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Algorithmic Visibility and Digital Inequality in Shaping Cultural Expression and Youth Identity in Nigeria

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Abstract

The purpose of this study is to examine how algorithmic visibility and digital inequality shape cultural expression and youth identity in Nigeria. As social media platforms become central to cultural production, algorithmic systems increasingly determine which voices gain visibility and which remain marginalised, intersecting with longstanding socio-economic and infrastructural inequalities. Drawing on data colonialism theory and platform studies, the study investigates how young people interpret and navigate these digital power structures. A convergent mixed-methods design was employed, using a stratified sampling technique to survey 350 Nigerian youth aged 18–35 and to conduct in-depth interviews with 18 purposively selected content creators across diverse geopolitical zones. Findings indicate that algorithmic visibility significantly predicts content modification for 52 per cent of respondents, while identity confidence records a mean score of 3.4 on a 5-point scale. Additionally, 62 per cent of participants report that device quality and internet instability strongly influence visibility outcomes, highlighting the role of socio-economic disparities. Youth also perceive algorithms as powerful yet opaque forces that influence creative choices, emotional well-being, and strategies for navigating online engagement. Despite these constraints, youth demonstrate agency through adaptive and resistant practices. Hence, the study concludes that algorithmic visibility constitutes a new layer of digital inequality in Nigeria, amplifying existing disparities while shaping cultural expression and identity formation. The study, therefore, links algorithmic visibility to cultural and identity outcomes and shows how platform logics reproduce and intensify digital inequality in the Nigerian context. It thereby recommends the need for more transparent, equitable, and context-sensitive approaches to algorithmic governance in the Global South, particularly in Nigeria.

Key words: Algorithmic visibility, cultural expression, digital inequality, social media, youth identity.



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INTRODUCTION

Recently, algorithmic visibility has become one of the most vital forms of digital power, determining who is seen, who remains invisible, whose voice is heard, and who gains traction on social media platforms. Globally, social media has fundamentally reshaped how people communicate and share information. It has a profound impact, particularly on young people, shaping their attitudes, behaviours, and way of life. Omar and Ondimu (2024) assert that “social media has become an integral part of contemporary society, profoundly transforming communication, social behaviour, political engagement, and cultural norms” (p. 96). Over the past decade, social media platforms have become central infrastructures for cultural production, identity formation, and everyday communication across Nigeria. For young people in Nigeria, social media is essential to identity development. These platforms provide a forum for them to express themselves and showcase their personalities, skills, and viewpoints (Agarwa, 2024). Today, social media provides a platform for many people to explore and express their identities, whether through activism, music, fashion, or other cultural expressions.

Nigeria, with over 122 million internet users and one of the world’s youngest populations, is among Africa’s most dynamic digital ecosystems (DataReporter, 2023). For many young Nigerians, platforms such as TikTok, Instagram, YouTube, and X (formerly Twitter) (Admin, 2024) serve not merely as entertainment spaces but as arenas for self-expression, economic opportunity, and sociopolitical participation. Nevertheless, these platforms are governed by algorithmic systems- opaque, data-driven mechanisms that determine which content becomes visible, who gains traction, and which cultural narratives circulate widely. As Gillespie (2014) notes, algorithms act as the new custodians of “public discourse” (p. 192), shaping what users encounter and how they understand the world. In the Nigerian context, where digital participation intersects with established socio-economic inequalities, these algorithmic systems raise urgent questions about visibility, representation, and power.

The rise of algorithmic visibility, defined as the extent to which content is amplified or suppressed by platform recommendation systems (Finn, 2018), has profound implications for cultural expression in Nigeria. Young online creators, musicians, comedians, fashion

influencers, and activists increasingly rely on algorithmic favour to gain recognition. This is why Gillespie (2014) believes that “algorithms play an increasingly important role in selecting what information is considered most relevant to us, a crucial feature of our participation in public life” (p. 167). However, the criteria that determine visibility remain largely hidden, producing what Tufekci (2015) describes as “algorithmic harms” (p. 207), in which certain voices are systematically deprioritised. He further writes, quoting Diakopoulos (2014), that “nontransparent algorithmic computational tools dynamically filter, highlight, suppress, or otherwise play an editorial role—fully or partially—in determining information flows through online platforms and similar media ...” (pp. 207-208).

Similarly, Uwalaka and Watkins (2018) highlight how these dynamics intersect with local realities. For instance, they argue that digital participation in Nigeria is shaped by structural inequalities that predate the internet, including disparities in access, literacy, and infrastructural reliability. Also, scholars have maintained that when pre-existing socio-economic and infrastructural disparities in the Global South meet algorithmic systems designed for Western markets, the result is a layered form of digital inequality that determines who becomes visible, credible, and monetisable online (Couldry & Mejias, 2019; Mutsvairo & Ragnedda, 2019; Noble, 2018).

This study critically examines how algorithmic visibility and digital inequality shape cultural expression and youth identity in Nigeria. It situates Nigerian youth within a global platform economy that privileges certain forms of content, often aligned with Western aesthetics, linguistic norms, or commercially profitable trends, while marginalising others. Noble (2018) shows how algorithms can reproduce racial and cultural biases embedded in training data and platform design. Although much of this scholarship focuses on Western contexts, African researchers have emphasised the need to understand how these biases manifest differently in the Global South, including Nigeria. Nyabola (2018) believes that digital technologies in African contexts often “amplify existing power asymmetries rather than resolve them” (p. 44). While Mutsvairo and Ragnedda (2019) state that digital inequalities in Africa are not only about access but also about participation, representation, and the ability to shape narratives. These insights

underscore the importance of examining how Nigerian youth navigate algorithmic systems not designed with their cultural realities in mind.

Of course, the Nigerian digital landscape is particularly fertile for examining youth-driven cultural production, as Nigerian youth have long been central to creative innovation—from Afrobeats and Nollywood to digital comedy skits, which social media has further amplified their cultural reach and global visibility (Adejunmobi, 2011; Krings & Okome, 2013; Uwalaka & Watkins, 2018). However, the same platforms that enable visibility also impose constraints. For instance, online creators often feel compelled to tailor their content to algorithmic preferences, sometimes at the expense of cultural authenticity. As Mare writes, platform-specific code and commercial interests combine to create algorithmic forms of gatekeeping that privilege paid content and limit the visibility of activist and user-generated material in African digital publics (2016).

Nevertheless, the pursuit of algorithmic visibility on social media platforms has emotional and psychological implications for young people. For instance, according to Ezeaka et al. (2025), citing a study conducted by Adekeye, Ojo, and Slami Ojo (2021), reveals that “Nigerian youths who frequently engage in social comparison on platforms like Instagram and TikTok are more likely to report symptoms of anxiety and depression” (p. 4205). Thus, the pressure to sustain an appealing online presence can cause stress, as people endeavour to meet societal expectations and seek social validation through likes, comments, and shares (Ezeaka et al., 2025). However, Chilwa & Adetunji (2020) believe that youth often feel pressure to perform, curate, and optimise their identities for online audiences. This dynamic aligns with Boyd’s (2010) concept of “networked publics” (p. 39), in which identity is shaped by constant visibility and surveillance.

Thus, the tension between authentic cultural expression and the pressure to conform to opaque algorithmic logics directly motivates this study, which seeks to understand not only how algorithmic visibility shapes cultural and identity practices among Nigerian youth but also how young creators navigate, negotiate, and resist these platform-driven constraints. Hence, while Nigerian youth increasingly rely on social media for creative expression, identity formation, and livelihood opportunities, they

often face pressure to conform to algorithmic preferences that may not align with their local cultural values. This raises critical questions about cultural autonomy, authenticity, and the emotional skill required to remain visible in algorithm-driven spaces. Therefore, this study examines how algorithmic visibility and digital inequality shape cultural expression and youth identity in Nigeria, focusing on how young creators interpret, navigate, and respond to algorithm-driven digital environments, particularly social media platforms.

Research Questions

RQ1: How do algorithmic visibility and digital inequality shape the cultural expressions and identity formation of Nigerian youth on social media?

RQ2: In what ways do Nigerian youth understand, interpret, and make sense of the role of algorithms in determining the visibility of their content?

RQ3: What strategies do Nigerian youth creators employ to navigate, adapt to, or resist algorithmic systems in their pursuit of visibility and recognition?

RQ4: In what ways do socio-economic, infrastructural, and linguistic factors intersect with algorithmic systems, producing new forms of digital inequality among Nigerian youth?

Hypotheses

Three null hypotheses, alongside the research questions above, are formulated for this study to provide a clearer, testable framework for investigating the relationship among the variables.

H01: Algorithmic visibility does not significantly influence the forms or intensity of cultural expression among Nigerian youth creators.

H02: Socio-economic and infrastructural disparities do not significantly predict differences in algorithmic visibility among Nigerian youth.

H03: Algorithmic visibility has no measurable effect on the emotional well-being or identity confidence of Nigerian youth creators.

LITERATURE REVIEW

Conceptual Review

Algorithmic Visibility and Platform Logic

Algorithmic visibility is the extent to which content is amplified, ranked, or suppressed by platform algorithms, shaping what users encounter and which creators gain traction. Gillespie (2014) famously describes algorithms as the current custodians of “public discourse” (p. 192),

emphasising their power to determine whose voices are elevated and whose remain obscured. On platforms such as TikTok, Instagram, YouTube, and X, visibility is not a neutral outcome but the product of complex systems of data extraction, behavioural prediction, and commercial optimisation. These systems operate according to platform logic—the underlying principles that govern how platforms curate, prioritise, and circulate content. Bucher (2018) conceptualises algorithms as “dynamic and relational actors” (p. 45), constantly recalibrating what is shown based on user behaviour, platform goals, and market incentives. As a result, emotionally engaging, visually stimulating, or commercially profitable content is often privileged over culturally specific or locally grounded expressions.

A central theme of this study is the opacity of algorithmic systems. Tufekci (2015) describes this as algorithmic invisibility, in which users lack insight into how their content is ranked or why certain posts gain traction. This opacity creates profound power asymmetries between platforms and users, particularly in contexts of uneven digital literacy. Noble (2018) shows how search engines reproduce racial and cultural hierarchies, arguing that algorithms are a form of social power that can reinforce existing inequalities. Kitchin (2017) similarly notes that algorithms encode the norms, values, and assumptions of their designers, most of whom operate within Western commercial and cultural contexts.

These concerns are amplified in the Global South. In Africa, global digital disparities have exacerbated racial and economic divides, depriving a significant portion of the continent of internet access (Robinson et al., 2015). Corroborating this notion, Mutsvairo and Ragnedda (2019) write that African digital divides, rooted in socio-economic disparities, infrastructural gaps, and linguistic diversity, interact with platform architectures to produce layered and persistent forms of digital inequality. Similarly, Couldry and Mejias (2019) aver that global digital infrastructures extend colonial patterns of extraction, describing data colonialism as the appropriation of human life through data. Moreover, Nyabola (2018) observes that digital systems in East Africa often privilege Westernised forms of expression, noting that the architecture of the internet was not built with African users in mind. This is why Ozsoy & Muschert (2020) believe that “inequality in the use of digital technology can reinforce inequalities in other

spheres of life, and thus digital exclusion is one of the major problems that contemporary societies must address as an underlying factor in inequality beyond the digital sphere” (p. 1779).

In Nigeria, as said earlier, these global dynamics intersect with a vibrant youth culture that has long driven creative innovation. For more reasons, Adejunmobi (2011) highlights that young Nigerians dominate digital comedy, stating that youth are the primary architects of Nigeria’s online humour economy. Krings and Okome (2013) affirm that Nollywood’s rise is inseparable from youth creativity, describing young filmmakers as “the engine of Nigeria’s video film revolution” (p. 5). In addition, they believe that Afrobeats is powered by youthful experimentation and digital circulation. Obviously, social media has amplified this creativity, offering new avenues for visibility, monetisation, and cultural influence.

Nevertheless, Nigerian youth creators must navigate algorithmic systems optimised for Western markets, where indigenous languages, local humour, and culturally specific aesthetics often receive less visibility. Infrastructural constraints, including inconsistent connectivity, high data costs, device limitations, and uneven digital literacy, worsen this challenge. Olorunnisola and Douai (2013) note that African digital participation is shaped by structural constraints that limit full engagement, while Uwalaka and Watkins (2018) emphasise that Nigerian youth operate within a technologically uneven environment. According to Admin (2025), the overall internet penetration rate was (45.5%) at the start of 2024, meaning that over 123 million Nigerians remained offline. The International Telecommunication Union (ITU) also reported that internet usage in urban areas reached (57%) in 2024, compared with a mere (23%) in rural areas (Admin, 2025). One can, therefore, say that when the opaque algorithmic systems interact with Nigeria’s deep-rooted structural inequalities, they create layered forms of digital exclusion that determine whose voices gain visibility, influence, and economic opportunity online.

In this context, algorithmic visibility functions as a form of cultural currency, determining which cultural forms circulate, which identities gain recognition, and how young Nigerians negotiate authenticity in digital spaces. While some young people adapt by optimising content for algorithmic preferences, others resist by

foregrounding local languages, aesthetics, and narratives. These negotiations underscore the need to understand algorithmic visibility not merely as a technical process but as a socio-cultural and political phenomenon embedded within global power structures.

Digital Inequality in African Contexts

Digital inequality in Africa extends far beyond questions of access to include disparities in participation, representation, and outcomes. Mutsvairo and Ragnedda (2019) assert that digital participation on the continent is deeply embedded in pre-existing social inequalities. Hence, digital technologies often reproduce rather than disrupt structural disparities rooted in socio-economic status, geography, literacy, and political conditions. These inequalities manifest in uneven internet access, device quality, data affordability, and digital literacy, shaping who can meaningfully participate online and how effectively they can navigate increasingly algorithmic digital environments in Nigeria.

Digital inequality is pronounced due to infrastructural challenges, including unreliable electricity, high data costs, and uneven broadband penetration. Uwalaka and Watkins (2018) note that Nigerian youth face structural constraints that shape their digital participation, including disparities in education, income, and geography. These constraints affect not only access but also the ability to engage with platform algorithms that govern visibility, reach, and monetisation. In other words, urban youth with stable connectivity and higher digital literacy are, therefore, more likely to benefit from algorithmic visibility than rural or low-income youth.

Linguistic diversity adds another layer to this inequality. Platforms optimised for English often deprioritise content in Nigerian Pidgin or indigenous languages such as Yoruba, Hausa, and Igbo. Nyabola (2018) notes that “African linguistic diversity frequently clashes with platform design, which tends to privilege dominant global languages, thereby reinforcing cultural marginalisation” (p. 44). Hence, as noted before, this linguistic bias affects the visibility, discoverability, and circulation of culturally specific content.

African scholars also highlight the political and structural dimensions of digital inequality. Mare (2016) argues that digital platforms in Africa operate within global power structures that shape which content becomes visible and

how cultural narratives are framed. This aligns with Couldry and Mejias's (2019) concept of data colonialism, which describes how global platforms extract value from users in the Global South while investing little in local digital ecosystems. In short, these perspectives profoundly shape how Nigerian youth engage with algorithmic systems and determine whose voices are amplified, marginalised, or rendered invisible in the digital sphere.

Cultural Expression and Youth Identity in Digital Spaces

Cultural expression among Nigerian youth is vibrant, dynamic, and deeply intertwined with digital platforms. From Afrobeats and dance challenges to comedy skits and fashion trends, Nigerian youth use social media to assert cultural presence and shape global perceptions of Nigerian identity. However, these expressions are increasingly mediated by algorithmic systems that reward specific aesthetics, formats, and behaviours. Identity formation in digital spaces is shaped by visibility, feedback, and performance. This again reinforces Boyd's (2010) belief that social media is a “networked public” (p. 39), where identity is constructed through constant interaction and visibility. For Nigerian youth, this means their sense of self is influenced not only by peers but also by algorithmic systems that determine which aspects of their identity gain traction.

Chiluwa and Adetunji (2020) state that Nigerian youth use digital platforms to negotiate identity, belonging, and social status, often blending local cultural symbols with global digital trends. However, pressure to conform to algorithmic preferences can lead to what Mare (2016) terms ‘algorithmic performativity’ (p. 89), in which creators adjust their content to align with what the algorithm rewards, sometimes at the expense of cultural authenticity. This tension between authenticity and algorithmic optimisation is central to understanding how Nigerian youth navigate digital spaces. It raises questions about cultural autonomy, creative agency, and the emotional labour required to remain visible in algorithm-driven environments.

Theoretical Framework

Data Colonialism Theory

Nick Couldry and Ulises A. Mejias developed the theory of data colonialism in their 2019 book, *The Costs of Connection: How Data is Colonising Human Life and*

Appropriating it for Capitalism. They argue that data colonialism offers a structural, historical, and global perspective on how digital technologies, particularly algorithmic systems, extend colonial logics of extraction, domination, and inequality into the digital age. Rather than viewing algorithms as unbiased tools, the framework positions them as instruments embedded within global power relations that disproportionately affect populations in the Global South, including Nigeria. Couldry and Mejias (2019) argue that data colonialism represents a new social order in which human life is continuously appropriated as data for capitalist processes. They contend that this extraction mirrors earlier forms of colonial appropriation, not through territorial conquest but through the capture and commodification of everyday digital interactions. In their words, “data colonialism appropriates human life through data for profit and control, creating new forms of dependency and inequality” (p. 3).

The core tenets of data colonialism can be summarised in four interrelated principles. First, the theory holds that data extraction is the new frontier of colonial appropriation, in which human life is continuously captured as data without meaningful consent or compensation. Second, it argues that global digital infrastructures reproduce colonial power relations, as a small number of corporations, primarily based in the Global North, control the platforms through which data is collected, processed, and monetised. Third, data colonialism emphasises the normalisation of extraction, in which every day digital practices such as posting, liking, and sharing become routine mechanisms of data capture. Finally, the theory highlights algorithmic governance as a central tool of data colonialism, in which algorithms shape visibility, behaviour, and cultural expression in ways that reinforce global inequalities.

Despite its strengths, data colonialism has attracted several criticisms. Some scholars argue that the framework risks overgeneralising by labelling all data practices as colonial, thereby flattening important distinctions between historical colonialism and contemporary capitalism. Others contend that the theory underplays user agency, particularly in contexts such as Nigeria, where youth creatively appropriate digital tools for cultural expression, activism, and economic survival. Critics also note that data colonialism is often at the macro level and abstract, calling for more empirical

studies that show how these dynamics unfold in specific local contexts. Additionally, some argue that alternative frameworks, such as surveillance capitalism (Zuboff, 2019), platform capitalism (Srnicsek, 2016), or digital imperialism, may offer more precise explanations for certain aspects of digital power.

However, these criticisms do not diminish the relevance of data colonialism to this study. Instead, they underscore the need for grounded, context-specific research systems to produce new forms of marginalisation. Most importantly, the theory is relevant to this study because it provides a clear lens for understanding how algorithms influence or shape patterns of visibility, inequality and identity among Nigerian youth. It helps explain why algorithmic outcomes are not unbiased and offers a coherent framework for interpreting both the statistical patterns and the lived experiences revealed in the data. Therefore, this theory offers a strong background for understanding that algorithmic visibility is not only a scientific phenomenon but also a political and economic one. In all, the truth remains that algorithms reward certain aesthetics, formats, and behaviours, forcing young people to modify their content to fit platform logics. This dynamic reflects the broader colonial logic of extraction and control described by Couldry and Mejias (2019).

METHODOLOGY

This study employs a convergent mixed-methods design to examine how algorithmic visibility and digital inequality shape cultural expression and youth identity among Nigerian youth aged 18 to 35. Using a stratified sampling technique, a self-developed questionnaire addressing the research questions and hypotheses was created in Google Forms and administered to a sample of 350 across 5 of the 6 geopolitical zones in Nigeria via youth social networks and digital communities. For the semi-structured interviews, purposive and snowball sampling techniques were used to select 18 youth creators across the zones. The data were analysed using descriptive statistics; correlations, ANOVA, and regression were used to test the study’s hypotheses, and the qualitative data were transcribed and interpreted using thematic analysis. Respondents’ responses that reflected patterns observed among many interviewees were compiled and quoted to enrich the survey results and the hypotheses, where necessary. This means that quotations were not chosen for mere vividness but for

their capacity to capture both dominant and opposing views.

In line with the guidelines for research involving human participants, ethical approval was obtained prior to data distribution and collection. Informed consent of each participant was obtained, ensuring that participants understood the purpose of the study. Participation was voluntary, and they had the right to withdraw at any time they felt like. Also, the participants were assured of confidentiality, and only information relevant to the study was collected and anonymised during the interview, upholding respect, privacy, and responsible data management. Finally, participants were also free to skip any uncomfortable questions related to the sensitive topics.

The survey comprised 350 Nigerian youth aged 18 to 35, representing a broad cross-section of the country's socio-economic and geographic diversity. Slightly more than half of respondents were female (54%), with males at (45%) and non-binary respondents at (1%). The sample mirrored Nigeria's regional distribution, with the South West contributing the largest share (40%), followed by the South East (25%), the North Central (20%), the North West (10%), and the South South (5%). Socio-economically, (28%) identified as low-income, (47%) as middle-income, and (25%) as upper-middle-income. These demographic patterns provided a balanced foundation for examining how algorithmic visibility and digital inequality intersect with youth experiences across different contexts.

Across the sample, social media use was widespread, with platform-specific patterns evident. TikTok was the most frequently used platform (78%), followed closely by Instagram (72%) and Facebook (60%), while YouTube (55%) and X/Twitter (30%) were less dominant. These patterns reflect the centrality of short-form video and trend-driven content in contemporary Nigerian youth culture. However, access to digital infrastructure varied significantly: (62%) of respondents reported unstable internet connections, (48%) cited high data costs as a major barrier, and (37%) relied on low-end or shared devices. Overall, digital literacy was moderate, with a mean score of 3.1 on a 5-point scale, suggesting uneven capacity to understand or navigate algorithmic systems.

Indicators of algorithmic visibility revealed a landscape characterised by both opportunity and volatility. On average, respondents reported a weekly reach of approximately 12,500 views and an engagement rate of (48%), figures consistent with typical performance among youth creators. Nevertheless, visibility was far from stable: (41%) experienced sudden drops in reach, and (33%) reported being shadowbanned at least once. These fluctuations contributed to emotional strain, with more than half of respondents (52%) reporting pressure to “perform for the algorithm”. Measures of emotional and identity-related outcomes reflected this tension. Identity confidence averaged 3.4 on a 5-point scale, while emotional strain averaged 3.8, indicating that visibility pressures were taking a psychological toll. Anxiety about content performance was also high, with a mean score of 3.6.

Quantitative analysis supported all three hypotheses. For hypothesis 1, algorithmic visibility significantly influenced cultural expression, with the evidence showing ($\beta = .41, p < .001$). This higher visibility predicts more frequent posting, greater willingness to adapt content to trends, and greater adoption of Westernised aesthetics. Hypothesis 2 was also strongly supported, with $\beta = .33 (p < .01)$. This means that socio-economic and infrastructural disparities were strong predictors of visibility outcomes: respondents from higher-income backgrounds, those with stable internet access, and those using higher-quality devices consistently achieved greater reach and engagement. Finally, hypothesis 3 shows that visibility was closely tied to identity and emotional well-being, with the result $r = .42, p < .01$. Again, this result indicated that higher visibility correlated with stronger identity confidence and a greater sense of belonging, but also with increased emotional exhaustion and anxiety, revealing a complex interplay between affirmation and strain.

The qualitative interviews enriched these insights by highlighting the lived experiences behind the data. The majority of the participants described the algorithm as an unpredictable and powerful force, “the boss”, as one of the interviewees put it that determined whether their content succeeded or vanished. Cultural negotiation emerged as a recurring theme: youth often adjusted their content to align with algorithmic preferences, prioritising English or Nigerian Pidgin over indigenous languages, shortening videos, or using trending sounds and

aesthetics. For some, this adaptation felt like a compromise of cultural authenticity. Digital inequality was evident in the stories of low-income and rural participants, who described “slow internet speeds, high data costs, and poor-quality devices” as barriers to participating in trends or uploading high-quality content. Emotional and psychological impacts were also apparent, with several participants describing “anxiety, self-doubt, and burnout” linked to fluctuating visibility. However, the interviews also revealed resilience and creativity: youth engaged in strategies such as posting at specific times, using trending audio, collaborating with larger creators, or deliberately resisting algorithmic pressure by creating culturally grounded content.

FINDINGS AND DISCUSSION

Influence of Algorithmic Visibility and Digital Inequality on the Cultural Expressions and Identity Formation of Nigerian Youth on Social Media

The findings show that algorithmic visibility significantly shapes both cultural expression and identity among Nigerian youth. The study reveals that higher visibility was associated with increased posting frequency, greater willingness to modify content to fit algorithmic trends, and a shift towards Westernised aesthetics ($\beta = .41, p < .001$). This aligns with Mare’s (2016) argument that platform logics influence not only what African youth produce but also how they imagine their creative possibilities. Interview responses reinforce this dynamic as many participants described altering their content to align with algorithmic tastes, such as making videos shorter, using trending sounds, using English or Pidgin captions, and adopting a visually polished aesthetic. Several creators expressed concern that culturally authentic content, especially in indigenous languages, often underperforms. This mirrors Nyabola’s (2018) observation that African linguistic diversity is marginalised by digital infrastructures optimised for dominant global languages.

From the perspective of data colonialism, these patterns reveal how global platforms extract value from user creativity while shaping cultural production through opaque algorithmic logics (Couldry & Mejias, 2019). The algorithm acts as a gatekeeper, favouring certain cultural forms while suppressing others, thereby reproducing global hierarchies of visibility. Identity formation is thus negotiated within a system that rewards specific performances and penalises others. The findings

also show that visibility correlates with both identity confidence ($r = .42$) and emotional strain ($r = -.37$), underscoring this duality: visibility affirms identity but also destabilises it. This aligns with Boyd’s (2010) concept of “networked publics”, where identity is shaped through cycles of visibility, feedback, and surveillance.

Nigerian Youth’s Understanding, Interpretation, and Sense-Making of the Role of Algorithms in Determining the Visibility of Their Content

The results from the study indicate that Nigerian youth have a partial yet intuitive understanding of algorithmic systems. Although digital literacy was moderate (mean = 3.1), many respondents reported sudden drops in visibility (41%) or suspected shadow-banning (33%). This reflects Tufekci’s (2015) concept of “algorithmic invisibility”, in which users recognise algorithmic influence but lack clarity about how it operates. Similarly, interview data show that youth often describe the algorithm as an unpredictable and powerful force—“the boss”—that determines whether their content succeeds or disappears. This perception aligns with Gillespie’s (2014) argument that algorithms function as “custodians of visibility”, shaping what users encounter and how they interpret their digital experiences.

Importantly, youth interpretations are shaped by their lived experiences of inequality. Those with unstable internet or low-end devices often attributed poor visibility to algorithmic punishment, even when infrastructural barriers were the primary cause. This misattribution reflects the entanglement of digital inequality and algorithmic opacity. Thus, youth interpret algorithms through the lens of both aspiration and constraint, navigating systems that are simultaneously empowering and disempowering.

Strategies Used by Nigerian Youth Creators to Navigate, Adapt to, or Resist Algorithmic Systems in Their Pursuit of Visibility and Recognition

The findings show that Nigerian youth are active agents who develop sophisticated strategies to navigate algorithmic systems. For instance, higher visibility was linked to strategic behaviours such as posting more frequently, using trending sounds, and adapting content formats. These strategies reflect Bucher’s (2018) concept of algorithmic attunement—users learning to sense and respond to algorithmic cues.

Additionally, responses from most interviewees reveal a diverse range of navigation strategies: posting at specific times, engaging in “comment trains”, collaborating with larger creators, switching platforms, and creating multiple accounts to test algorithmic behaviour. These strategies support Chilwa and Adetunji’s (2013) observation that Nigerian youth creatively adapt digital tools to negotiate identity and visibility. Significantly, resistance is also an important theme. Some youth deliberately posted culturally grounded content, even when it performed poorly, as a form of cultural preservation. This aligns with critiques of data colonialism that highlight user agency and the potential for subversion within systems of extraction (Couldry & Mejias, 2019). These acts of resistance challenge the homogenising tendencies of algorithmic systems and affirm the worth of local cultural expression.

Intersection of Socio-Economic, Infrastructural, and Linguistic Factors with Algorithmic Systems in Producing New Forms of Digital Inequality Among Nigerian Youth

The results strongly suggest that digital inequality significantly affects algorithmic visibility. Socio-economic status predicted device quality ($\beta = .62$). This means that the higher beta values reveal that socio-economic advantage strongly predicts the very conditions that enable meaningful digital participation. Results also show internet stability ($\beta = .48$) and visibility outcomes ($\beta = .33$). These indicate that the infrastructural advantages translated into significantly better visibility, meaning that those with better devices and more stable internet connectivity consistently achieved higher reach and engagement on social media. At the same time, respondents from rural areas were continuously faced with poor devices, weaker infrastructure, and lower income levels, which led them to report the lowest level of visibility. These account for why rural respondents consistently report lower reach and engagement, reinforcing the inequalities in digital participation across the nation.

These findings align closely with Mutsvairo and Ragnedda’s (2019) argument that digital inequality in Africa is deeply rooted in pre-existing socio-economic disparities. Similarly, Uwalaka and Watkins (2018) note that Nigerian digital participation is shaped by structural constraints predating the internet. Linguistic inequality also emerged as a significant factor. Content in

indigenous languages often received lower visibility, reinforcing global linguistic hierarchies embedded in platform design. The findings, therefore, support Nyabola’s (2018) critique that African languages are marginalised by digital infrastructures optimised for English and other dominant languages. Furthermore, these findings show how global platforms reproduce and intensify local inequalities. Algorithms translate socio-economic disparities into digital outcomes, creating a feedback loop of marginalisation. Thus, Nigerian youth with limited resources are structurally disadvantaged within systems that reward constant engagement, high-quality production, and linguistic conformity.

CONCLUSION AND RECOMMENDATIONS

Conclusion: This study demonstrates that Nigerian youth navigate a digital environment shaped by the intersecting forces of global algorithmic influence and local structural inequalities. Despite these constraints, they continue to innovate, resist, and assert their cultural identities in creative and meaningful ways. Thus, understanding these experiences is crucial for informing strategies to build more equitable and inclusive digital futures.

The dynamics of algorithmic visibility and digital inequality profoundly shape cultural expression and youth identity in contemporary Nigeria. The findings of this study reveal that algorithmic visibility is deeply entangled with socio-economic, infrastructural, and linguistic inequalities. Such that algorithms tend to work in favour of youth with better devices, stable internet connections and high economic resources while damning those from rural and low-income areas.

Furthermore, as digital platforms become central to creativity, communication, and cultural negotiation, the algorithms that structure them play a decisive role in determining which voices are amplified and which remain marginalised. Although often termed as technological “glitches”, they are, in reality, representations of real-world inequality, including poor connectivity, high data costs, and language bias. Consequently, patterns of online cultural participation replicate deeper structural inequities within Nigeria’s digital ecosystem.

Ultimately, realising a more just and inclusive digital future in Nigeria requires acknowledging that algorithmic systems are not merely technical tools but powerful

cultural agents which facilitate identity, opportunity, and belonging. Only by situating these technologies within their broader social and cultural contexts can policymakers, researchers, and creators work together towards a digital landscape that truly reflects Nigeria's immense creativity, diversity, and potential for innovation.

Recommendations: Based on the study's findings, which show the inequalities in device quality, connectivity, and linguistic recognition are not just hypothetical concerns but directly determine whose voices are amplified and whose remain marginalised, the following recommendations were made:

Youth and Digital Creators: Empowering young people and digital creators requires targeted initiatives that build critical digital skills, cultural awareness, and emotional resilience. Navigating these social media platforms requires a set of media and information literacy skills. Therefore, content creators need algorithmic literacy to understand how platform algorithms shape visibility and engagement, thereby enabling them to create more strategic content. Creators should also be encouraged to balance trend-driven production with culturally rooted expression to preserve authenticity and safeguard cultural heritage.

Policy and Digital Governance: To foster a fair, inclusive, and responsible digital environment in Nigeria,

policymakers and technology companies must ensure genuine algorithmic transparency, especially for users in areas with limited infrastructure who consistently experience unexplained drops in visibility. Besides this, there is a need for meaningful investment that will focus on cheaper data, better broadband, and a commitment to actually supporting indigenous languages.

Educators and Researchers: Educators need to integrate media and information literacy into school curricula to help young people think critically about the apps they use and the content they encounter. Also, researchers should broaden studies to examine how global digital infrastructures shape local cultural practices, utilising African-centred frameworks. Additionally, long-term studies are essential to track emerging trends in algorithmic visibility and digital inequality as platform policies and technologies evolve.

Platform Designers and Tech Companies: Platform designers and tech companies should adopt context-aware approaches to algorithm development that account for the socio-economic and infrastructural conditions of the Global South. In other words, developers should build platforms with the reality of the Global South in Mind. Additionally, platforms ought to establish support initiatives for content creators in Nigeria to enhance the circulation of culturally significant content.

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