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The Role of Digital Literacy in Information Discernment and Misinformation Resilience: A Dual-Outcome Analysis in the Nigerian Social Media Context

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Abstract

This study investigates the relationship between digital literacy and misinformation resistance among Nigerian social media users, examining both information discernment capability and misinformation resilience behaviour as distinct outcomes. Through a quantitative survey of 306 active social media users in Nigeria, the research employs PLS-SEM to analyse the direct and mediated relationships between these variables. The study demonstrates strong positive relationships between digital literacy and fact-checking behaviour ($\beta = 0.681$, $p < 0.001$), and between fact-checking behaviour and both information discernment capability ($\beta = 0.609$, $p < 0.001$) and misinformation resilience behaviour ($\beta = 0.428$, $p < 0.001$). These results suggest that the development of practical verification skills, rather than general digital competencies alone, is crucial for effective misinformation resistance. The findings contribute to our understanding of how digital literacy influences misinformation resistance in developing nations and provide practical implications for digital literacy education programs and social media platform policies.

Keywords: Digital literacy, misinformation resistance, fact-checking behaviour, social media, information discernment, Nigeria

1. INTRODUCTION

The emergence of social media platforms has transformed the way information is created, shared, and consumed in modern society (Nielsen & Ganter, 2022; Miller et al. 2016; Tudoroiu, 2014). Although in this digital revolution the information is democratised, it also brings unparalleled challenges to the veracity and trustworthiness of the information. The viral nature

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of misinformation on social media poses a major challenge to social cohesion, democratic politics, and public conversation (Bessi et al., 2015; Wang et al., 2019). More precisely, the ability of individuals to distinguish between reliable and fake news has become a major concern in the daily use of today's digital ecosystem (Ahmed et al., 2019).

Accordingly, digital literacy - broadly, the overall ability and capability to understand and utilise digital information for navigating, judging, and using digital information - is becoming such a critical issue in the fight against the dissemination of fake news and misinformation (Jones-Jang et al., 2021). Nevertheless, the constantly changing nature of social media and the constant modernisation process, suggest a potentially intricate relationship between digital literacy and resistance to misinformation that requires continuous investigation (Ahmed et al., 2019). Uncovering this correlation is of particular importance to rapidly developing economies such as Nigeria, where the steep rate of digital penetration is offset by the lack of direct access to organised digital education facilities (Olanrewaju et al., 2021; Egbe, 2023).

The association between digital literacy and resistance to misinformation explored in prior studies has demonstrated that better levels of digital literacy are associated with greater ability to detect false information (Jones-Jang et al., 2021; Guess et al., 2020). However, there is a gap in understanding how digital literacy shapes the cognitive and behavioural components of resisting misinformation, especially in developing nations (Brisola & Doyle, 2019). In addition, while prior studies like Shao et al. (2018) have reported the utility of fact-checking behaviours in combating disinformation, this evidence base is yet sufficiently considered fact-checking behaviour as a mediating variable in the digital literacy and misinformation construct.

This research makes three significant contributions to the literature. First, it introduces a dual-outcome framework that distinguishes between information discernment capability (cognitive) and misinformation resilience behaviour (behavioural), addressing the limitation of prior studies that examine these as a single construct. Second, it empirically tests fact-checking behaviour as a mediating mechanism, advancing theoretical understanding of how digital literacy translates into misinformation resistance. Third, it provides empirical evidence from Nigeria, filling the substantial gap in research from developing nations where misinformation challenges are acute but under-studied. These contributions have practical implications for designing digital literacy programs that effectively combat misinformation in resource-constrained contexts.

Research Objectives and hypotheses:

This study investigates the relationship between digital literacy and misinformation resistance among Nigerian social media users, examining both information discernment capability and misinformation resilience behaviour as distinct outcomes where fact-checking behaviour is a mediating variable. The specific objectives are:

1. To examine the relationship between digital literacy levels and information discernment capability among Nigerian social media users

2. To investigate the impact of digital literacy on misinformation resilience behaviour
3. To analyse the mediating role of fact-checking behaviour in the relationship between digital literacy and both dependent variables

Based on these objectives and the existing literature, the following hypotheses are proposed:

- H1: Digital literacy level has a positive direct effect on fact-checking behaviour
- H2: Fact-checking behaviour positively influences information discernment capability
- H3: Fact-checking behaviour positively influences misinformation resilience behaviour
- H4: Digital literacy level has a direct positive effect on information discernment capability
- H5: Digital literacy level has a direct positive effect on misinformation resilience behaviour

2 LITERATURE REVIEW

2.1 Conceptual Clarifications and Theoretical Landscape

Digital Literacy:

Digital literacy has undergone significant conceptual evolution since its initial conceptualisation as basic computer skills to become a multifaceted construct encompassing critical evaluation of digital information (van Laar et al., 2017). Modern understanding of digital literacy extends beyond technical competencies to include cognitive and social-emotional dimensions that are essential for navigating contemporary digital environments (Ng, 2012). Ng's (2012) influential framework identifies three interconnected dimensions: technical literacy (the ability to use digital tools and platforms), cognitive literacy (the capacity to critically evaluate and analyse digital information), and social-emotional literacy (the skills to engage appropriately in digital social contexts). This multidimensional understanding is crucial for examining how digital competencies translate into misinformation resistance behaviours.

Recent scholarship has challenged the assumption that technical digital skills automatically confer critical evaluation abilities. Pangrazio and Selwyn (2019) argue that digital literacy programs often emphasise technical competencies while neglecting critical thinking skills necessary for information evaluation, a critique particularly relevant in developing nations where digital adoption often outpaces structured digital education. Anthonysamy and Sivakumar (2024) operationalise digital literacy in the context of misinformation identification through three key components: technical competence (familiarity with internet-related terms and platform functionality), cognitive literacy (ability to analyse and critically evaluate information and source credibility), and information verification practices (using fact-checking tools and techniques).

In the Nigerian context, George et al. (2025) identified low digital literacy as a significant barrier to effective digital engagement among small and medium enterprises in Port Harcourt, with many lacking strategic understanding of digital tools and few aware of support initiatives

for digital integration. This skill gap reflects a broader pattern across developing nations where rapid digital penetration is not matched by adequate digital literacy development (Olanrewaju et al., 2021).

Misinformation, Disinformation, and Allied Concepts

Clarity in conceptual definitions is essential for understanding the phenomenon under investigation. Misinformation refers to false or inaccurate information that is shared without malicious intent to deceive (Lewandowsky et al., 2012). The sharer may genuinely believe the information to be true, making misinformation distinct from other forms of information disorder. Disinformation, in contrast, involves deliberately false information spread with the intent to deceive, manipulate, or advance particular agendas (Pennycook & Rand, 2021). A third category, malinformation, refers to genuine information shared with the intent to cause harm, such as leaks or revenge porn.

Related to these concepts are several allied terms essential to this study. Fake news refers to fabricated news stories designed to mimic legitimate journalism while spreading false narratives. Information discernment capability represents the cognitive ability to distinguish reliable from unreliable information, a skill requiring both knowledge and metacognitive awareness (Guess et al., 2020). Misinformation resilience behaviour encompasses the active behavioural responses individuals engage in to combat misinformation spread, including verification practices, corrective actions, and refusal to share unverified content (Huang et al., 2024). Fact-checking behaviour refers specifically to the verification practices users engage in when encountering potentially false information, representing a crucial mediating mechanism between digital literacy and misinformation resistance.

The Misinformation Landscape in Social Media Contexts

The global misinformation landscape has intensified dramatically in recent years, with social media platforms serving as primary vectors for both information and misinformation dissemination (Nielsen & Ganter, 2022). The viral nature of misinformation on social media poses major challenges to social cohesion, democratic politics, and public conversation (Bessi et al., 2015; Wang et al., 2019). The COVID-19 pandemic demonstrated the severe consequences of health misinformation, while political misinformation has threatened democratic processes worldwide (Ziapour et al., 2024). In Africa specifically, disinformation campaigns have surged nearly fourfold since 2022, with 189 documented campaigns across the continent, often sponsored by external state actors from Russia, China, and the Middle East seeking to manipulate African information systems (Africa Center for Strategic Studies, 2024).

Nigeria presents a particularly compelling context for studying misinformation dynamics. As Africa's most populous nation with over 150 million active internet users and exceptionally high social media engagement rates (NCC, 2022), Nigeria exemplifies the challenges facing rapidly digitising societies. The 2023 Nigerian presidential election witnessed an unprecedented

deluge of misinformation across platforms including Facebook, Twitter, TikTok, and WhatsApp, with political strategists weaponising social media to delegitimise opponents and manipulate voter behaviour (Hassan, cited in Al Jazeera, 2023). Ikuelogbon et al. (2025) documented how hate comments on X (formerly Twitter) during the 2023 election employed strategic linguistic mechanisms including derogatory labeling, neologisms, and metaphors to fuel socio-political divisions, highlighting the urgent need for digital literacy initiatives to combat hate-driven discourse in Nigerian electoral processes.

Alugbin and Iyoha (2024) demonstrated how Twitter served as a mobilizing force during Nigeria's 2020 #EndSARS protest, illustrating both the power of social media for democratic expression and its vulnerability to manipulation through coordinated disinformation campaigns. The study emphasised how hashtags function as paralanguage for users to categorise posts, express emotions, and facilitate tracking of discourse topics, enabling the construction of structural meaning and interpersonal management in digital activism.

2.2 Theoretical Foundations

The study of people's processing and behaviour in response to misinformation in digital settings can be well grounded in Social Cognitive Theory (SCT), introduced by Albert Bandura in 1986. The well-integrated nature of the SCT framework allows for an in-depth examination of how personal characteristics, behavioural profile, and ecological factors interrelate at the level of information processing and decision-making. The focus on self-efficacy and behavioural skills in SCT especially comes into play when looking at the development of individuals' capacity to discriminate between misinformation and the behavioural dispositions to resist the spread of it (Bandura, 2001; LaRose & Eastin, 2004).

The theory is relevant, especially in terms of information discrimination capacity, as it focuses on the salience of cognitive processes in observational learning and decision-making. The theory suggests that individuals' information evaluation decisions are mediated by their experiential history, knowledge structures, and self-regulatory capabilities (De la Fuente et al., 2023). This theoretical base is consistent with modern research in the field of digital literacy and information processing, whereby the literature has shown that people with greater capacity of domain self-efficacy exhibited greater abilities in detecting false information (Marett et al., 2004; Hocevar et al., 2014).

Extending this further, the Cognitive Mediation Model (CMM) developed by Eveland (2001) provides yet another theoretical lens through which one might view how people conceptualise information being presented electronically. The CMM is concerned with the impact of information processing modes on learning and understanding in media spaces. Such a model is especially helpful in understanding the capacity of information discrimination, since it explains how and in what ways people's awareness of information and their elaborations modify their ability to engage with content in a critical way.

Eveland's work showed that in contrast to passive processing, information processed actively would also contribute to deeper comprehension and greater retention, phenomena that have consistently been confirmed in subsequent research into digital literacy (Eveland & Dunwoody, 2002). The Information Processing Model (Petty & Cacioppo, 1986) suggests that individuals process information through central (analytical) or peripheral (heuristic) routes. Digital environments often promote peripheral processing due to information overload and time constraints, making users more susceptible to misinformation (Bronstein et al., 2018).

Fact-checking behaviour represents a specific manifestation of metacognitive awareness, the ability to monitor and regulate one's own thinking processes (Flavell, 1979). Recent neurocognitive research suggests that fact-checking activates the anterior cingulate cortex, associated with conflict monitoring and cognitive control (Bago et al., 2020). The Elaboration Likelihood Model provides insight into when individuals engage in effortful fact-checking versus relying on heuristics. Motivated reasoning theory (Klayman & Ha, 1987) suggests that individuals selectively seek information that confirms existing beliefs, potentially limiting fact-checking effectiveness.

2.3 Empirical Review

The Digital Literacy-Misinformation Relationship

A substantial body of empirical research has established positive associations between digital literacy levels and the ability to detect false information. Jones-Jang et al. (2021) found that information literacy, specifically, helps identification of fake news, though other forms of literacy showed less consistent effects. Guess et al. (2020) conducted preregistered experiments in both the United States and India, demonstrating that a digital media literacy intervention increased discernment between mainstream and false news headlines by 26.5% in the U.S. sample and 17.5% in an Indian sample, providing evidence that relatively short, scalable interventions can be effective across cultural contexts.

Huang et al. (2024) conducted a comprehensive meta-analysis of 49 experimental studies involving 81,155 participants, quantitatively synthesising evidence on media literacy interventions' efficacy in mitigating misinformation. Their findings indicate that media literacy education programs significantly improve resilience to misinformation, with effects moderated by intervention type, duration, and participant characteristics. The analysis revealed that interventions combining skill-building with critical thinking instruction produced the strongest effects.

Recent research from Nigeria specifically supports these global findings while highlighting contextual particularities. Apuke et al. (2023) found that literacy concepts serve as an effective intervention strategy for improving fake news knowledge and detection skills while curtailing the tendency to share fake news among Nigerian populations. Dame Adjin-Tettey (2022) demonstrated through experimental research in Ghana that media and information literacy

training improved participants' ability to determine story authenticity and reduced the likelihood of sharing inaccurate stories, with effects persisting beyond the immediate intervention period.

Fact-Checking Behaviour as a Critical Mechanism

Fact-checking behaviour has emerged as a crucial mechanism through which digital literacy translates into misinformation resistance. Shao et al. (2018) tracked the competition between fact-checking and misinformation spread, demonstrating that fact-checking interventions can effectively reduce misinformation circulation, though timing and reach remain critical factors. Tambuscio et al. (2015) modeled the fact-checking effect on viral hoaxes in social networks, revealing that early fact-checking interventions have disproportionate impact on limiting misinformation spread.

Recent empirical work has explored the factors influencing fact-checking intentions and behaviours. A study of 433 social media users found that fact-checking intent is significantly explained by news literacy levels and news trust, with news literacy showing particularly strong effects (Behavioural Sciences, 2023). Zhou and Pan (2025) examined how active versus passive social media involvement affects health information fact-checking behaviours, finding that active involvement positively associated with fact-checking while passive consumption negatively associated with verification behaviours, with effects mediated by social media fatigue and moderated by self-perceived information literacy.

The effectiveness of fact-checking interventions, however, faces significant challenges. Bachmann and Valenzuela (2023) conducted preregistered experiments in Chile revealing a troubling paradox: while fact-checks effectively reduced misperceptions, exposure to political fact-checks actually decreased trust in news media and increased perceptions of media bias, especially when corrections debunked pro-attitudinal misinformation. This suggests that fact-checking's impact on misinformation resistance is complex, potentially strengthening discernment capabilities while simultaneously eroding institutional trust.

Drolsbach et al. (2024) provided encouraging evidence that community-based fact-checking systems, such as X's Community Notes, can mitigate trust issues common in traditional fact-checking approaches. Their experimental study of 1,810 Americans found that textual community notes explaining why content was misleading increased trust in fact-checking more effectively than simple misinformation flags, suggesting that transparent, context-rich fact-checking may overcome resistance to expert-led verification.

Information Discernment versus Behavioural Resilience: Dual Outcomes

A critical gap in existing research involves the conflation of cognitive and behavioural aspects of misinformation resistance. Most studies examine either recognition abilities or sharing behaviours, rarely treating these as distinct but related outcomes (Pennycook & Rand, 2021). Pennycook and Rand (2021) demonstrated that accuracy motivation can be temporarily increased through simple interventions, but sustained behavioural change requires deeper

engagement with verification processes. Their research on the psychology of fake news revealed that people often share misinformation not because they believe it, but due to inattention to accuracy, suggesting that interventions targeting attention allocation may be as important as those building evaluation skills.

Research on user-level countermeasures to misinformation reveals significant gaps between beliefs and actions. A survey of 1,010 American social media users found that participants expected others to exert more effort when responding to misinformation than they themselves reported doing, highlighting implementation gaps between knowledge and behaviour (Scientific Reports, 2025). This discrepancy underscores the importance of examining both cognitive outcomes (what people can discern) and behavioural outcomes (what people actually do) as distinct dependent variables.

The Nigerian and African Context: Unique Challenges

Research in African contexts reveals distinctive patterns in misinformation dynamics and digital literacy challenges. Wasserman (2020) argued that understanding fake news in Africa requires moving beyond Western-centric frameworks to account for specific historical, political, and social contexts. Mare et al. (2019) emphasised the need for recentering the research agenda on fake news and cyber-propaganda in Sub-Saharan Africa, noting that existing theoretical frameworks often fail to capture the complexity of African information ecosystems.

The African information landscape is characterised by several unique features. Approximately 84% of Africans rely on social media as their primary news source, with 80% favoring Facebook (KnowBe4 Africa Survey, 2024), representing one of the highest rates of social media news consumption globally. This heavy dependence on platforms with limited fact-checking infrastructure creates acute vulnerability to misinformation. Disinformation campaigns in Africa frequently exploit existing ethnic, religious, and regional tensions, requiring literacy interventions that address not only technical skills but also critical awareness of how misinformation exploits social divisions.

Onanuga and Gbadegesin (2024) examined how digital media serves as a key platform for representing and circulating nationalistic discourses and public opinion in Nigeria, emphasising the importance of visuality in framing public perceptions. Their multimodal critical discourse analysis revealed how online cartoons and visual media shape narratives, highlighting the need for visual literacy as a component of comprehensive digital literacy education.

2.4 Research Gaps and Study Contribution

Despite growing attention to misinformation, several critical research gaps persist. First, existing studies examining the relationship between digital literacy and misinformation resistance typically focus on either recognition abilities or sharing behaviours but rarely examine both as distinct outcomes within a single framework (Pennycook & Rand, 2021). This limits understanding of how digital literacy operates across cognitive and behavioural domains and whether interventions effectively targeting one domain necessarily improve the other.

Second, while fact-checking behaviour has been identified as important for misinformation resistance (Shao et al., 2018; Tambuscio et al., 2015), its role as a mediating mechanism between digital literacy and misinformation resistance outcomes remains underexplored. Understanding the mediating pathways through which digital literacy influences both discernment and behavioural resilience is essential for designing effective interventions. As Kim et al. (2022) demonstrated, the relationship between news use and knowledge can be complex and mediated by verification behaviours, suggesting that similar mediation patterns may operate in the digital literacy-misinformation resistance relationship.

Third, most research on digital literacy and misinformation originates from Western contexts, leaving substantial questions about how these relationships function in developing nations where digital adoption patterns, information ecosystems, and cultural contexts differ substantially (Brisola & Doyle, 2019). While some studies have examined these issues in specific African contexts (Apuke et al., 2023; Dame Adjin-Tettey, 2022), comprehensive examinations of mediation mechanisms in African digital environments remain limited.

Fourth, the theoretical integration of multiple frameworks explaining misinformation resistance has been insufficient. While Social Cognitive Theory, Cognitive Mediation Model, and Protection Motivation Theory each offers valuable insights, few studies have integrated these perspectives to develop comprehensive models of how digital literacy translates into misinformation resistance through specific mediating mechanisms.

This study addresses these gaps through three primary contributions. First, it introduces a dual-outcome framework distinguishing between information discernment capability (cognitive outcome) and misinformation resilience behaviour (behavioural outcome), enabling examination of whether and how digital literacy differentially affects these dimensions. Second, it empirically tests fact-checking behaviour as a mediating mechanism, advancing theoretical understanding of the pathways through which digital literacy translates into misinformation resistance. Third, it provides empirical evidence from Nigeria, filling the substantial gap in research from developing nations while accounting for the unique characteristics of African digital environments, including high social media dependence, uneven literacy development, and distinctive cultural frameworks for information evaluation.

The convergence of these theoretical constructs offers a strong explanatory model for the effects of digital literacy on information discernment capacity and behaviours related to misinformation resistance. It proposes that the acquisition of these abilities is not one of filling skill gaps alone, but a development of a variety of complex cognitive and behavioural processes conditioned by individual, environmental, and behavioural factors. This theoretical basis underpinning our conceptual framework in which digital literacy shapes outcomes through both direct and indirect causal mechanisms. The proposed conceptual framework for this study illustrates the hypothesised relationships between digital literacy and its outcomes through fact-checking behaviour. The framework posits digital literacy as the exogenous variable, influencing two distinct dependent variables: information discernment capability and

misinformation resilience behaviour. This dual-outcome approach recognises that resistance to misinformation manifests in both cognitive (discernment) and behavioural (resilience) dimensions.

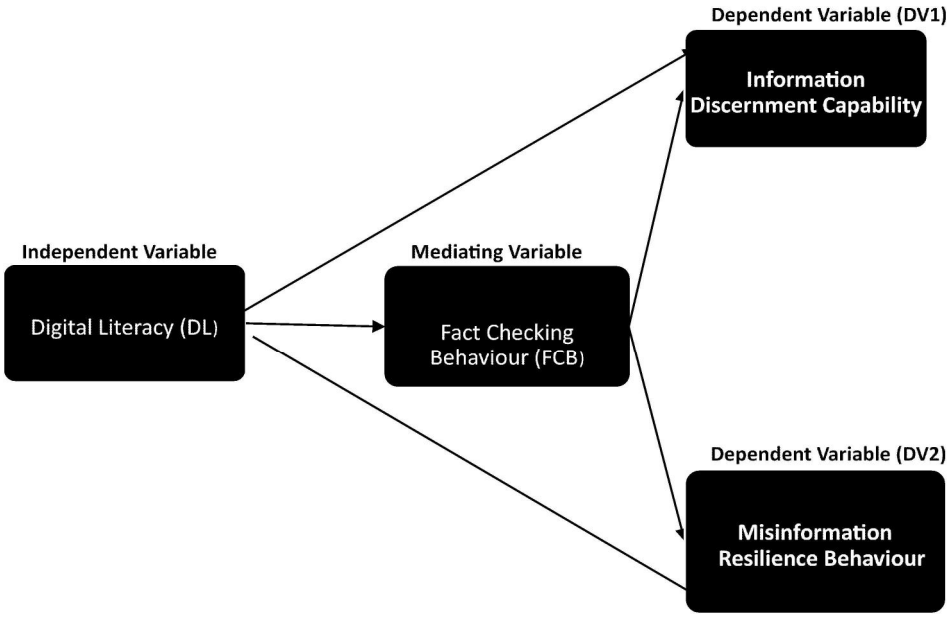

Figure 1 – Conceptual framework (Author's Construct, 2024)

3 METHOD

3.1 Research Design and Approach

This study employed a quantitative research design using a survey methodology to examine the relationships defined in the conceptual model. This design is particularly appropriate for examining complex relationships between multiple variables while accounting for both direct and mediating effects (Leavy, 2022). The cross-sectional survey method was also chosen to collect information at one point in time, thus offering a moment-in-time picture of how digital literacy relates to the resistance against the spread of misinformation among social media users in Nigeria. This approach allowed us to collect data efficiently from a large sample while maintaining standardisation in measurement across all participants. The timing of the data collection (June 2023 to May 2024) was particularly significant as it coincided with a period of increased social media activity and information sharing in Nigeria, particularly following the 2023 general elections.

3.2 Sampling and Data Collection

This study used purposive and snowball sampling approaches to achieve the target sample for the research. The participants were recruited through X, using targeted posts and

engagement with Nigerian digital communities. These first respondents were subsequently prompted to send the survey to their networks, further increasing our exposure while at the same time keeping things in the context of current users on social media.

Purposive Sampling: The initial recruitment used purposive sampling to ensure participants met inclusion criteria and represented diverse demographic characteristics. This approach was necessary given the specific requirements for social media engagement and digital access.

Snowball Sampling: The secondary snowball component leveraged network effects inherent in social media environments, potentially increasing ecological validity by recruiting through actual social media connections rather than artificial recruitment methods.

This sampling approach helped ensure that participants had sufficient exposure to social media environments and potential encounters with misinformation. The final sample size of 306 respondents provides substantial statistical power for the intended analyses.

Sample Size Calculation: Using G*Power 3.1.9.7, we calculated minimum sample size requirements:

- Effect size (f^2) = 0.15 (medium effect, based on meta-analysis by Kim et al., 2022)
- $\alpha = 0.05$, $\beta = 0.20$ (Power = 0.80)
- Number of predictors = 3 (maximum in any single regression)
- Minimum required sample = 77 participants

Our achieved sample of 306 provides substantial power (>0.95) for detecting medium effects and adequate power (0.80) for small effects.

3.3 Data Collection and Analysis

All data collection was online, based on a validated questionnaire structured on well-known scales and adapted to the Nigerian context. The questionnaire was conducted on Qualtrics, a professional survey platform that guaranteed the data security and anonymous participation. A pilot study with 30 participants was also carried out before the main data collection for evaluating the clarity and consistency of questionnaire items. Each of the constructs used in our study was assessed by several items in order to guarantee reliability and validity. The analytical framework for this research was the Partial Least Squares Structural Equation Modeling (PLS-SEM), a statistical method especially designed to analyse intricate relationship networks among variables. The analysis followed established protocols for SEM analysis:

1. **Data Screening**: Examination of missing data patterns, outliers, and response patterns
2. **Normality Assessment**: Skewness and kurtosis evaluation, though PLS-SEM is robust to non-normality
3. **Common Method Bias**: Harman's single-factor test and marker variable technique

Following the two-step approach recommended by Anderson and Gerbing (1988):

Step 1: Measurement Model Evaluation

- Internal consistency reliability (Composite reliability > 0.70)

- Convergent validity (AVE > 0.50, factor loadings > 0.70)
- Discriminant validity (Fornell-Larcker criterion, HTMT ratio < 0.90)

Step 2: Structural Model Assessment

- Path coefficients and significance testing
- Coefficient of determination (R^2)
- Effect sizes (f^2)
- Predictive relevance (Q^2)

Mediation Analysis

Mediation testing follows the approach recommended by Hair et al. (2019):

1. Direct effects of digital literacy on outcome variables
2. Indirect effects through fact-checking behaviour
3. Total effects and variance accounted for
4. Bootstrap confidence intervals for mediation significance

Bootstrap procedures with 5,000 resamples were used to generate confidence intervals and assess the significance of path coefficients and indirect effects, following established guidelines for PLS-SEM analysis. Analysis was conducted using SmartPLS 3.3.3 and the comprehensive analytical approach ensures robust testing of the proposed theoretical model while accounting for the complexity of relationships among digital literacy, fact-checking behaviour, and misinformation resistance outcomes.

3.4 Ethical Considerations

The study received approval from the Research Ethics Committee at Ignatius Ajuru University of Education (Protocol #IAUE/REC/2023/087). Participants provided informed consent through Qualtrics before accessing survey questions. Consent information clearly explained, the Study purpose and procedures, anonymity, Potential risks (minimal) and the Voluntary participation and right to withdraw.

4 RESULTS

4.1 Demographic Profile

A demographic analysis of the 306 respondents shows a representative cross-section of Nigerian users of social media. The sample has a balanced gender distribution, with a slight tilt to the male side, while most are young adults falling between 18 and 35 years. Educationally, there is a high level of attainment, as most participants had completed university education. Most of those surveyed use social media every day for more than three hours.

Table i: Demographic profile of respondents (N=306)

Characteristic	Category	Percentage
Gender	Male	54.2%
	Female	45.8%
Age	18-25	35.3%
	26-35	42.8%
	36-45	16.7%
	Above 45	5.2%
Education	Secondary	8.5%
	Tertiary	76.8%
	Postgraduate	14.7%
Daily Social Media Usage	1-3 hours	28.4%
	3-5 hours	45.8%
	Above 5 hours	25.8%

4.2 Measurement Model Assessment

Measurement model evaluation focused on establishing the reliability and validity of our constructs based on multiple criteria. As presented in Table ii, the composite reliability values obtained assured excellent internal consistency for all constructs, with values between 0.894 and 0.940, much above the recommended threshold of 0.70. These results show strong reliability in our measurement instruments.

Table ii Composite reliability values (rho_c)

	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Digital Literacy	0.940	0.006	158.771	0.000
Fact Checking Behaviour	0.903	0.008	112.244	0.000
Information Capability Discernment	0.940	0.007	125.400	0.000
Misinformation Behaviour Resilience	0.894	0.014	64.595	0.000

The average variances extracted, which are shown in Table iii, suggested very strong evidence of convergent validity for our constructs. All values are above the threshold of 0.50,

ranging from 0.548 to 0.693, meaning that each construct explains more than half of the variance of its indicators.

Table iii: Average variance extracted (AVE)

	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Digital Literacy	0.691	0.022	31.495	0.000
Fact Checking Behaviour	0.613	0.021	29.538	0.000
Information Capability Discernment	0.693	0.028	25.112	0.000
Misinformation Behaviour Resilience	0.548	0.036	15.412	0.000

4.3 Structural Model Assessment

Model fitness

The structural model fit indices are, as presented in Table iv, adequate for model fit. It showed a satisfactory SRMR value at 0.070 for the saturated and 0.092 for the estimated model—values considered within acceptable ranges. Values of other fit indices also showed adequacy, such as NFI and Chi-square values.

Table iv: Model fitness

	Saturated model	Estimated model
SRMR	0.070	0.092
d_ULS	1.874	3.210
d_G	0.741	0.778
Chi-square	1265.105	1316.322
NFI	0.797	0.789

Coefficient of Determination (R^2) Analysis

The coefficient of determination analysis showed meaningful explanatory power for our endogenous variables: fact-checking behaviour and information discernment capability. Both showed strong R^2 values of 0.464 and 0.467, respectively, indicating that a large part of their variance is explained by the model. The lower R^2 value of 0.185 for misinformation resilience behaviour does suggest that other factors might be at play.

Table v: Coefficient of determination

	R-square	R-square adjusted
Fact Checking Behaviour	0.464	0.462
Information Discernment Capability	0.467	0.464
Misinformation Resilience Behaviour	0.185	0.180

Path Coefficients Analysis

Path coefficient analysis revealed some important significant relationships between the key constructs. Digital literacy has a direct strong positive influence on the fact-checking behaviour of the individual ($\beta = 0.681$, $p < 0.001$); fact-checking behaviour of an individual had significant positive effects on both information discernment capability ($\beta = 0.609$, $p < 0.001$) and on misinformation resilience behaviour ($\beta = 0.428$, $p < 0.001$). Conversely, direct effects of DL on dependent variables were nonsignificant.

Table vi: Path coefficients

	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Digital Literacy -> Fact Checking Behaviour	0.681	0.039	17.538	0.000
Digital Literacy->Information Discernment Capability	0.104	0.091	1.137	0.256
Digital Literacy -> Misinformation Resilience Behaviour	0.002	0.116	0.022	0.983
Fact Checking Behaviour -> Information Discernment Capability	0.609	0.074	8.256	0.000
Fact Checking Behaviour -> Misinformation Resilience Behaviour	0.428	0.104	4.125	0.000

The path diagram visually (figure 2) illustrates the structural relationships among our constructs, evidencing the mediating role of fact-checking behaviour. The diagram presents a visual representation of the path coefficient and their corresponding P values based on our proposed model.

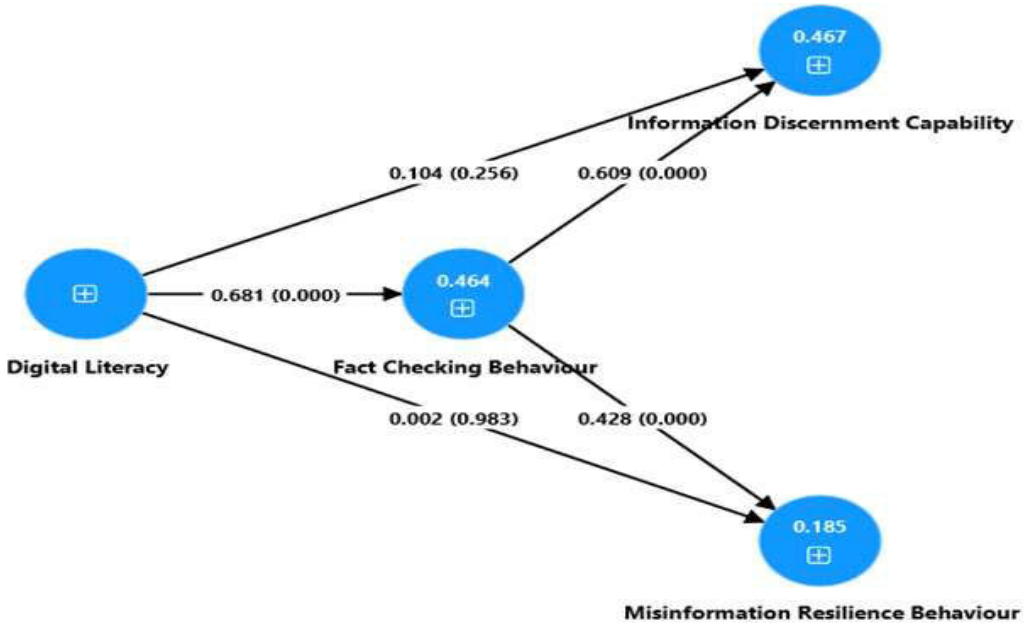

Figure 2: Estimated path model

4.4 Hypothesis Testing

The results of the analysis of research hypotheses indicated some significant relationships among the study variables. The first hypothesis (H1) that proposed a positive relationship between digital literacy and fact-checking behaviour was strongly supported: $\beta = 0.681$, $t = 17.538$, $p < 0.001$. This finding shows that as the level of digital literacy increases, so does the tendency of users to engage in fact-checking activities.

The second hypothesis (H2) examined the relationship between fact-checking behaviour and information discernment capability; this relationship is strongly supported by the data: $\beta = 0.609$, $t = 8.256$, $p < 0.001$. The above evidence shows that those who are frequent fact-checkers have an increased ability to differentiate trustworthy information from untrustworthy information. (H3), which predicted a positive relation between fact-checking behaviour and misinformation resilience behaviour, was supported: $\beta = 0.428$, $t = 4.125$, $p < 0.001$. This would suggest that fact-checking habits lead to more active resistance against the spread of misinformation.

Interestingly, our fourth hypothesis—H4—proposing a direct relationship between digital literacy and information discernment capability was not supported ($\beta = 0.104$, $t = 1.137$, $p = 0.256$). Likewise, H5 relating to a direct relationship between digital literacy and misinformation resilience behaviour was not supported ($\beta = 0.002$, $t = 0.022$, $p = 0.983$).

The sixth hypothesis (H6) was supported by the mediating role of fact-checking behaviour in the relationship, through the indirect effects that are significant of digital literacy on both

dependent variables via fact-checking behaviour. That may mean, though digital literacy does not impact the outcome variables directly, it does so indirectly through the acquisition of the habit of factchecking.

5. DISCUSSION

The result of the current study offers key insights into the intricate relationships among the variables examined. The significant relationship (β 0.681, p 0.001) between digital literacy and fact-checking behaviour is in line with Metzger et al. (2010), who reported that greater digital literacy is associated with more complex information verification. This evidence also suggests that the greater the digital competencies of the users, the more likely the users will engage increasingly in active object verification of experiences they have online. The strength of this relationship in the Nigerian setting is particularly intriguing, as it demonstrates that the bridging effect of digital literacy and fact-checking behaviour applies across cultures and across technology contexts.

The finding that digital literacy operates exclusively through fact-checking behaviour rather than directly influencing misinformation resistance challenges prevailing assumptions in the literature. This mediation pattern suggests that digital literacy functions as an "enabling condition" rather than a direct protective factor, a distinction with profound implications for both theory and practice. From a Social Cognitive Theory perspective, this mediation aligns with Bandura's (2001) emphasis on behavioural capability versus behavioural performance. Our results suggest that digital literacy provides the cognitive infrastructure necessary for fact-checking behaviours, but these behaviours represent the actual mechanism through which misinformation resistance emerges. This finding extends beyond simple skill acquisition to encompass behavioural activation processes.

The strength of the digital literacy to fact-checking relationship indicates that approximately 46% of the variance in fact-checking behaviour is explained by digital literacy skills. This substantial effect size suggests that digital competencies serve as necessary but insufficient conditions for information verification behaviours. The remaining 54% of variance likely involves motivational, contextual, and individual difference factors that warrant investigation in future research. This pattern contradicts the direct-effect assumptions prevalent in much of the digital literacy literature, suggesting that interventions focusing solely on skill development may be incomplete without corresponding behavioural activation components

The substantial positive behavioural impact of fact-checking on information discrimination ability ($\beta = 0.609$, $p < 0.001$) and misinformation resilience behaviour ($\beta = 0.428$, $p < 0.001$) suggests that verification activity is an important mediating factor between digital skills and lived resistance to the spread of misinformation. This finding aligns with Tambuscio et al. (2015), who reported that information verification task contribution is important for understanding the information verification task's effect across cognitive and behavioural dimensions.

The differential effects of fact-checking behaviour on information discernment capability versus misinformation resilience behaviour reveal a theoretically important distinction. The stronger relationship with discernment capability suggests that fact-checking primarily enhances cognitive evaluation processes, while its influence on resistant behaviour involves additional complexity. This pattern aligns with dual-process theories of cognition (Evans & Stanovich, 2013), which distinguish between automatic, intuitive processing and deliberative, analytical processing. Fact-checking appears to strengthen analytical processing capabilities more directly than it influences behavioural responses, which may be subject to social pressures, emotional responses, and habitual sharing patterns that operate through more automatic processes.

The cognitive-behavioural gap observed in our results ($R^2 = 0.467$ for discernment versus $R^2 = 0.185$ for resilience behaviour) mirrors broader findings in health psychology regarding the intention-behaviour gap. Recognition of misinformation may be necessary but insufficient for resistant behaviour, requiring additional intervention strategies targeting behavioural maintenance and social influence processes. This gap is considerably stronger in the relationship between fact-checking and information discernment capability compared to misinformation resilience, consistent with Monaghan's (2017) findings regarding the cognitive-behavioural gap in West African contexts.

In this research, there was a considerably stronger relationship between fact-checking and information discernment capability compared to misinformation resilience. Consistent with Monaghan (2017**)**, it is consonant with the cognitive-behavioural gap in the West African context. This gap proposes that, although fact-checking attempts can be very beneficial in enhancing (a person's) capacity to identify misinformation, it may be the case that different types of attitudes would be more predisposed to facilitate people's responsiveness to its propagation. This result also agrees with Ecker et al.'s (2022) proposal that misinformation resistance is based on advanced behavioural mechanisms, independent of mere recognition capacity.

The Nigerian context provides unique insights into how digital literacy operates within specific cultural and technological environments. The strong effect sizes observed in our study may reflect the particular urgency of misinformation challenges in Nigeria's democratic and economic transition period. Nigeria's information ecosystem is characterised by high social media penetration alongside limited formal media literacy education (Ogbodo et al., 2020). This creates conditions where informal learning through social media engagement becomes a primary mechanism for developing information evaluation skills. Our findings suggest that this informal learning process can be effective when it includes active fact-checking behaviours.

6 CONCLUSION

The paper offers significant insights into the intricate interplay between digital literacy and misinformation resistance in the Nigerian social media environment. Our results demonstrate that although digital literacy is not directly related to information discernment or to misinformation

resistance, it acts via the important mediating process of fact-checking activity. This points to the fact that the acquisition of achievable checks on aptitudes, and not a broad digital competence, is crucial for counteracting the spread of misinformation. The significant mediating effect of factchecking behaviour underlines the importance of digital literacy curricula to focus on both the practical aspects of verification and the framework of theory. Programs of educational interventions, however, should aim for habituation to fact-checking rather than skills-related activities in the area of digital literacy, which can act as a link between the former and cognitive and behavioural dimensions of resistance to misinformation. Future research is needed to investigate these associations across various demographic and social media platforms, especially those including populations with limited online access and/or literacy. Furthermore, longitudinal studies may elucidate patterns of how these relationships change with time and across varying forms of misinformation.

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