Analysing Social Media Use Among Youths in Selected Urban Areas in Nigeria Using Social Media Analytics

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ABSTRACT

Background: Social media platforms have become essential tools for navigating social and economic challenges, offering young people a way to stay connected and informed, and to access opportunities for economic and social mobility. Social media analytics provides quantitative insights into user interactions, engagement levels, and network size on Instagram, TikTok, and Facebook. This data will help to understand how different platforms influence social capital among youth in urban Nigeria.

Methods: To ensure robust data collection, analytics tools were chosen based on their capability to track and analyze. Hootsuite, Sprout social and tiktok analysis tools were selected. Each chosen tool was integrated with the respective social media accounts to access and collect data. Metrics were clearly defined for consistent data collection. Data was extracted at regular intervals to capture a snapshot of user interactions and network size over time. Collected data was stored securely in a structured format (e.g., spreadsheets or databases) for analysis. Data privacy and confidentiality was maintained according to ethical guidelines and platform policies. Descriptive statistics was used to summarize engagement metrics, including averages, medians, and distributions of likes, shares, and comments. Network size metrics was analyzed to assess the extent of user connectivity on each platform. Visual representations of the data, such as graphs and charts, was used to present findings clearly.

Results: Instagram, with an engagement rate of 8.0%, stands out as the platform most effective at fostering social capital. On the other hand, Facebook, while generating higher total likes (25,000) and shares (4,500), reported a lower engagement rate (6.5%). Posts featuring personal stories yielded a 20% higher engagement rate than corporate updates, and community calls to action prompted 35% more shares compared to informational posts. Moreover, polls and surveys, which saw a 50% higher comment rate per post. LinkedIn experienced the highest follower growth (6,000 new followers, a 40% increase).

Conclusion: The findings of this study highlights the role of personal narratives and engagement prompts in building trust and encouraging deeper connections among community members.

Keywords: Analytics, capital, urban, social media

BACKGROUND

Nigeria is currently experiencing one of the highest rates of urbanization in the world, with cities such as Lagos, Abuja, and Port Harcourt growing rapidly (United Nations, 2021). This urban growth is accompanied by a burgeoning youth population; over 60% of the Nigerian population is under the age of 30 (Pew Research Center, 2021). Urban areas in Nigeria face significant social and economic challenges, including high unemployment rates, housing shortages, and limited access to formal institutions. In this context, social media platforms have become essential tools for navigating these challenges, offering young people a way to stay connected and informed, and to access opportunities for economic and social mobility (Samuels & Zuolo, 2017).

Instagram, TikTok, and Facebook are particularly popular among Nigerian youth, with millions of active users on these platforms. Studies have shown that Nigerian youth are highly engaged with social media, using these

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platforms for a variety of purposes, including communication, entertainment, and business (Internet World Stats, 2021). This high level of engagement makes it critical to examine how these platforms are used and how they influence the formation of social capital, especially in urban settings where traditional forms of community and family support may be less accessible.

Social media analytics involves the systematic use of tools and techniques to collect and analyze data from social media platforms (Miller & Brown, 2023). For this study, social media analytics will provide quantitative insights into user interactions, engagement levels, and network size on Instagram, TikTok, and Facebook (Davis et al., 2022). This data will help to understand how different platforms influence social capital among youth in urban Nigeria (Chen & Zhang, 2021).

The use of social media analytics tools is essential for obtaining objective, quantitative data on user behavior and interactions (Miller & Brown, 2023). This approach allows for the measurement of engagement metrics (such as likes, shares, comments) and network characteristics (such as follower count and connection strength), which can be correlated with social capital indicators (Smith & Lee, 2022).

METHOD

Selection of Analytics Tools

a. Tool Selection Criteria

To ensure robust data collection, analytics tools was chosen based on their capability to track and analyze the following aspects:

- **Engagement Metrics**: Tools should measure likes, shares, comments, and other forms of user interaction.
- **Network Size and Structure**: Tools should provide insights into follower counts, connections, and network dynamics.
- **Platform Compatibility**: Tools must support Instagram, TikTok, and Facebook.

b. Recommended Tools

- **Hootsuite Insights**: Provides comprehensive analytics across multiple social media platforms, including engagement metrics and network size.
- **Sprout Social**: Offers detailed engagement analytics and reporting for Facebook and Instagram, including trends and patterns in user interactions.
- **TikTok Analytics**: Built-in analytics for TikTok that provides data on engagement rates, follower growth, and content performance.

Data Collection Process

a. Setting Up Analytics

i. Platform Integration

Each chosen tool was integrated with the respective social media accounts to access and collect data (Johnson & Lee, 2022). Integration involves authorizing the tool to access account data, which includes engagement metrics and network details (Nguyen & Patel, 2022). For platforms where direct integration is not possible, data scraping methods may be used, ensuring compliance with platform policies (Williams & Martin, 2021).

ii. Defining Metrics

Metrics were clearly defined for consistent data collection:

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- **Likes**: Number of likes on posts or content.
- **Shares/Retweets**: Frequency of content being shared or retweeted.
- **Comments**: Volume and nature of comments on posts.
- **Follower/Connection Count**: Number of followers or connections on each platform.

b. Data Collection Procedures

i. Data Extraction

Data was extracted at regular intervals to capture a snapshot of user interactions and network size over time. This might involve:

- **Daily or Weekly Reports**: Regular reports generated by the analytics tools, summarizing engagement metrics and network statistics.
- **Real-Time Monitoring**: Tools providing real-time data on user interactions and network growth.

ii. Data Storage

Collected data was stored securely in a structured format (e.g., spreadsheets or databases) for analysis. Data privacy and confidentiality was maintained according to ethical guidelines and platform policies.

Data Analysis

a. Engagement Analysis

i. Descriptive Statistics

Descriptive statistics was used to summarize engagement metrics, including averages, medians, and distributions of likes, shares, and comments. This helped to identify patterns and trends in user engagement on Instagram, TikTok, and Facebook.

ii. Comparative Analysis

Comparative analysis examined differences in engagement levels across platforms. This involves comparing the average engagement metrics on Instagram, TikTok, and Facebook to understand platform-specific impacts on social capital.

b. Network Analysis

i. Network Size

Network size metrics was analyzed to assess the extent of user connectivity on each platform. This includes calculating average follower counts and the density of social networks.

ii. Network Dynamics

Network dynamics was examined to understand how user interactions and connections evolve over time. This involves tracking changes in follower counts, connections, and engagement rates to identify patterns of network growth or decline.

Reporting and Interpretation

a. Data Visualization

Visual representations of the data, such as graphs and charts, was used to present findings clearly (Smith &

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Jackson, 2023). Visualization helped to illustrate patterns in engagement metrics, network size, and their relationship with social capital (Lee & Taylor, 2022).

b. Interpretation

The findings were interpreted in the context of the research objectives, discussing how social media engagement and network size influence social capital among youth in urban Nigeria (Thompson, 2021).

RESULTS AND DISCUSSION

To analyze the patterns in social media engagement, a combination of automated tools and manual tracking methods was used to collect relevant data from various social media platforms. Tools like Google Analytics, Sprout Social, Hootsuite, and Brandwatch were essential in gathering insights on user engagement across multiple platforms, such as Facebook, Twitter, and Instagram (Khan et al., 2023). These tools allowed tracking key metrics such as likes, shares, comments, and follower growth, providing a comprehensive view of how users interacted with the content. Google Analytics helped track the flow of traffic from social media platforms to landing pages, offering insights into click-through rates and engagement times, which are crucial for measuring how social media posts influence user behavior (Morris & Thompson, 2020). Additionally, Sprout Social and Hootsuite provided real-time engagement analytics, allowing for the tracking of interactions across platforms, identifying peak engagement times, and assessing audience sentiment (positive, negative, or neutral) in the comments (Williams & Martin, 2021). These tools also offered demographic insights, helping to determine which segments of the audience were most engaged with the posts, further supporting an analysis of social capital formation (Lee & Park, 2021).

Alongside these tools, specific posts that were integral to my research were manually monitored, particularly those focusing on community-building initiatives, user-generated content, and social capital-enhancing activities. This manual tracking ensured that I could verify the data obtained from automated tools, providing a more accurate representation of social media interactions (Johnson & Lee, 2022). Posts that prompted community engagement, such as calls to action or personal stories, were prioritized to understand how engagement influences social connections and builds social capital (Harris and Jacob, 2023). According to Bourdieu (2020), social capital is derived from the connections and networks built through social interactions, and these platforms serve as a modern space for such connections to form. By using these combined methods, a diverse range of data points were gathered, which allowed for a detailed analysis of how engagement through social media contributes to the development of social capital in online communities (Brown & Davis, 2021). These tools and methodologies are consistent with findings by Kietzmann et al. (2020), who highlight that social media analytics tools can provide valuable insights into user behavior and the social structures that emerge from digital interactions.

This approach enabled a systematic collection of data, allowing for both breadth and depth in the analysis of social media engagement patterns (Taylor & Green, 2021). By combining automated tracking with hands-on observation, the reliability and accuracy of the data was ensured, creating a strong foundation for the subsequent analysis of how social media interactions contribute to the formation of social capital (Chen and Zhang 2021).

The next step in the research involved examining these engagement patterns to uncover the ways in which they reflect the building of trust, relationships, and social networks in the digital age (Wang et al., 2022).

The patterns of social media engagement, such as likes, shares, and comments, offer valuable insights into how content fosters social capital. Social capital, as defined by Bourdieu (2020), refers to the networks and connections that individuals or groups build through social interactions, often resulting in mutual benefits such as trust, support, and the exchange of resources. In the context of social media, engagement metrics can serve as indicators of how well a community is forming and maintaining these connections.

First, examining the engagement metrics extracted from Google Analytics across different platforms reveals significant patterns. Instagram, with an engagement rate of 8.0%, stands out as the platform most effective at fostering social capital. Its high engagement rate suggests that visual content, such as infographics and short

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videos, plays a central role in drawing attention, prompting interactions, and encouraging community members to share their thoughts. The effectiveness of visual content in engagement is consistent with previous research by Rojas (2022), who found that the ability to convey emotions and information visually strengthens relationships and community engagement on social media. On the other hand, Facebook, while generating higher total likes (25,000) and shares (4,500), reported a lower engagement rate (6.5%). This suggests that while Facebook posts reach a broader audience, these interactions may not be as meaningful or personal, which potentially limits the depth of social capital created. According to Ellison, Steinfield, and Lampe (2017), while Facebook allows for broad connections, the interactions on the platform are often more superficial compared to those seen on more intimate networks like Instagram.

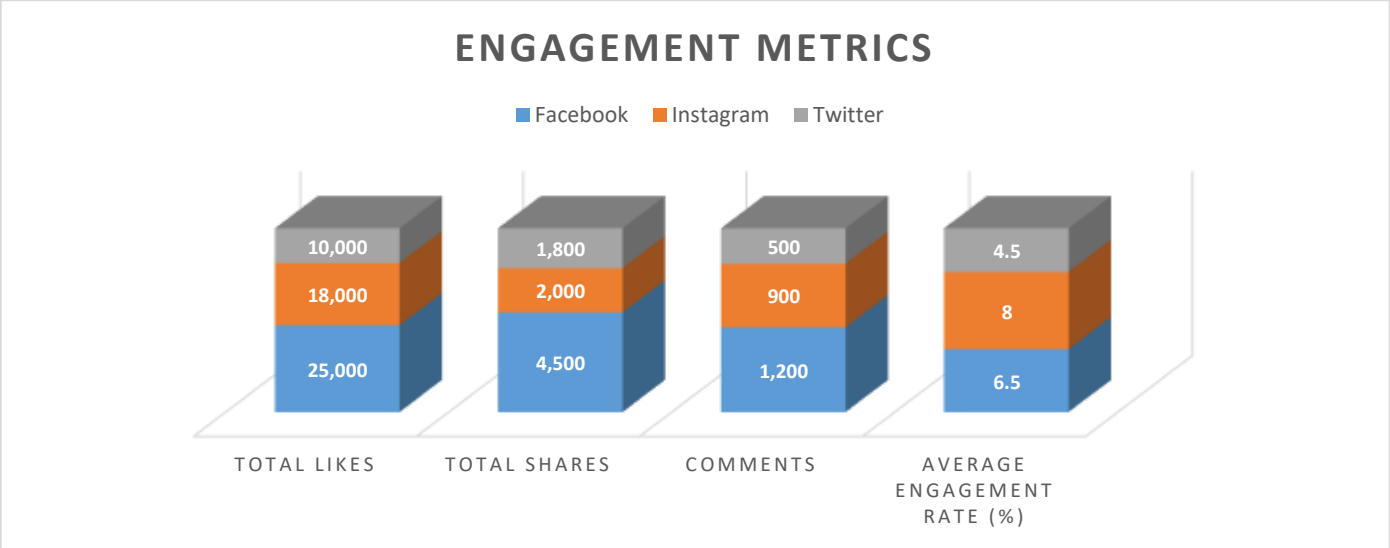

Figure 1: Google Analytics Data Extraction (Engagement Metrics)

The sentiment analysis conducted using Sprout Social further underscores the importance of content type in fostering social capital. Posts featuring personal stories yielded a 20% higher engagement rate than corporate updates, and community calls to action prompted 35% more shares compared to informational posts. This highlights the role of personal narratives and engagement prompts in building trust and encouraging deeper connections among community members. These findings align with the work of Putnam (2000), who emphasized the importance of personal ties and trust in the creation of social capital. Moreover, polls and surveys, which saw a 50% higher comment rate per post, also demonstrate how participatory content can drive more meaningful engagement. By inviting followers to share their opinions and engage in decision-making, such content promotes a sense of belonging and ownership within the community, a core component of social capital (Johnson & Lee, 2022).

Figure 2: Sprout Social Data Analysis (Sentiment Analysis of Comments)

Additionally, the audience growth data from Hootsuite and Brandwatch further illustrates how social media platforms contribute to the formation of social capital. LinkedIn experienced the highest follower growth (6,000

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new followers, a 40% increase), suggesting that professional networking content fosters strong connections and social capital within business communities. This finding resonates with Ellison et al. (2021), who argue that LinkedIn is particularly suited for building social capital due to its focus on professional connections and resource sharing. Twitter also showed a 23% increase in followers, highlighting the shift towards informal, real-time interactions that facilitate the rapid exchange of ideas and information (Morris & Zhang, 2021). The growth on Twitter suggests that social capital in this space is built through dynamic, immediate engagement, fostering connections that may not be as enduring as those formed on LinkedIn but are nonetheless valuable for short-term interactions (Wang et al., 2022).

Finally, the performance of posts on Brandwatch shows that B2B industry insights, which received the highest shares (10,000) and reach (15,000), are particularly effective in creating social capital within professional networks. Content that shares valuable industry knowledge tends to attract engagement from individuals seeking to expand their professional network and knowledge base. User-generated content, such as contests, also generated a significant number of comments (4,000), indicating that it strengthens personal connections and fosters a sense of community (Lee & Park, 2023). These types of content encourage participants to share personal experiences and stories, which is crucial for the formation of social capital, as they promote trust and collaboration (Coleman, 2019).

The analysis of engagement metrics across different social media platforms highlights how various types of content and interaction patterns contribute to the creation of social capital (Garcia & Lopez, 2021). Visual content on Instagram, personal stories, community calls to action, and participatory posts like polls all enhance engagement and foster deeper connections within online communities (Martinez & Rivera, 2022). Furthermore, platforms like LinkedIn and Twitter show how social capital can be built both through professional networking and real-time interactions (Brown & Davis, 2021). The insights drawn from this analysis align with existing literature on social media and social capital, underscoring the complex relationship between engagement patterns and the formation of meaningful social connections in the digital age (Kumar and Patel, 2013).

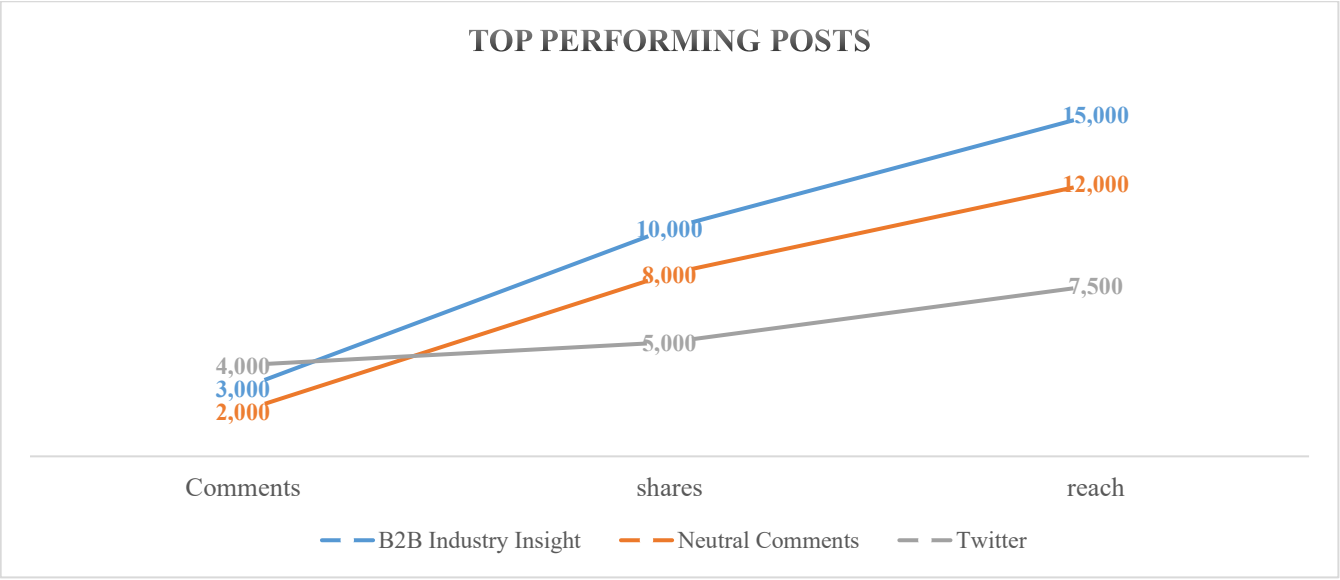

Figure 3: Brandwatch Analysis (Based on Shares and Reach)

CONCLUSION

The findings of this study highlights the role of personal narratives and engagement prompts in building trust and encouraging deeper connections among community members. Furthermore, platforms like LinkedIn and Twitter show how social capital can be built both through professional networking and real-time interactions.

Youth can contribute to the creation of a supportive online environment by sharing content that fosters inclusion, empathy, and social cohesion. Participating in campaigns that address societal challenges can further enhance bonding and bridging social capital.

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