

DIGITAL MEDIA USAGE TRENDS AMONG GRAPHIC DESIGNERS IN BENIN CITY, EDO STATE, NIGERIA

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ABSTRACT

This study investigates digital media trends among graphic designers in Benin City, Nigeria, drawing on the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) Theory to explain patterns of technology adoption. The study adopted a mixed-methods approach involving questionnaires administered to 450 participants and interviews with 25 key informants. Findings revealed a high level of digital media adoption among graphic designers, with 89.3% used professional software and 84.6% relying on social media platforms such as Facebook and Instagram for communication. The study concludes that while digital media enhances graphic design practice, its full potential depends on improved infrastructure and capacity development. The study therefore recommends increased investment in digital infrastructure, affordable software access, and continuous professional training to strengthen digital media utilization among graphic designers.

Keywords: Digital Media; Graphic Design; Mass communication; Technology Adoption; Communication Effectiveness

INTRODUCTION

The evolution of digital media technologies has significantly transformed mass communication, reshaping how information is created, distributed, and consumed. Digital media has shifted communication from traditional linear models to interactive, network-based systems that enhance audience engagement and participation (Zuo, 2023). Within this transformation, Zuo (2023) also claimed that graphic designers have emerged as key facilitators of visual communication, utilizing digital tools and platforms to convey messages across diverse audiences.

Digital media has expanded the scope of graphic design beyond traditional print practices to include interactive, multimedia, and network-based communication. Digital communication technologies have enhanced connectivity and enabled more dynamic forms of information dissemination, thereby increasing the effectiveness and reach of visual communication (Nwambam et al. 2023). This shift has positioned designers as critical actors in contemporary communication systems.

In developing countries such as Nigeria, these global advancements intersect with local realities, where access to technology, infrastructure, and professional training influence the extent of digital media adoption. Benin City, as an active creative hub, provides a relevant context for examining how graphic designers engage with digital media tools and platforms in practice.

Digital Media in Mass communication: Digital media according to Zuo (2023), has significantly transformed the landscape of mass communication, reshaping how information is produced, distributed, and consumed. This claim represents a shift from traditional communication channels such as print, radio, and television to interactive, network-based platforms driven by internet technologies. This transition has enhanced the speed, reach, and accessibility of communication processes, making digital media central to contemporary information exchange.

Nwambam et al. (2023) noted that the integration of digital technologies into mass communication has improved connectivity and facilitated the rapid dissemination of information across diverse audiences; asserting that digital media enables both large-scale and niche communication, fostering engagement within communities defined by shared interests. Similarly, Wahyu and Irawan (2024) argue that digital transformation has expanded the scope of communication by introducing dynamic and interactive forms of visual storytelling. These developments have strengthened communication effectiveness by emphasizing multimedia and motion-based content over static formats.

Graphic Designers as Agents of Mass communication: Graphic designers have evolved into key agents of mass communication, functioning as visual interpreters who translate complex ideas into accessible forms. Their role extends beyond aesthetic production to include strategic

communication, where design is used to inform, persuade, and influence audiences. The integration of design elements within digital media enables designers to achieve sophisticated communication objectives through structured visual system (Nwaoboli & Arijeniwa, 2025).

In practical contexts, graphic designers contribute significantly to public communication efforts. For instance, in health communication, designers create visual materials that address diverse audiences and overcome literacy barriers through culturally relevant imagery. The importance of visual communication became particularly evident during the COVID-19 pandemic, where effective design strategies were essential for disseminating critical health information (Ternenge et al., 2022).

Furthermore, the rise of social media has amplified the role of graphic designers in shaping public discourse. Platforms such as Instagram and Twitter enable designers to produce and distribute content that can mobilize social movements and influence public opinion. The #EndSARS protests in Nigeria illustrate how digital media and visual communication can be leveraged to coordinate collective action and sustain engagement (Uwalaka & Nwala, 2023).

Digital Media Adoption in Developing Countries:

Despite the global expansion of digital media, its adoption in developing countries presents unique challenges. In Nigeria, the integration of digital technologies into communication practice is often constrained by infrastructural limitations, including unreliable internet connectivity and inconsistent power supply (Guanah et al., 2020). These factors affect the efficiency and consistency of digital media usage among professionals.

In addition, disparities in digital literacy pose significant barriers to effective adoption. Alegado (2025) highlights that many potential users lack the necessary skills to fully utilize digital tools, while Sujoko et al. (2023) identify a gap between the demand for digital competencies and the availability of training opportunities. These challenges contribute to uneven levels of adoption and limit the potential of digital media in professional practice.

Challenges in Digital Media Utilization: The utilization of digital media in graphic design is further affected by economic, technological, and socio-cultural constraints. Resource limitations, such as the high cost of professional

software and hardware, restrict access to advanced design tools, particularly among small and medium-scale practitioners (Veza et al., 2023; Moussadecq et al., 2024). These financial barriers hinder the ability of designers to fully exploit digital media capabilities.

Moreover, the digital divide continues to affect both access and quality of digital services, thereby influencing the effectiveness of communication strategies (Sujoko et al., 2023). Beyond technological constraints, cultural considerations also play a significant role. Nwaoboli and Arijeniwa (2025) emphasize that the creation of culturally appropriate and contextually relevant content requires designers to navigate complex social and linguistic dynamics. This challenge is particularly pronounced in digital environments that often prioritize global standards over local specificity.

Despite the growing importance of digital media in graphic design, there remains limited localized, empirical research that captures how these technologies are adopted and utilized within specific environments. The studies by Okoronkwo and Oshionebo (2024); and Shobukonla and Nwabuku (2025) were either institution-specific or limited in scope, leaving gaps in understanding the broader patterns of digital media adoption, communication effectiveness, and contextual challenges among practicing graphic designers in urban creative hubs such as Benin City; thus, necessitating this investigation into digital media trends among graphic designers in Benin City, focusing on adoption patterns, communication effectiveness, and the challenges shaping professional practice with the following specific objectives to:

1. examine the patterns of digital media usage among graphic designers.
2. assess the impact of digital media on communication effectiveness.
3. identify challenges impeding digital media adoption and utilization

seeking to provide answers to the research questions below:

1. What digital media tools and platforms are commonly used by graphic designers in Benin City for mass communication?
2. How does the adoption of digital media influence the effectiveness of mass communication among graphic designers in Benin City?

3. What challenges do graphic designers in Benin City encounter in the adoption and utilization of digital media technologies?

METHODOLOGY: This study is anchored on the *Technology Acceptance Model (TAM)* and the *Diffusion of Innovation (DOI) Theory*, which together explain the individual and social dimensions of digital media adoption among graphic designers.

The Technology Acceptance Model (TAM) posits that technology adoption is primarily determined by *perceived usefulness*—the extent to which a technology enhances job performance—and *perceived ease of use*—the degree to which it is free of effort (Davis, 1989). These constructs influence users' attitudes and behavioural intention toward technology use. TAM explains graphic designers' adoption of digital media tools as a function of their perceived value in enhancing creativity, efficiency, and communication effectiveness, while constraints such as skill gaps and software complexity may affect ease of use.

The Diffusion of Innovation (DOI) Theory explains how innovations spread within a social system over time through communication channels (Rogers, 2003). Contemporary studies further emphasize that diffusion is influenced by social networks, adopter categories, access to infrastructure, and communication processes that shape technology acceptance and usage (Iqbal & Zahidie, 2022). Within this study, digital media tools represent the innovation, while professional networks and digital platforms facilitate their diffusion among graphic designers. Variations in adoption are shaped by peer influence, infrastructural access, and the role of early adopters within the design community. Together, TAM and DOI provide a complementary framework that links individual perceptions with broader social processes, offering a comprehensive basis for analyzing digital media adoption in graphic design practice.

This study adopted a mixed-methods research design to examine digital media trends among graphic designers in Benin City. The approach was considered appropriate as it enables the integration of quantitative data for identifying general patterns with qualitative insights for explaining underlying experiences and contextual factors. It also allows for triangulation, thereby enhancing the validity and reliability of the findings. The population comprised

practicing designers, including freelancers, agency-based, and corporate professionals. Given the absence of a comprehensive sampling frame and the need to engage participants with relevant professional experience, a purposive sampling technique was employed to select respondents who are actively involved in graphic design practice. This was complemented by snowball sampling, where initial participants referred other qualified designers within their networks. A total of 450 respondents were selected for the quantitative phase, while 25 key informants participated in the qualitative interviews. Data were collected using structured questionnaires and semi-structured interview guides, capturing information on demographics, digital media usage, communication effectiveness, and professional challenges. Quantitative data were analyzed using SPSS, descriptive and inferential statistics, while qualitative data were analyzed through thematic analysis. Triangulation was employed to enhance the validity and reliability of the findings.

RESULTS AND DISCUSSION

The findings indicate a predominantly young and digitally oriented workforce as seen in Figure 1, with Generation Z (45.3%) and Millennials (38.7%) forming the majority, alongside a near-balanced gender distribution (52.4% male; 47.6% female) as captured in Figure 2. Most respondents hold bachelor's degrees (67.8%) and are early-career professionals (41.3% with 1–5 years' experience), with freelancing (34.2%) and agency-based practice (28.9%) dominating the employment structure. It is obvious from the findings that graphic design practice in Benin City is dominated by a young and digitally inclined workforce, largely composed of Generation Z and Millennials. This is further reinforced by qualitative insights, where one informant noted: "*Most of us grew into design through digital tools; it is almost impossible to practice without them now.*" This suggests that the profession is being driven by individuals who are inherently familiar with digital technologies. The implication of this demographic structure is that digital media adoption is not incidental but embedded within the professional identity of contemporary designers. Recent studies have shown that younger creative professionals are more likely to integrate digital technologies into their daily workflows due to greater familiarity with digital environments and evolving communication cultures (Sujoko et al., 2023). The near-balanced gender distribution further indicates increasing inclusivity within

the creative industry, reflecting broader shifts toward diversity in digital and media professions. Furthermore, Veza et al. (2023) strongly believes that the dominance of early-career practitioners and freelancers reflects a flexible, decentralized, and evolving creative economy shaped by platform-based work, remote collaboration, and digital entrepreneurship. Digital media adoption is extensive, as Figure 3 reveals high usage of professional tools such as Adobe Photoshop (89.3%) and Illustrator (76.4%), alongside accessible platforms like Canva (72.1%). Social media platforms, especially Instagram (84.6%) and Facebook (71.3%) serve as key channels for communication and promotion. A large proportion of respondents use digital tools for over six hours daily (78.4%) and integrate them into more than 80% of their projects (92.1%), reflecting a strongly digital workflow as shown in Figure 4.

(showing a near-balanced representation of male and female graphic designers).

Qualitative responses reveal that designers strategically combine tools based on project demands and client expectations. As one participant explained: *"We use Photoshop for serious design work, but Canva helps when clients want something fast and affordable."* This shows that digital media tools are deeply integrated into professional practice, with designers relying heavily on

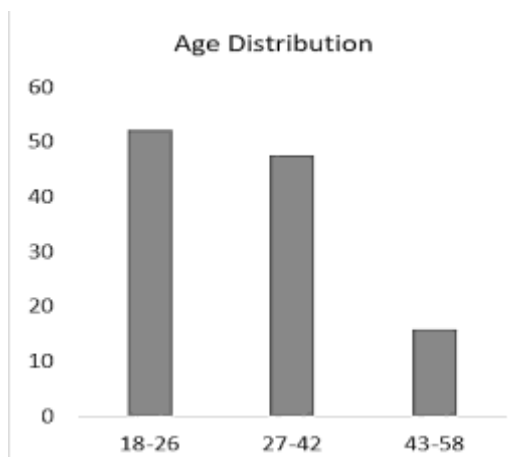


Figure 1. Age distribution of respondents (showing the dominance of younger graphic designers within the study population).

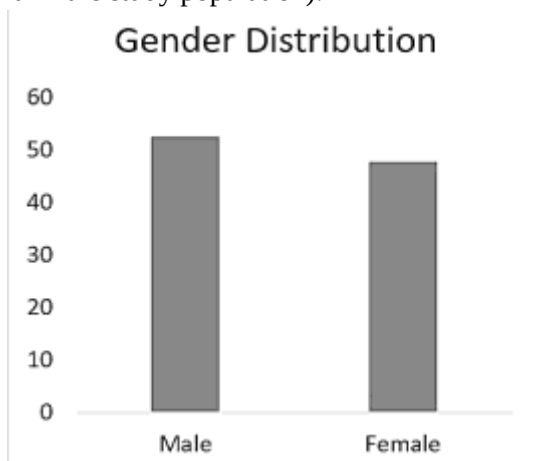


Figure 2. Gender distribution of respondents

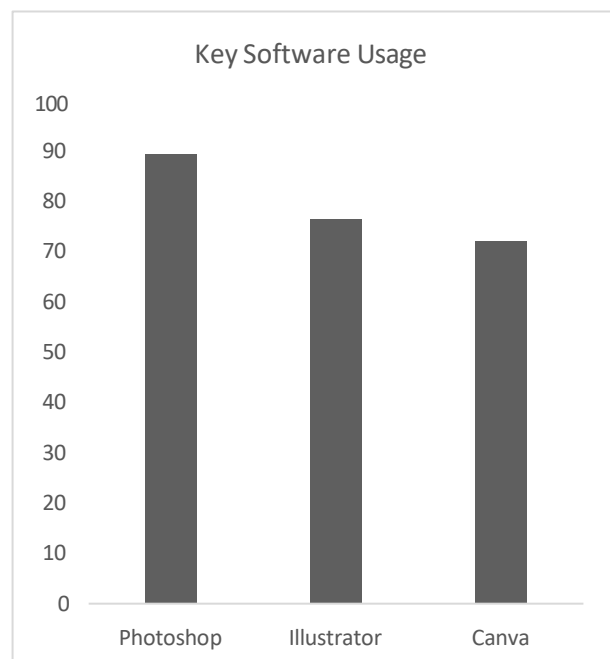


Figure 3. Key software usage among respondents (showing high reliance on professional and accessible digital design tools).

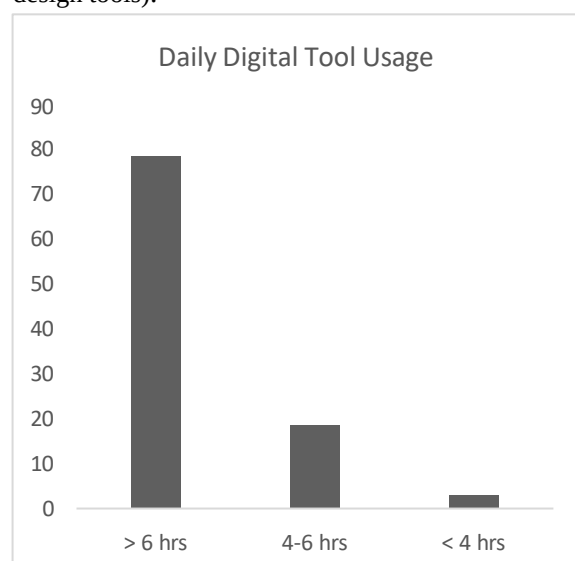


Figure 4. Daily digital tool usage among respondents (showing extensive dependence on digital technologies in graphic design practice).

both advanced software and accessible platforms. It indicates a dual-layered design ecosystem where high-end tools support professional production, while user-friendly platforms enhance speed and accessibility. This extensive daily use of digital tools and their integration into the majority of projects confirm that graphic design practice has transitioned from traditional methods to a fully digital workflow environment. The implication is that digital competence is no longer optional but a core requirement for professional relevance.

Digital media significantly enhances communication effectiveness, with Figure 5 showing improvements in client engagement (87.2%), audience reach (84.7%), and project efficiency, including faster completion rates (89.7%). It also supports creative development, with 82.1% reporting expanded creative possibilities.

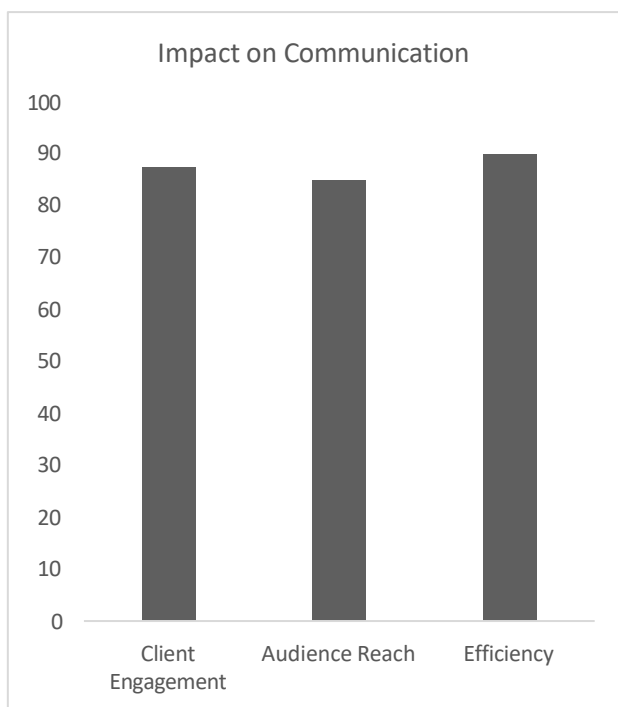


Figure 5. Impact of digital media on communication effectiveness

(showing improvements in engagement, audience reach, and efficiency).

This reveal that digital media significantly enhances the effectiveness of graphic design as a communication tool. Improvements in client engagement, audience reach, and project efficiency suggest that digital platforms enable faster, broader, and more interactive communication. This was supported by qualitative evidence emphasizing

improved speed and engagement: *“With social media, you can reach thousands instantly, and clients respond faster than before.”* Another informant added: *“Motion and digital designs make people understand messages better than static designs.”*

Additionally, the expansion of creative possibilities indicates that digital tools are not only functional but also transformative, allowing designers to explore new forms of visual expression. This reinforces the position of graphic designers as strategic communicators rather than mere visual producers.

However, these benefits are constrained by challenges such as poor internet connectivity (76.8%), unstable power supply (68.4%), high software costs (72.3%), and limited access to training (69.5%) as captured in Figure 6.

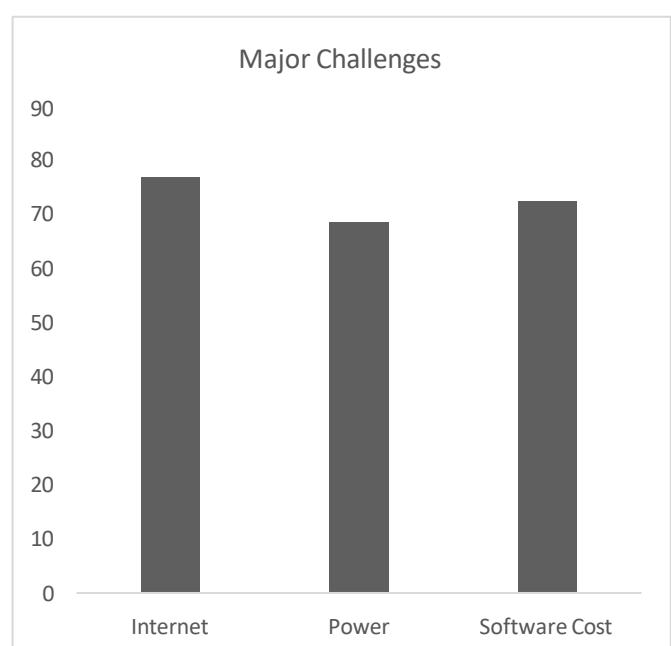


Figure 6. Major challenges affecting digital media adoption among graphic designers (particularly internet connectivity, power supply, and software costs).

Client resistance to digital approaches (63.7%) and market competition (58.4%) further complicate practice. This implies that infrastructure deficits, particularly unreliable internet connectivity and power supply, limit the efficiency and consistency of digital workflows. Financial barriers, including the high cost of software and limited access to training, further restrict the capacity of designers to fully utilize available technologies. While these challenges

were statistically prominent, informants emphasized their practical implications: *“Sometimes you lose hours of work because there is no power or the internet is too slow.”* Similarly, financial constraints were elaborated as limiting professional growth: *“Many designers cannot afford licensed software, so they either use outdated versions or alternatives.”*

Skill gaps were also highlighted as a critical concern: *“There are many new tools, but not everyone has access to proper training to use them effectively.”* These narratives reveal that the challenges are not merely statistical but deeply experiential, affecting productivity, quality, and innovation. Furthermore, client-related issues emerged strongly in qualitative responses, particularly resistance to digital processes: *“Some clients still prefer traditional methods and don’t understand the value of digital design.”* This demonstrates a disconnect between technological advancement and user awareness, which affects the full utilization of digital media. The implication of these challenges is that while digital media adoption is high, it operates within a context of systemic constraints, which may hinder optimal performance and innovation. This highlights the need for improved infrastructure, capacity development, and greater awareness of digital communication value among clients and stakeholders.

Overall, the findings demonstrate that while digital media is deeply integrated into graphic design practice in Benin City, its effectiveness is shaped by both technological opportunities and contextual constraints within a developing economy. These findings align with previous studies by Guanah et al. (2020) and Sujoko et al. (2023) that highlighted the challenges of digital media adoption in developing countries. The results underscore the need for systemic improvements to support digital transformation in the creative industry.

CONCLUSION

This study revealed that digital media has fundamentally transformed graphic design practice in Benin City, positioning designers as key contributors to mass communication. The widespread adoption of digital tools has enhanced communication effectiveness, expanded creative possibilities, and improved professional efficiency. However, the full potential of digital media cannot be realized without addressing the underlying challenges affecting its adoption such as infrastructure

limitations, high costs of acquiring original software applications, and skill gaps which continue to hinder progress. Addressing these issues require coordinated efforts from government, educational institutions, and industry stakeholders.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed:

1. Government and private stakeholders should invest in digital infrastructure, particularly stable internet connectivity and electricity supply, to enhance the effective utilization of digital media tools among graphic designers. This will support the broader integration of digital technologies in communication practice.
2. Professional bodies, institutions, and training centers should develop continuous digital skill acquisition programmes to improve designers’ proficiency in emerging software and communication technologies. This will address the identified skill gaps affecting effective digital media adoption.
3. Policies and support mechanisms should be introduced to improve access to professional design software and digital resources, particularly for freelancers and early-career practitioners. This could include subsidies, institutional licensing schemes, or affordable subscription models.
4. Greater collaboration between academia, industry, and professional design communities should be encouraged to promote innovation, practical knowledge exchange, and the adaptation of digital media practices to local communication needs and realities.
5. Graphic designers should be encouraged to adopt more strategic and audience-centered digital communication practices in order to maximize client engagement, audience reach, and overall communication effectiveness.

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