media landscape reflects the growing importance of digital technologies in news production and dissemination. According to the Rwanda Governance Board (RGB, 2024), the number of print media outlets declined from 30 in 2014 to five in 2023, while online media outlets increased from seven to 169 during the same period. These developments demonstrate a substantial structural transformation within Rwanda's media industry, characterised by the expansion of digital publishing alongside a reduction in the number of print

media outlets. However, these statistics do not independently establish changes in newspaper readership or demonstrate that digital media adoption directly caused declining print consumption. Understanding the implications of this transformation therefore requires empirical evidence concerning how readers access and engage with newspaper content across print and digital platforms.

The New Times, established in 1995, represents an important case for examining newspaper readership within Rwanda's evolving digital media environment. Through its print and digital publications, the newspaper provides readers with alternative channels for accessing news and information. Gasabo District, located in Kigali City, offers a relevant context for investigating these developments because of its urban characteristics and access to digital communication technologies. Examining readers' experiences within this setting provides an opportunity to understand how digital media technologies relate to newspaper access, perceived readership changes, and preferences for digital news services.

Despite the expansion of digital publishing in Rwanda, limited context-specific empirical evidence exists regarding the patterns of digital media technology usage among readers of The New Times, their perceptions of changes in print and digital readership, and the strategies they consider effective for improving digital news engagement. Existing national media statistics primarily describe changes in the structure of the media industry rather than the experiences and preferences of readers of individual newspapers. This knowledge gap limits the availability of reader-level evidence that could inform the development of responsive and sustainable digital publishing strategies. Addressing this gap is particularly important because increased access to digital technologies does not necessarily translate into increased newspaper readership or the replacement of traditional print consumption.

Therefore, this study examined digital media technology usage and newspaper readership of The New Times in Gasabo District, Rwanda. Specifically, the study sought to:

1. To determine patterns of digital media technology usage among readers of The New Times in Gasabo District.
2. To compare perceived readership levels before and after the adoption of digital media technologies by The New Times.
3. To identify strategies that readers consider useful for enhancing digital readership of The New Times.

# 2. Literature Review

## 2.1 Uses and Gratifications Theory

Uses and Gratifications Theory (UGT) explains media consumption by emphasising the active role of audiences in selecting communication channels that satisfy their information, entertainment, personal identity, and social interaction needs (Katz et al., 1973; Ruggiero, 2000). Sundar and Limperos (2013) extended this perspective to digital media, highlighting how technological features, including interactivity, navigability, and customisation, provide additional opportunities for audience satisfaction. In newspaper publishing, the theory helps explain readers' preferences for digital platforms, including websites, mobile applications, and social media, compared with traditional print editions. In the present study, UGT provides a theoretical basis for understanding patterns of digital media usage and identifying digital platform improvements that respondents consider important for enhancing readership of The New Times.

## 2.2 Media Dependency Theory

Media Dependency Theory (MDT), developed by Ball-Rokeach and DeFleur (1976), explains how individuals' reliance on media resources to obtain information, understand societal developments, and achieve personal goals shapes their relationships with communication channels. The theory suggests that the importance of a particular medium depends on the extent to which audiences rely on it to satisfy their information needs. Within the context of digital newspaper publishing, readers may increasingly depend on online platforms because of their accessibility, immediacy, and availability of updated information. MDT complements UGT by explaining the importance of media reliance, whereas UGT focuses on motivations underlying media selection. In this study, MDT provides a conceptual perspective for interpreting respondents' perceived changes in print and digital newspaper readership following the adoption of digital technologies.

## 2.3 Digital Media Technology Usage and Newspaper Readership

The expansion of digital media technologies has transformed newspaper readership by diversifying the channels through which audiences discover, access, and engage with news content. Newman et al. (2024), drawing on evidence from more than 95,000 respondents across 47 markets, demonstrated the increasing fragmentation of online news consumption and the growing importance of social media, video-based content, and other digital platforms. Similarly, Westlund (2013) highlighted the role of mobile technologies in reshaping news production, distribution, and consumption. These studies indicate that digital news consumption increasingly extends beyond traditional newspaper websites to multiple interconnected platforms.

Nevertheless, the relationship between digital and print readership remains complex. Increased digital accessibility does not necessarily imply a corresponding decline in print newspaper consumption, as readers may use both formats

according to their preferences and information needs. Furthermore, accessing news headlines through social media does not necessarily constitute comprehensive engagement with newspaper content. Therefore, distinguishing between digital access, readership behaviour, and actual circulation trends is essential when examining changes in newspaper consumption. Although existing studies provide valuable insights into global digital news trends, their findings do not adequately explain the specific readership experiences of The New Times audiences in Gasabo District, Rwanda.

## 2.4 Theoretical Integration and Research Gap

Uses and Gratifications Theory and Media Dependency Theory provide complementary perspectives for understanding digital media technology usage and newspaper readership. UGT explains readers' selection of media platforms based on perceived benefits, including convenience, accessibility, interactivity, and content relevance, while MDT provides insights into the importance of media channels in satisfying information needs. Together, these theories inform the interpretation of digital media usage patterns, perceived changes in newspaper readership, and strategies for strengthening digital audience engagement.

Despite the growing literature on digital news consumption, limited context-specific empirical evidence exists regarding how readers of The New Times in Gasabo District use digital technologies, perceive changes in print and digital readership, and identify strategies for improving digital news access. This study addresses this gap by providing descriptive evidence from 76 respondents concerning these three dimensions of newspaper readership. However, because audience gratifications and media dependency were not directly measured, the theories serve as interpretive frameworks rather than empirically tested models. Accordingly, the study contributes context-specific insights into digital newspaper readership without establishing causal relationships between digital technology adoption and readership changes.

# 3. Methodology

## 3.1 Research design and study area

A descriptive, cross-sectional survey design was employed in Gasabo District, Kigali, in 2026. The questionnaire combined closed-ended response categories with open-ended prompts, allowing respondents to report experiences and suggest improvements. Although the original study described a mixed-methods orientation, the reported findings consist of coded response categories summarised quantitatively; no independent qualitative thematic analysis or formal integration procedure is documented. The design is therefore reported here as a descriptive survey rather than a fully implemented mixed-methods design.

## 3.2 Participants

Eligible participants were readers of The New Times in Gasabo District who had accessed the newspaper through at least one print or digital channel. No verified register of the newspaper's readers in the district exists, so a sampling frame could not be constructed, and a probability sample was not possible. The 76 respondents who took part are therefore the achieved sample, and the study makes no claim that this figure was statistically derived from a known population. Respondents belonged to six engagement groups (Table 1). These groups describe how respondents were recruited and are not assumed to be mutually exclusive.

**Table 1. Respondents by engagement group**

| Group | n | % |
|---|---|---|
| General readers of The New Times | 19 | 25.0 |
| Subscribers | 10 | 13.2 |
| Print newspaper consumers | 14 | 18.4 |
| Digital newspaper users | 12 | 15.8 |
| Website users | 9 | 11.8 |
| Social media followers | 12 | 15.8 |
| **Total** | **76** | **100.0** |

## 3.3 Instrument and procedure

The questionnaire was administered on paper and via Google Forms to accommodate readers with differing levels of digital access. It contained demographic questions and closed- and open-ended items aligned with the three objectives. Participation was voluntary and responses were treated confidentially for academic purposes. The questionnaire was piloted with 34 respondents outside Gasabo District, including 14 readers of Imvaho Nshya in

Nyarugenge District. Pilot feedback informed wording, item order and the revision or removal of repetitive questions. Expert consultation supported coverage of the study concepts, but no numerical content-validity index or reliability coefficient was reported; these procedures should not be described as statistical validation.

Before the main survey, the instrument was piloted with 34 respondents outside Gasabo District, including 14 readers of Imvaho Nshya in Nyarugenge District. Pilot feedback led to rewording of unclear questions, reordering of some items and removal or revision of repetitive ones, and experts were consulted on coverage of the study concepts. No reliability coefficient or content-validity index is reported for the instrument.

## 3.4 Analysis

Questionnaire responses were checked, coded and analysed using SPSS to obtain frequencies and percentages. For each objective, one response category per respondent was tabulated, giving a denominator of 76; percentages were computed from the counts and rounded to one decimal place. Open-ended responses were represented through coded categories rather than presented as interview quotations or a separate thematic analysis. No inferential statistical tests, pre-adoption baseline measures or newspaper circulation records were analysed. Therefore, comparisons of readership before and after digital adoption describe retrospective perceptions, not observed longitudinal change or causal effects.

# 4. Results and Discussion

## 4.1 Profile of respondents

The sample was predominantly male (75.0%) and relatively young, with three-quarters of respondents aged between 26 and 45 years. It was also highly educated: 82.9% held a bachelor's degree and a further 10.5% a master's degree. Most had engaged with The New Times for at least a year, and more than a fifth (23.7%) for over a decade (Table 2).

**Table 2. Socio-demographic profile of respondents**

| Characteristic | Category | n | % |
|---|---|---|---|
| Gender | Male | 57 | 75.0 |
| | Female | 19 | 25.0 |
| Age (years) | Below 25 | 6 | 7.9 |
| | 26–35 | 32 | 42.1 |
| | 36–45 | 25 | 32.9 |
| | Above 46 | 13 | 17.1 |
| Education | Secondary certificate | 5 | 6.6 |
| | Bachelor's degree | 63 | 82.9 |
| | Master's degree | 8 | 10.5 |
| Length of readership | Less than 1 year | 8 | 10.5 |
| | 1–5 years | 26 | 34.2 |
| | 5–10 years | 24 | 31.6 |
| | More than 10 years | 18 | 23.7 |

## 4.2 Patterns of digital media technology usage

Respondents most often described digital media as having changed how they access news (26.3%). Mobile phones and social media came next (19.7%). Two further patterns were each reported by 18.4% of respondents: a shift of readership towards digital platforms and a preference for shorter digital news items. The remaining 17.1% described engaging with the newspaper through online interactions such as comments, shares and likes (Table 3).

**Table 3. Patterns of digital media technology usage**

| Pattern | n | % |
|---|---|---|
| Digital media has changed how news is accessed | 20 | 26.3 |
| Readers use mobile phones and social media | 15 | 19.7 |
| Readership has shifted to digital platforms | 14 | 18.4 |
| Readers prefer shorter digital news | 14 | 18.4 |
| Readers engage through online interactions | 13 | 17.1 |

## 4.3 Perceived readership before and after digital adoption

The most common perception was that more readers now access The New Times digitally than before digital adoption (23.7%). A further 21.1% reported that print readership has declined and 17.1% that readers have moved to online platforms such as the website and social media channels. Notably, 14.5% reported that total readership has increased, and 11.8% observed that digital platforms attract younger readers. Another 11.8% gave other responses (Table 4).

**Table 4. Perceived readership change after digital adoption**

| Perceived change | n | % |
|---|---|---|
| More readers access The New Times digitally | 18 | 23.7 |
| Print readership has declined | 16 | 21.1 |
| Readers have shifted to online platforms | 13 | 17.1 |
| Total readership has increased | 11 | 14.5 |
| Digital platforms attract younger readers | 9 | 11.8 |
| Other responses | 9 | 11.8 |

## 4.4 Strategies to enhance digital readership

Respondents prioritised usability and relevance. Improving the mobile application interface and navigation was the leading proposal (27.6%), followed by personalised content recommendations (23.7%). Multimedia and interactive content such as video and infographics was proposed by 18.4%, interaction features such as comments, sharing and discussion by 17.1%, and faster, more mobile-friendly websites by 13.2% (Table 5).

**Table 5. Strategies proposed to enhance digital readership**

| Strategy | n | % |
|---|---|---|
| Improve mobile application interface and navigation | 21 | 27.6 |
| Offer personalised content recommendations | 18 | 23.7 |
| Increase videos, infographics and interactive content | 14 | 18.4 |
| Enable comments, sharing and discussion | 13 | 17.1 |
| Improve website speed and mobile-friendly design | 10 | 13.2 |

## 4.5 Discussions

### 4.5.1 Multi-channel, mobile and interactive use

The usage pattern is consistent with international findings that digital news use is spread across several routes rather than channelled through one (Newman et al., 2024) and with the emphasis Westlund (2013) places on mobile devices. Respondents' reliance on phones and social media, their preference for shorter items and their use of comments, shares and likes together describe an audience that reaches the newspaper through varied, mobile and participatory channels.

Through a UGT lens, these behaviours are plausible expressions of gratifications such as convenience, speed, flexibility and social interaction, consistent with the features Sundar and Limperos (2013) associate with new media. Readers appear to be choosing channels that fit their needs rather than receiving content passively (Katz et al., 1973). An important caution applies: the survey recorded behaviours and perceptions, not gratifications, so this is an interpretation and not a test.

#### 4.5.2 Transformation rather than simple substitution

The coexistence of perceived print decline (21.1%) with perceived audience growth (14.5%) and a perception that digital platforms draw younger readers (11.8%) suggests that digital adoption may be changing the composition and channels of the readership rather than only moving existing readers from one format to another. This reading fits the wider point that print and digital use can be complementary for some readers and substitutive for others.

The findings also fit the national picture of a media system that has shifted markedly towards online outlets (RGB, 2024), but the link should not be overstated. Sector-level counts of outlets and respondents' perceptions of one newspaper are different kinds of evidence, and neither confirms that digital media caused readership to change.

From an MDT perspective, the perceived shift towards digital access suggests that digital channels may be growing in importance as sources for The New Times among respondents, while reliance on the printed edition may be weakening for some (Ball-Rokeach & DeFleur, 1976). Since dependency was not measured directly, this too remains an interpretation to be tested.

#### 4.5.3 Usability and personalisation as reader priorities

The strategy results show that readers' most frequent proposals concern ease of use and relevance, not novelty. Application navigation and personalised recommendations lead, and website speed and mobile design also appear. In UGT terms, these improvements address needs for convenience and information relevance; interactive and multimedia features address engagement and social needs (Sundar & Limperos, 2013). In MDT terms, a platform that is easy to use and delivers relevant content is better placed to become a source people rely on.

The proposals are respondents' judgements about what would help. They are not evidence that any given change would raise readership, which would require testing in practice.

#### 4.5.4 Implications for journalism practice and scholarship

The leading reader priorities mobile navigation (27.6%) and personalised recommendations (23.7%) suggest practical areas for The New Times to evaluate through small-scale usability tests and monitored pilots. Respondents also mentioned multimedia, interaction and website speed, which can be considered in subsequent design experiments. The publisher should compare survey perceptions with subscription, circulation and web-analytics data before concluding that digital readership has increased or print readership has declined. For media scholarship, the study offers a local descriptive baseline but does not test Uses and Gratifications Theory or Media Dependency Theory; future work should operationalise these constructs and examine their relationships with actual reading behaviour.

# 5. Conclusions and Recommendations

## 5.1 Conclusions

The study examined digital media technology usage and newspaper readership of The New Times in Gasabo District, Rwanda, based on responses from 76 participants. Regarding the first objective, the findings indicated that digital media technologies had changed how respondents accessed news (26.3%), while mobile phones and social media were identified as important news access channels (19.7%). This suggests that digital platforms play an important role in respondents' newspaper consumption practices. Concerning the second objective, respondents perceived increased digital news accessibility (23.6%), declining print readership (21.0%), and a shift from print to online platforms (17.1%), indicating perceived changes in readership patterns following digital media adoption. Regarding the third objective, improvements in mobile application usability and navigation (27.6%) and personalised content recommendations (23.6%) were identified as the leading strategies for enhancing digital readership, highlighting the importance of user-centred digital publishing.

Overall, the study concludes that digital media technologies are associated with changing patterns of newspaper access, perceived shifts in print and digital readership, and emerging opportunities for improving digital audience engagement. Practically, the findings suggest that The New Times management should strengthen mobile news accessibility, improve platform navigation, and prioritise personalised content delivery to enhance reader engagement and retention. However, these conclusions are limited to respondents' perceptions and do not establish verified readership trends or causal relationships.

## 5.2 Recommendations

Based on the findings and conclusions drawn from the three specific research objectives, the following recommendations are proposed:

**Strengthen Digital Media Accessibility and Platform Engagement:** The management of The New Times should strengthen the accessibility and effectiveness of its digital news distribution channels, particularly mobile platforms and social media. Greater emphasis should be placed on ensuring that newspaper content is easily accessible, appropriately presented, and conveniently available across commonly used digital devices. The newspaper should also

regularly assess readers' platform preferences and digital engagement practices to inform content distribution strategies that respond to evolving news consumption patterns.

**Promote Balanced Print and Digital Readership Strategies**: The management of The New Times should adopt an integrated publishing approach that recognises the continuing relevance of print newspapers alongside the growing importance of digital platforms. Rather than assuming that digital readership necessarily replaces print consumption, the newspaper should monitor both formats through reliable readership surveys, circulation records, subscription data, and digital audience analytics. Such evidence would support informed decisions regarding audience retention, content distribution, and the sustainable development of print and digital newspaper services.

**Improve Digital User Experience and Personalised Content Delivery**: The New Times should prioritise improvements in the usability and functionality of its digital platforms, particularly mobile application interfaces, website navigation, and content accessibility. In addition, the newspaper should consider introducing personalised news recommendations that reflect readers' interests and information needs. These improvements should be implemented progressively and evaluated through user feedback, readership engagement indicators, and platform analytics to determine their effectiveness in enhancing digital readership and reader satisfaction.

**Study Limitations and Suggestions for Further Research** Several limitations should shape how the findings are used. The sample (N = 76) was non-probabilistic, was drawn from a population with no verified register, and was predominantly male, university-educated and aged 26 to 45. Results describe these respondents and cannot be generalised to all readers in Gasabo District or Rwanda. Data are self-reported and retrospective, and respondents may recall past reading inaccurately or answer in socially acceptable ways. The design is cross-sectional and descriptive, so it cannot show causation or trend. No inferential tests and no reliability coefficient are reported. Finally, perceived change was not checked against circulation, subscription or web-traffic records.

Future studies should use probability or stratified samples with verified readership frames, compare multiple districts including rural and older populations, combine surveys with audience analytics, and follow readers over time. Experimental or field tests of the strategies proposed here would show whether they actually raise digital readership.

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