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SEARCH Journal of Media and Communication Research (SEARCH)

ABOUT THE JOURNAL

Aims & Scope

The aim of the *SEARCH Journal of Media and Communication Research* is to promote and enhance research development and debates in the field of media and communication research. It also serves as a forum for researchers and industry players who use research as the frame for social awareness and change. We welcome any submission of manuscripts throughout the year. Authors are invited to submit scholarly works on communication such as International Relations, Media Management, Film and Media Arts, Digital Education and Communities, Communication and Policies, Globalization and Social Impact, Youth and Media, Audience and Perception Analysis, Democracy and Integration, Media Literacy and Education, Media and Development, Health Communication, Politics, Hegemony and the Media, Gender and Sexuality, Social Media and Subcultures, Popular Culture and Society, Media and Religion, Media and Identity, War/Peace Journalism, Conflict and Crisis Communication, Strategic Communication and Information Management, Digital Media, Advertising and Persuasive Management, Public Relations and Crisis Management, Global Journalism and relevant areas from the standpoint of media and communication research.

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FOREWORD

The intelligence era continues to reshape how media is produced, distributed and interpreted requiring innovative perspectives and balance between human and machine interaction. In this special issue of *SEARCH Journal of Media and Communication Research* that is featuring the 5th International Conference on Media Studies (ICMS25) held in October 2025, with the theme *Media Transformation in the Intelligence Era: The Human-Machine Centred Approach*, we include ten papers that showcase how communication is changing in Southeast Asia as a result of technological innovations.

The first article, *Mapping the Research on AI-Generated Content (AIGC) in Social Media*, presents the dynamic growth of AIGC research through more than 1,400 articles in 2024. The research shows both progress and fragmentation of this sphere as the authors rely on selected theories presented in the paper. *From Fandom to Citizenship* examines Indonesia's "Anies Bubble" campaign, showing how meme aesthetics, influencer mediation, and peer circulation transformed electoral messaging into participatory cultural expression. Complementing this, Connectivity and Control demonstrates that internet penetration does not uniformly enhance freedom of expression across ASEAN. Instead, its effects are shaped by national political conditions.

Journalism and its practice is ever evolving. *Digital News Storytelling in Malaysian Newsrooms* reveals how multimedia journalists balance values of accuracy and fairness with the demands of immediacy, visuality, and platform-specific storytelling. The shift reflects transformation in human-approach of audience behaviour that aligns with the theme of the conference. Several articles discuss digital trust, vulnerability, and safety. *Visual Storytelling through Mise en Scène: Investigating Its Impact on Audience Engagement in Social Media Short Films* explores how *mise en scene* functions as a visual storytelling tool on social media platforms contributing to the role of visual aesthetics in audience engagement. *Digital Harassment in Gaming Communication* identifies six forms of cyberbullying and explains how gaming environments generate new modes of harm. Meanwhile, *Brand Credibility in a Social Media Ecosystem* shows how transparency, consistent communication, and visible impact shape donor trust in an increasingly crowded NGO landscape.

A Topic Modelling Analysis of Mental Health Discourse identifies themes of emotional expression, advice-seeking, and resource sharing within Facebook support groups. The study highlights the value of peer-to-peer digital spaces, especially as automated moderation and AI-assisted support tools expand. Environmental communication is represented through *The Role of Environmental NGOs in Communicating E-Waste Awareness* and demonstrates how ENGOs bridge policy and community to promote sustainable practices in rural Malaysia. Finally, *Social Media Sentiment Analysis on Datuk Seri Najib Tun Razak's Court Case* explains the use of social media as a platform for political narratives in a post-truth environment. Together, these ten studies demonstrate that while machine intelligence is highly sought, human values

and context for meaning-making remains vital. This special issue invites readers to balance technological advancement with human approach to strengthen ethical and socially grounded media futures.

Guest Editor
Dr Normahfuzah Ahmad
Universiti Utara Malaysia, Malaysia

FOREWORD

It is with great pleasure that we present the *SEARCH Special Issue 2026*, a collection of ten selected scholarly papers published in conjunction with the 5th International Conference on Media Studies (ICMS25), organised by Universiti Utara Malaysia (UUM). This special issue marks another meaningful collaboration between *SEARCH Journal of Media and Communication Research* and the academic community, reflecting our shared commitment to advancing scholarship and fostering intellectual exchange in media and communication studies.

The publication of a special issue represents more than the compilation of scholarly works. It is the culmination of a collective academic effort involving authors, reviewers, editors, and institutional partners, united by a commitment to research quality and scholarly integrity. Each manuscript in this issue has undergone a rigorous process of peer review, revision, and editorial evaluation, supported by the editorial teams of *SEARCH* and *ICMS*. Through several stages of assessment and refinement, considerable attention has been devoted to ensuring that the papers meet the scholarly standards and expectations of the journal.

We recognize that meaningful academic contributions emerge not only from the originality of research but also from the critical dialogue, constructive feedback, and intellectual engagement that shape a manuscript throughout the publication process. It is through this collaborative endeavor that research is strengthened, perspectives are refined, and knowledge is made available to a wider scholarly community.

I would like to express my sincere appreciation to Dr Normahfuzah Ahmad for her dedication and invaluable contribution as Guest Editor. Her thoughtful coordination, commitment, and collaborative spirit have been instrumental in bringing this special issue to fruition. My gratitude also extends to the Institute of Communication and Media Studies (ICMS), Universiti Utara Malaysia, for its valued partnership and support. Equally, I wish to acknowledge the reviewers, authors, and editorial teams whose collective efforts have made this publication possible.

As we present these ten papers to our readers, we hope that this special issue will serve as a meaningful resource for researchers, educators, and practitioners, encouraging further critical inquiry, scholarly discussion, and the exchange of ideas across disciplines and communities.

On behalf of the editorial team of *SEARCH*, it is my pleasure to welcome readers to this *SEARCH Special Issue 2026*. May the contributions presented here continue to inspire new perspectives and advance the pursuit of knowledge in media and communication research.

Editorial Lead, SEARCH Special Issue (ICMS25)
Dr Nurul Lina Mohd Nor
Taylor's University, Malaysia

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Mapping the research on AI-generated content in social media: A bibliometric analysis approach

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ABSTRACT

AI-generated content (AIGC) is reshaping how social media content is produced, distributed, and consumed. Yet the literature lacks a consolidated account of the field's intellectual foundations. This study maps the knowledge base and theoretical structure of AIGC research in social media through a bibliometric and science-mapping analysis of Scopus-indexed journal articles published between 2014 and 20 May 2025. Following PRISMA-guided screening, 2,945 articles were analysed using Bibliometrix and VOSviewer. Annual publication trends provide temporal context, document co-citation analysis identifies influential knowledge clusters, and keyword co-occurrence analysis offers complementary thematic evidence. Output remained negligible till 2022 but increased to 208 articles in 2023 and 1,440 in 2024, with a further 1,288 indexed by 20 May 2025. The co-citation results show that the field relies heavily on theories borrowed from information systems, social psychology, and marketing, particularly TAM, UTAUT, and social-media engagement frameworks. Keyword analysis highlights increasing attention to AI ethics, trust, misinformation, and related social concerns. Overall, AIGC research in social media remains theoretically fragmented and lacks a cohesive AIGC-specific foundation. The study therefore calls for more integrated frameworks to support future media and communication research.

Keywords: ***AI-generated content (AIGC), social media, bibliometric analysis, science mapping, AI ethics***

* Corresponding author

INTRODUCTION

Generative AI systems such as ChatGPT, Midjourney, and Sora can produce texts, images, audios, and videos at scale, dramatically shifting digital communication and social-media content production (Babadoğan, 2024; Hua et al., 2024). Their use in social-media marketing has shifted communication towards algorithmic and synthetic formats, including virtual personas, AI-generated advertising, and recommendation systems (Aggarwal et al., 2024; Flores et al., 2025). These applications improve efficiency but also raise concerns about content quality, audience experience, authenticity, and ethical governance (Arango et al., 2023).

As AI-generated content (AIGC) has expanded from template-based tools to multimodal generative systems, it has attracted research across communication, psychology, marketing, computer science, and ethics (Elkhatibi & Benabdelouhed, 2024; Feng & Wang, 2024). Its rapid and interdisciplinary growth makes the field's intellectual foundations difficult to assess and reinforces the need for systematic mapping (Kubovics, 2025). However, existing AIGC studies are often application-specific and do not provide a consolidated account of the field's intellectual structure (Dixit et al., 2024; Guo et al., 2025).

Prior bibliometric work has mainly examined broad generative-AI developments or sectoral applications, particularly in technology and education (Mayasari et al., 2024; Vhatkar et al., 2024). Consequently, the literature reviewed for this study does not provide a dedicated analysis of the knowledge base through which AIGC intersects with social-media platforms, user behaviour, and communication practices. Without such a map, the field risks fragmented and duplicative lines of inquiry, which may impede cumulative theory development (Zhang et al., 2023).

Accordingly, this study used bibliometric and science-mapping techniques to clarify the field's development and reveal the foundational works and theoretical structure underpinning AIGC research in social media.

Research question and objective

In response to the above limitations, the present study is guided by one research question:

> RQ: What knowledge base and theoretical structure underpin the rapidly expanding body of research on AIGC in social media?

To answer this question, the study pursues one main research objective:

> RO: To reveal the foundational knowledge base and theoretical structure of AIGC–social media research through document co-citation analysis, complemented by keyword co-occurrence analysis.

Annual publication trends were analysed solely to contextualise the field's development and the interpretation of the science-mapping results; they were not treated as a separate research objective.

LITERATURE REVIEW

AIGC and social media: Concepts and applications

AI-generated content (AIGC) comprises digital text, images, audio, and video produced wholly or partly by generative AI systems (Grewal et al., 2025). In social media, it supports automated posts, captions, advertising materials, chatbots, virtual influencers, and AI-curated content flows (Pan et al., 2025; Shao & Yin, 2025). These applications increase production efficiency and enable personalisation but blur distinctions between human and synthetic communication.

The resulting concerns centre on authenticity, trust, misinformation, and governance. Park et al. (2024) found that users often had difficulty distinguishing AI-generated from human-generated Instagram accounts and evaluated AI and influencer accounts similarly in terms of attractiveness and content quality, while also expressing ethical concerns. Related evidence from AI-generated voice research shows that perceived human-likeness shapes audience responses to synthetic media (Leong et al., 2023). Generative AI also increases the scale and sophistication of content manipulation, intensifying regulatory challenges on social platforms (Pan et al., 2025).

Although these studies establish the practical and social significance of AIGC, they remain dispersed across marketing, communication, HCI, and information-systems research. This disciplinary dispersion makes the field's collective development and intellectual foundations difficult to assess.

Existing reviews and bibliometric studies on generative AI

Reviews of ChatGPT and generative AI have synthesised applications and risks across sustainability, health, education, work, social media, and energy (Hussein et al., 2025), while media-focused work has examined AI-assisted content creation and related ethical concerns (Shao & Yin, 2025). Bibliometric studies have also mapped ChatGPT and generative-AI research broadly (Khan et al., 2024; Koo, 2025; Obreja et al., 2025) or within sectors such as higher education and medicine (Gande et al., 2024; Sekwatlakwatla & Malele, 2023; Zhang et al., 2025).

These studies establish rapid interdisciplinary growth but have three limitations for the present purpose. First, they usually treat generative AI as the unit of analysis rather than AIGC within social-media communication. Second, sector-specific mappings do not consolidate research spanning platforms, user behaviour, and communication practices. Third, most emphasise productivity, collaboration, and themes rather than document co-citation structures. A dedicated analysis is therefore needed to identify the knowledge base and theoretical organisation of AIGC research in social media.

Theoretical frameworks in AIGC and social media research

Three theoretical families recur in AIGC and social-media research. First, technology-acceptance models explain adoption through perceived usefulness, ease of use, performance expectancy, social influence, and perceived behavioural control (Ajzen, 1991; Davis, 1989; Venkatesh et al., 2003). Empirical AIGC studies extend this user-response focus by examining engagement with AI-generated advertising (Du et al., 2023) and customer responses to AI-enabled social-media personalisation (Beyari & Hashem, 2025).

Second, communication frameworks explain how platform affordances and engagement processes shape interaction. Kietzmann et al.'s (2011) building-block model identified identity, conversations, sharing, presence, relationships, reputation, and groups, while Hollebeek et al. (2014) conceptualised consumer engagement in social media.

Third, ethics and risk frameworks address transparency, authenticity, privacy, bias, and accountability in AI-mediated communication (Grewal et al., 2021; Pan et al., 2025; Park et al., 2024). Overall, the literature relies mainly on theories borrowed from information systems, social psychology, marketing, and communication. Whether these frameworks form a coherent knowledge base or a fragmented constellation has not been systematically assessed, which motivates the present co-citation analysis.

Research gaps and contributions of this study

The review identified three related gaps. First, existing reviews and bibliometric studies usually examine generative AI broadly or focus on specific sectors such as education and health (Hussein et al., 2025; Sekwatlakwatla & Malele, 2023; Zhang et al., 2025). Second, prior mappings emphasise descriptive indicators, including countries, institutions, and authors, but rarely examine the intellectual structure of AIGC research in communication contexts (Khan et al., 2024; Koo, 2025). Third, although studies frequently apply TAM, UTAUT, TPB, and social-media frameworks, it remains unclear whether these borrowed theories form a coherent knowledge base or a fragmented constellation (Ajzen, 1991; Davis, 1989; Kietzmann et al., 2011; Venkatesh et al., 2003).

This study makes three contributions. It first charts the publication trajectory of AIGC research in social media from 2014 to 20 May 2025 as temporal context. It then uses document co-citation analysis to identify influential works, theoretical clusters, and patterns of theoretical borrowing. Finally, keyword analysis provides complementary evidence on the field's thematic orientation. Together, these analyses clarify the development and intellectual foundations of AIGC–social media research and support the development of more integrated, AIGC-specific frameworks.

Table 1 summarises the three literature strands underpinning the study: conceptual and empirical research on AIGC in social media, reviews and bibliometric studies of generative AI, and theoretical frameworks used in AIGC-related research.

Table 1. Overview of literature strands, limitations, and implications for the present study

Literature Strand	Main Focus	Key Limitations from the Perspective of AIGC in Social Media	Implications for the Present Study (Key References)
AIGC and social media: concepts and applications	Defines AIGC and documents its social media uses (content creation, virtual influencers), with associated opportunities and risks.	Insights fragmented across marketing, HCI, communication and information systems; no consolidated overview of the field.	Motivates the use of publication trends as temporal context for interpreting the field's intellectual foundations. Key sources: Grewal et al. (2025); Pan et al. (2025); Park et al. (2024); Shao & Yin (2025)

Table 1. (con't)

Literature Strand	Main Focus	Key Limitations from the Perspective of AIGC in Social Media	Implications for the Present Study (Key References)
Reviews and bibliometric studies on generative AI	Maps generative AI research across sectors (education, health, work); describes publication patterns and thematic clusters.	Generative AI treated generically or per sector; social media only a sub-theme; emphasis on descriptive statistics rather than intellectual structure.	Reveals the gap for a focused bibliometric and science-mapping study that treats AIGC in social media as a distinct domain and examines its knowledge base and theoretical structure. Key sources: Gande et al. (2024); Hussein et al. (2025); Koo (2025); Obreja et al. (2025); Sekwatlakwatla & Malele (2023); Zhang et al. (2025).
Theoretical frameworks in AIGC and social media research	Applies established theories (TAM, UTAUT, TPB, social media building blocks, ethics and trust frameworks) to user responses to AIGC.	Heavy reliance on theories borrowed from information systems, social psychology and communication; no systematic assessment of the field's actual knowledge base.	Justifies document co-citation analysis as the core method for identifying the foundational knowledge base and theoretical structure of AIGC–social media research, with keyword co-occurrence analysis as complementary evidence. Key sources: Ajzen (1991); Beyari & Hashem (2025); Davis (1989); Du et al. (2023); Grewal et al. (2021); Kietzmann et al. (2011); Venkatesh et al. (2003).

Based on the above literature strands and identified gaps, Figure 1 presents the conceptual framework linking prior work to the study's single research objective.

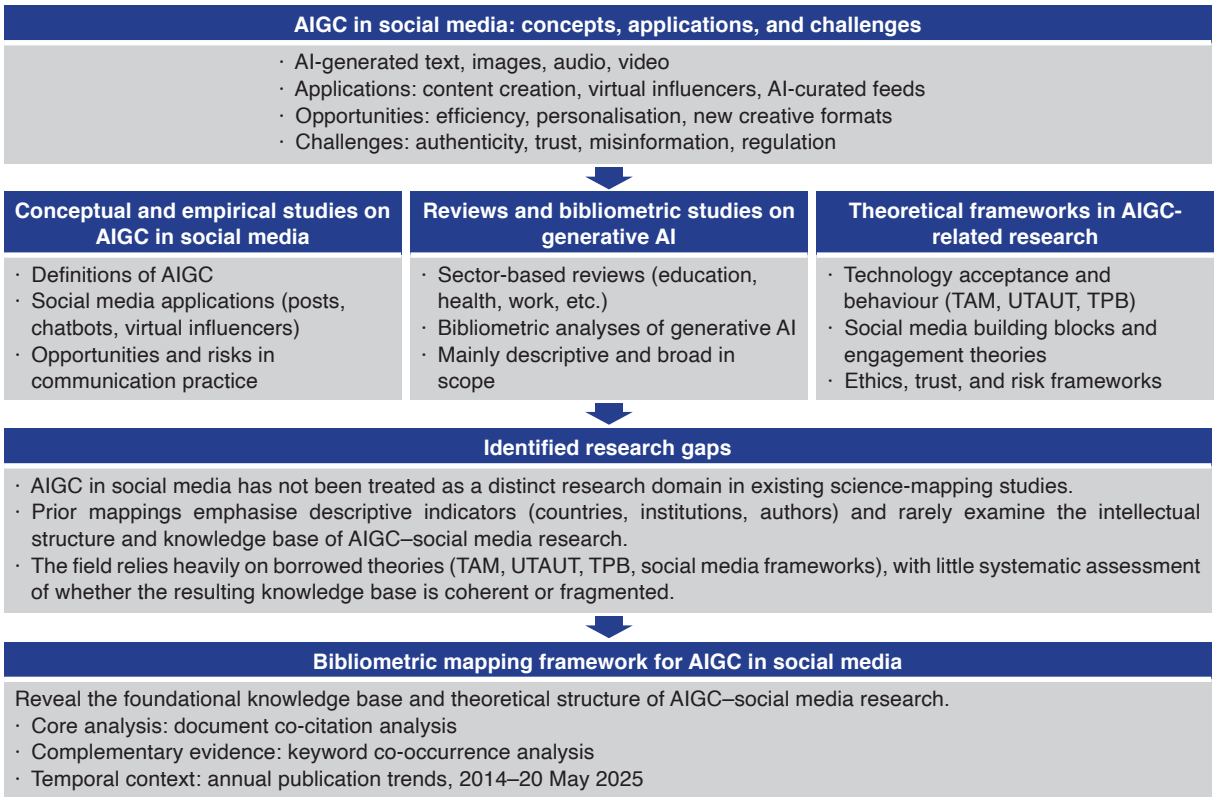

Figure 1. Conceptual framework linking the literature, research gaps, and single research objective

METHODS

Data source and search strategy

This study retrieved bibliographic data from the Scopus database. Scopus was selected due to its broad disciplinary coverage, high-quality indexed literature, robust citation analysis functions, and compatibility with bibliometric tools such as Bibliometrix and VOSviewer (Pranckute, 2021). Scopus was chosen over other databases like Web of Science due to its broader coverage of interdisciplinary journals, particularly in the social sciences and humanities, which is crucial for a topic as multifaceted as AIGC in social media (AlRyalat et al., 2019; Mongeon & Paul-Hus, 2016).

The search strategy combined terms related to generative AI, "AI-Generated Content," "AIGC,", "generative AI", and the term "social media." The research team executed searches using the title, abstract and keyword fields. The publication time window was set to 2014–20 May, 2025, as the earliest relevant document addressing both AIGC and social media appeared in 2014; after applying the inclusion criteria (peer-reviewed journal articles in English), the earliest eligible article dates from 2020 (see Table 2). The initial query returned 5,263 records (see Figure 2). These results were subsequently refined through a screening and cleaning process to determine the final dataset for analysis.

Inclusion criteria and screening process

The study applied pre-defined inclusion and exclusion criteria to screen the retrieved documents. The inclusion criteria were:

1. Document type must be peer-reviewed journal articles (Articles), either published or accepted for publication.
2. Language of publication must be English.

A key decision in our screening process was the exclusion of documents not classified as peer-reviewed journal articles. The study recognizes that conferences play a major role in computer science research dissemination (Franceschet, 2010), yet our research focused on the established knowledge base of the field. According to Thyer (2008), the review process of the peer-reviewed journal articles usually undergoes a more rigorous and lengthy review process, which represents a more stable form of academic communication.

The research followed established theoretical and empirical arguments through its focus. The research team discusses this study limitation in the discussion section because journal articles contain more detailed conceptual development than conference papers which show different levels of quality and completeness (Cossu, 2010; González-Albo & Bordons, 2011). Thus, the exclusion criteria included:

1. Documents that were not journal articles.
2. Articles written in languages other than English.

The screening process was reported using the PRISMA 2020 framework (Page et al., 2021). As shown in Figure 2, documents that did not meet the inclusion criteria were gradually removed. Ultimately, the study included 2,945 articles in the final dataset for bibliometric analysis.

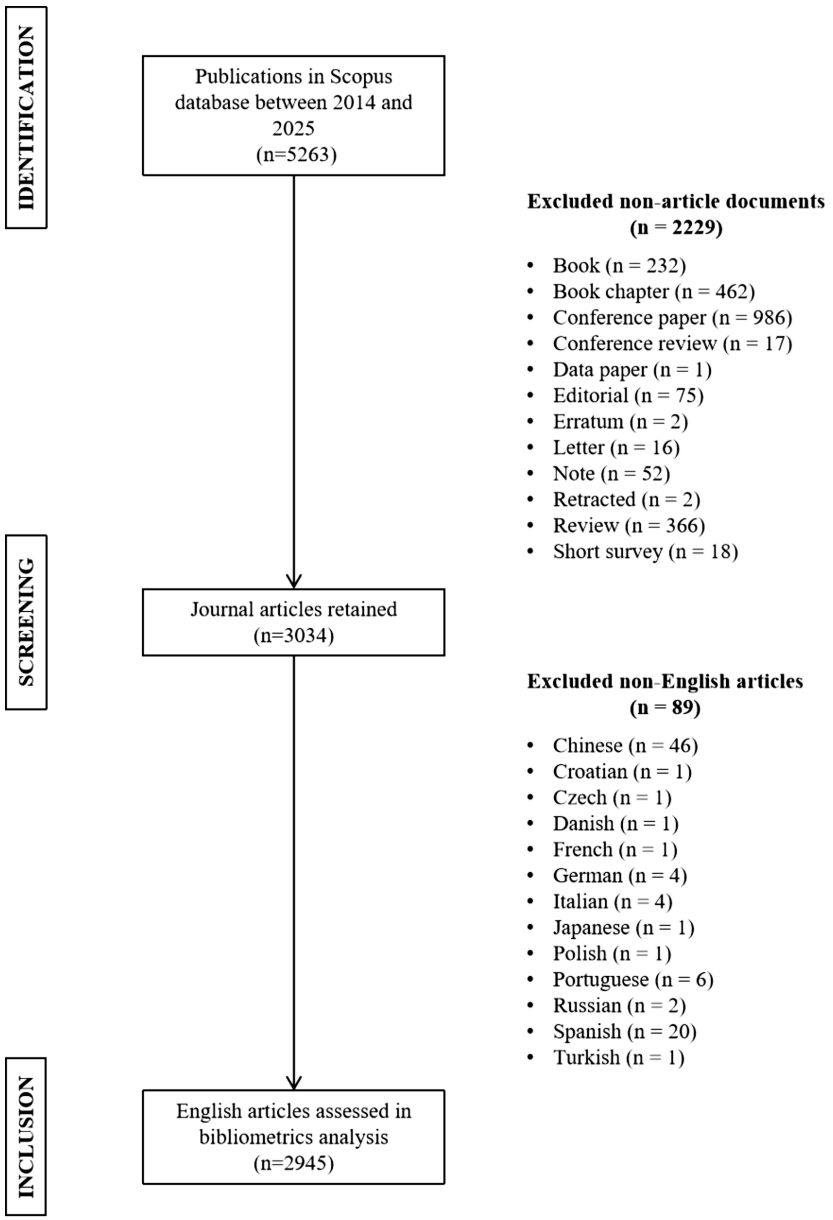

Figure 2. Flow diagram of the article selection process in Scopus.

Analytical tools

To support the study's single research objective, Bibliometrix in R was used to calculate annual publication trends and basic co-citation statistics (Aria & Cuccurullo, 2017; Moral-Muñoz et al., 2020). The publication indicators provided temporal context for the subsequent science-mapping analysis.

VOSviewer was used to construct and visualise document co-citation and keyword co-occurrence networks. VOSviewer constructs network maps based on co-occurrence relationships, where item size represents the selected weight, link thickness represents link strength, and colour represents cluster membership or a selected score, depending on the visualisation (Noyons, 2012; Van Eck & Waltman, 2010). Document co-citation analysis served as the core procedure for revealing the field's knowledge base and theoretical structure, while keyword co-occurrence analysis provided complementary thematic evidence. Annual publication trends were analysed separately as temporal context.

Analytical workflow

The analysis comprised two integrated stages serving the single research objective: a descriptive stage that established the publication trajectory as temporal context, followed by a core science-mapping stage that examined the field's knowledge base and theoretical structure.

The number of relevant publications per year from 2014 to 20 May, 2025 was calculated and visualised to depict the temporal evolution of AIGC in social media research. Key inflection points in the growth curve were identified, and year-over-year growth rates were calculated to distinguish different phases of development in line with prior bibliometric work on emerging technologies (Alrefaee et al., 2025). These procedures provided temporal context for interpreting the field's intellectual structure.

To address the study's single research objective, the most frequently cited publications in the corpus were identified and examined as the potential foundational knowledge of the field. A document co-citation matrix was constructed and imported into VOSviewer to generate co-citation networks and detect clusters of highly cited papers (Lopez-Lopez et al., 2025). Each cluster was then interpreted through the lens of the theoretical framework discussed in the literature review. Bibliometrix was used to summarise the frequencies of Keywords Plus terms and to generate the corresponding word-frequency plot and word cloud. VOSviewer was used to construct the author-keyword co-occurrence overlay visualisation and to examine the relative temporal distribution of author keywords based on average publication year.

FINDINGS

The findings are presented in an integrated sequence: publication trends establish temporal context, while co-citation and keyword analyses address the study's single research objective.

Overview of the corpus and publication trajectory

Publication output remained below five articles annually through 2022. Following the public release of ChatGPT in late 2022, output increased to 208 articles in 2023 and 1,440 in 2024. By 20 May, 2025, a further 1,288 articles had been indexed (Table 2, Figure 3). This expansion demonstrates strong scholarly interest but does not, by itself, establish the theoretical maturity of the field.

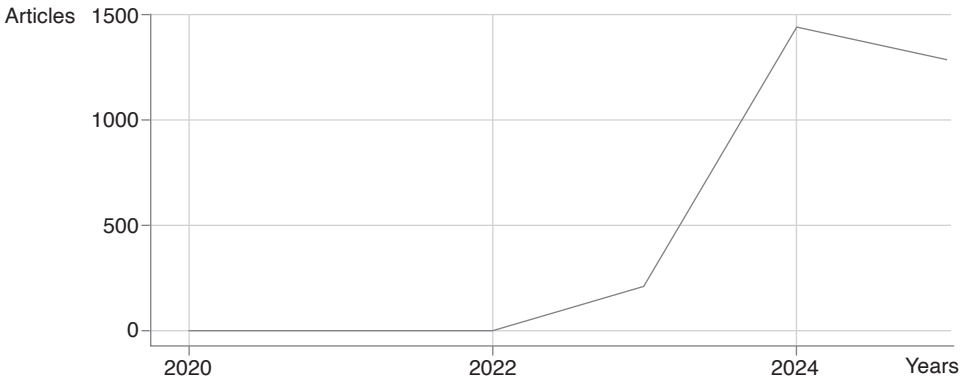

Figure 3. Number of publications per year (2025 data are reported through 20 May, 2025)

Table 2. Number of papers by year and percentage over the total

Year	Articles	Percentage (%)	Annual Growth Rate (%)
2020	3	0.1	–
2021	2	0.07	–33.33
2022	4	0.14	100
2023	208	7.06	5100
2024	1440	48.9	592.31
2025	1288	43.73	–

Note: Data for 2025 reflect publications retrieved up to 20 May, 2025.

Highly cited literature and knowledge base analysis

Central to the study's single research objective, this subsection investigates the knowledge base of AIGC in social media research by identifying and analysing the most highly cited publications in the corpus. As shown in Figure 4, nine of the top ten documents were published in 2023 and one in 2024, indicating that a recent group of publications has rapidly gained substantial citation influence within the corpus. The most cited paper, a 2023 position article by Dwivedi et al. discusses the implications of ChatGPT and has garnered over 2,000 citations (Table 3). Other highly cited papers span education (Tlili et al., 2023), management (Lim et al., 2023), and medicine (Clusmann et al., 2023), illustrating the cross-disciplinary influence of generative AI research. Many of these highly cited papers are conceptual or perspective-oriented, which is consistent with the field's early stage of development.

The subsequent co-citation analysis (Figure 5) shows different theoretical clusters that describe the intellectual structure of the field. One prominent cluster is built around technology acceptance models such as TAM (Davis, 1989) and UTAUT (Venkatesh et al., 2003). This cluster indicates the strong intellectual influence of information-systems and consumer-psychology theories. Several highly co-cited references, including Kuo et al. (2022), have limited direct substantive relevance to AIGC. Their prominence suggests that co-citation rankings in this young corpus may be influenced by concentrated citation patterns and should therefore be interpreted cautiously (Table 4). The broader co-citation network in Figure 5 spans management, psychology, education, and communication, whereas Figure 6 provides a closer view of the concentrated author-linked cluster.

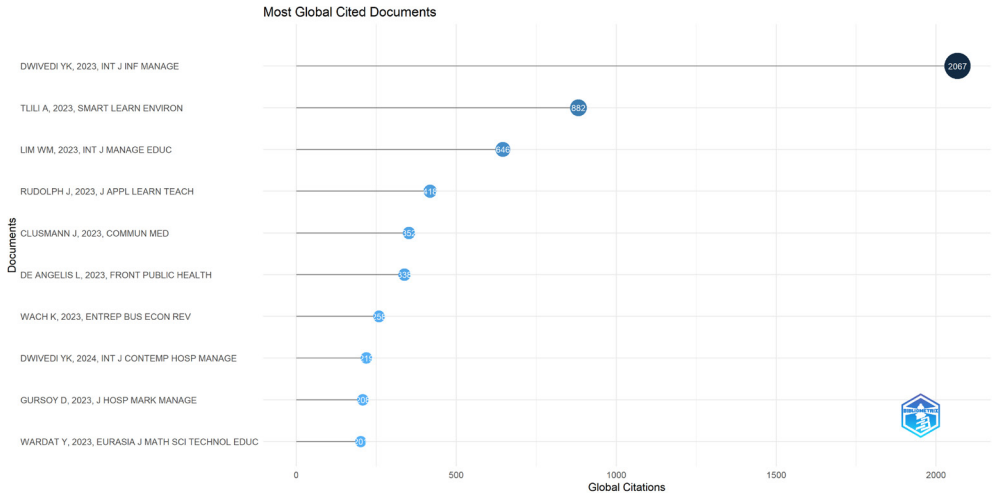

Figure 4. Most cited papers over the study period

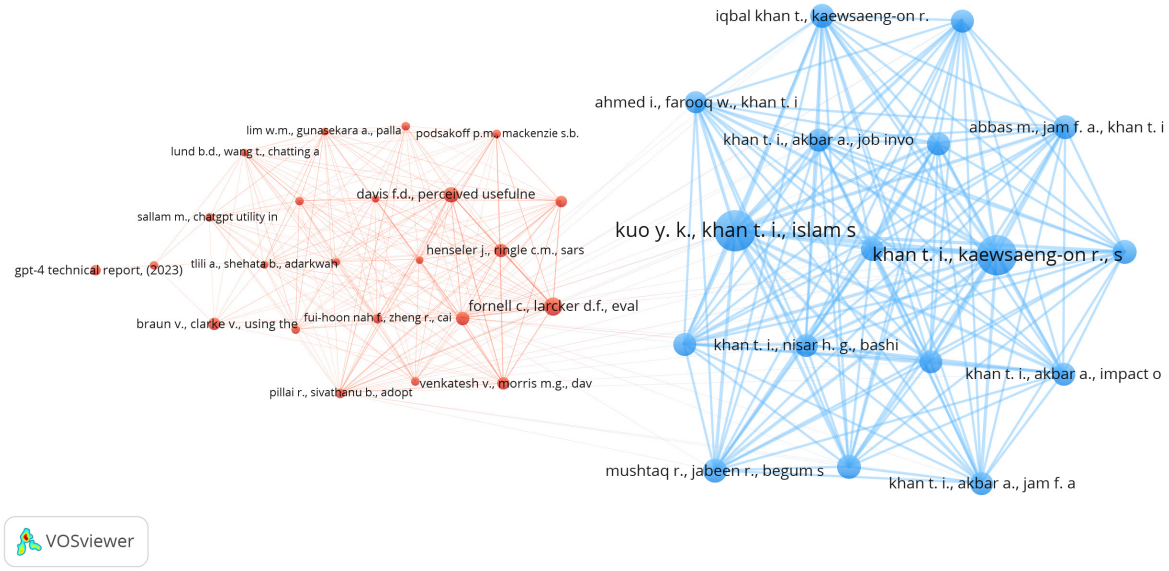

Figure 5. Co-citation between references

Table 3. Top 10 most cited publications and basic information

Author(s)	Paper	Source	Year	Total Citations	TC per Year
Dwivedi et al.	Opinion Paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy	*International Journal of Information Management*	2023	2067	689
Tlili et al.	What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education	*Smart Learning Environments*	2023	882	294
Lim et al.	Generative AI and the future of education: Ragnarök or reformation? A paradoxical perspective from management educators	*The International Journal of Management Education*	2023	646	215.33
Rudolph et al.	War of the chatbots: Bard, Bing Chat, ChatGPT, Ernie and beyond. The new AI gold rush and its impact on higher education	*Journal of Applied Learning & Teaching*	2023	418	139.33
Clusmann et al.	The future landscape of large language models in medicine	*Communications Medicine*	2023	352	117.33
De Angelis et al.	ChatGPT and the rise of large language models: The new AI-driven infodemic threat in public health	*Frontiers in Public Health*	2023	338	112.67
Wach et al.	The dark side of generative artificial intelligence: A critical analysis of controversies and risks of ChatGPT	*Entrepreneurial Business and Economics Review*	2023	258	86

Table 3. (con't)

Author(s)	Paper	Source	Year	Total Citations	TC per Year
Dwivedi et al.	Leveraging ChatGPT and other generative artificial intelligence (AI)-based applications in the hospitality and tourism industry: Practices, challenges and research agenda	*International Journal of Contemporary Hospitality Management*	2024	219	109.5
Gursoy et al.	ChatGPT and the hospitality and tourism industry: An overview of current trends and future research directions	*Journal of Hospitality Marketing & Management*	2023	208	69.33
Wardat et al.	ChatGPT: A revolutionary tool for teaching and learning mathematics	*Eurasia Journal of Mathematics, Science and Technology Education*	2023	201	67

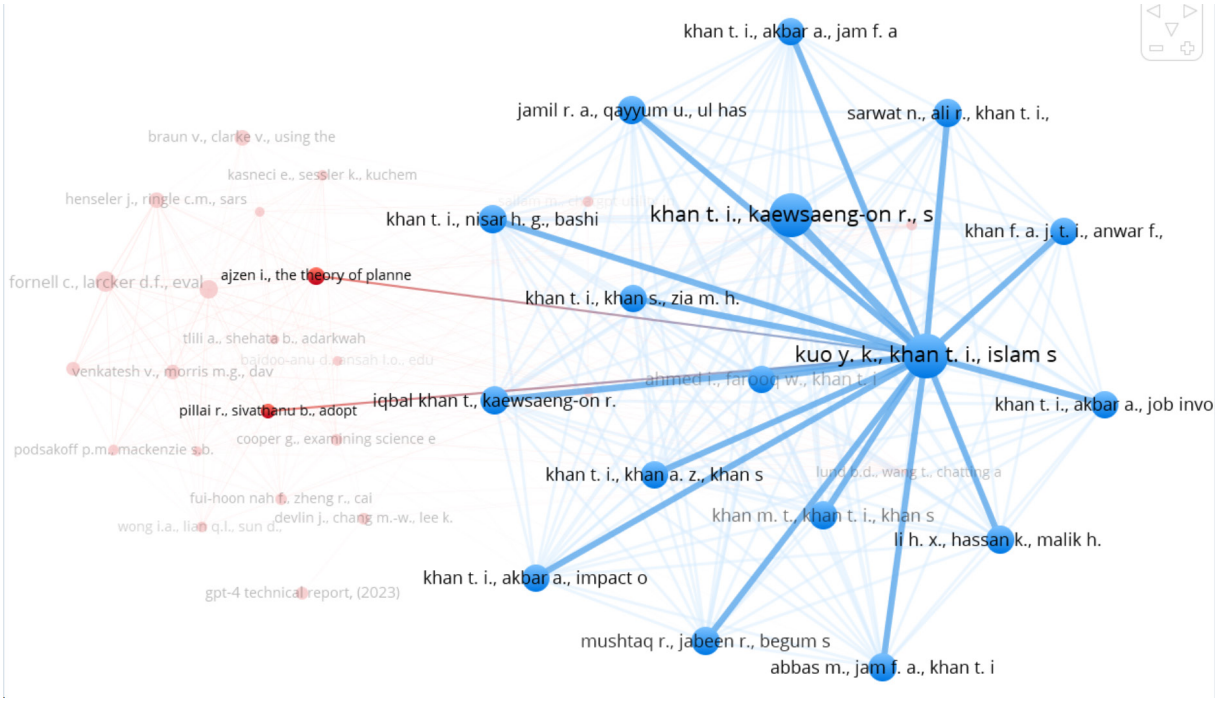

Figure 6. Connections within the cluster ranked first

Table 4. Ranking of the most co-cited references

Rank	Title	Source Title	Citations	Total Link Strength
1	Impact of Green HRM Practices on Environmental Performance: The mediating role of green innovation	*Frontiers in Psychology*	240	4602
2	Impact of workload on innovative performance: Moderating role of extrovert	*Humanities & Social Sciences Reviews*	233	4549

Table 4. (con't)

Rank	Title	Source Title	Citations	Total Link Strength
3	Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students	*International Journal of Educational Technology in Higher Education*	124	2469
4	Expanded job scope model and turnover intentions: A moderated mediation model of core-self evaluation and job involvement	*Management Science Letters*	123	2469
5	Impulsive and compulsive buying tendencies and consumer resistance to digital innovations: The moderating role of perceived threat of COVID-19	*Frontiers in Psychology*	121	2461
6	Perceived organizational politics and age, interactive effects on job outcomes	*Sage Open*	123	2452
7	Innovation & its diffusion in business: Concept, stages & procedural practices	*Sir Syed Journal of Education and Social Research (SJESR)*	121	2449
8	Impact of aversive leadership on job outcomes: Moderation and mediation model	*NICE Research Journal*	120	2448
9	Effect of time pressure on organizational citizenship behaviour: Moderating role of agreeableness	*Sir Syed Journal of Education and Social Research (SJESR)*	119	2443
10	Impact of social media influencers on consumers' well-being and purchase intention: A TikTok perspective	*European Journal of Management and Business Economics*	120	2436

Keyword co-occurrence analysis

Complementing the document co-citation analysis, this subsection examines keyword co-occurrence patterns to provide thematic evidence on the field's intellectual structure. As shown in Figure 7 and Figure 8(a), the most frequent Keywords Plus terms are "artificial intelligence" (528 occurrences) and "human" (293 occurrences), followed by "article" (235), "humans" (208), and "ChatGPT" (202). Other recurrent Keywords Plus terms include "large language model" (196) and "social media" (173), showing that technology-related terms coexist with broad human-related indexing terms. As Keywords Plus terms are database-generated, these patterns should be interpreted cautiously.

The overlay visualisation in Figure 8(b) provides a relative temporal perspective based on the average publication year of author keywords. Established technology-centred terms, including "artificial intelligence," "ChatGPT," and "machine learning," occupy central positions in the network. Terms such as "generative AI," "ethics," "trust," and "technology acceptance model" appear among the relatively recent topics. This pattern suggests that the field's established technological focus is increasingly accompanied by attention to ethical, trust-related, and user-acceptance concerns.

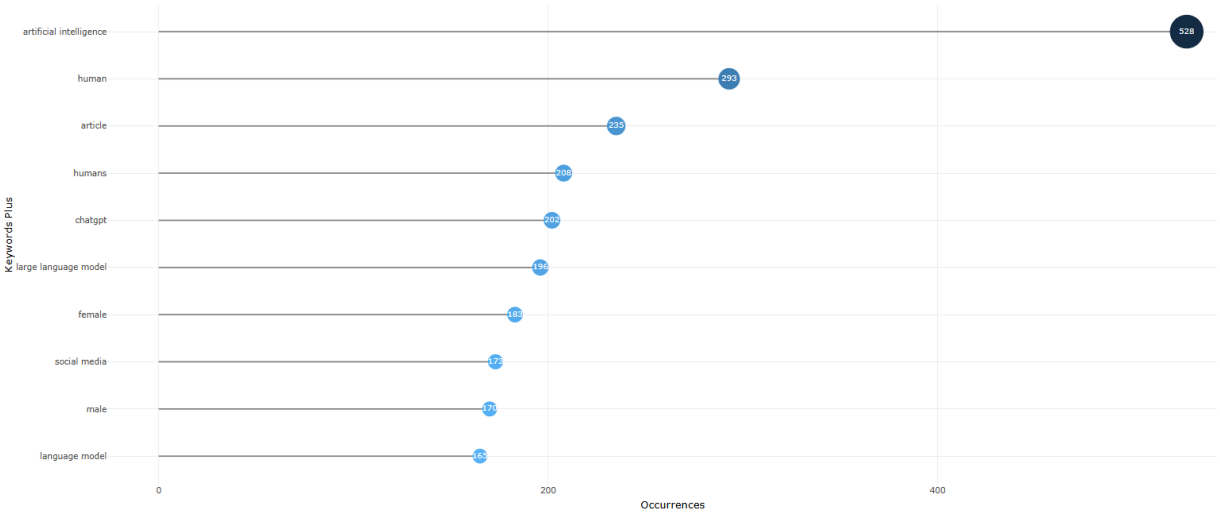

Figure 7. Top 10 most frequent Keywords Plus terms



(a) (b)

Figure 8. Keyword analysis: (a) word cloud of frequently occurring Keywords Plus terms; (b) author-keyword co-occurrence overlay visualisation based on average publication year

DISCUSSION

Taken together, the findings can be interpreted against the three strands of literature reviewed earlier. First, the publication trajectory confirms and extends prior mapping studies of generative AI. The explosive post-2022 growth observed here mirrors the pattern reported in Web of Science-based analyses of ChatGPT research (Koo, 2025) and in broader science mapping of generative AI (Obreja et al., 2025), but the present corpus demonstrates that AIGC in social media has developed into a substantial and rapidly expanding body of research. Notably, although the search window opened in 2014, no eligible journal article combining AIGC and social media was indexed before 2020, and fewer than five appeared annually until 2022. This suggests that the peer-reviewed journal literature is younger than the underlying technology, and that early technical work was disseminated mainly through conference venues excluded by the present inclusion criteria.

Second, the co-citation results substantiate the concern raised in the literature review that the field rests on borrowed theoretical scaffolding. The prominence of TAM, UTAUT, and TPB in the co-citation network indicates continued reliance on established technology-acceptance frameworks, while the visibility of Kietzmann et al.'s (2011) building-block model reflects the influence of pre-generative social-media theory. At the same time, several of the most strongly co-cited references in Table 4 originate from a concentrated author-linked cluster in management and consumer research whose substantive focus is only indirectly related to AIGC. Rather than automatically treating this cluster as the field's theoretical foundation, its prominence should be interpreted cautiously because concentrated citation patterns may influence co-citation structures in emerging fields (García-Villar & García-Santos, 2021). Co-citation rankings should therefore be read alongside the keyword evidence, which offers a complementary, content-oriented perspective of the field's thematic orientation.

Third, the keyword findings show that ethical and trust-related concerns have become visible alongside established technology-centred themes. This pattern is consistent with recent conceptual and empirical work on trust, authenticity, misinformation, and governance (Pan et al., 2025; Park et al., 2024; Shao & Yin, 2025). The convergence between the keyword evidence and the substantive literature suggests that the field is becoming increasingly attentive to the social implications of AIGC and underscores the need for AIGC-specific frameworks that integrate technical transparency with user-centred and ethical considerations.

CONCLUSION

Summary of findings

This study mapped the knowledge base and theoretical structure of Scopus-indexed AIGC research in social media published through 20 May, 2025. Annual trends provided temporal context, document co-citation analysis identified influential clusters, and keyword analysis supplied complementary thematic evidence. The field expanded rapidly after 2022 but remains theoretically fragmented. Co-citation patterns show continued reliance on theories from information systems, social psychology, and marketing, particularly TAM, UTAUT, and social-media engagement frameworks. Keyword patterns also indicate growing attention to ethics, trust, authenticity, and misinformation. Overall, application-oriented research is expanding faster than AIGC-specific theory development.

Challenges and limitations

Beyond the theoretical fragmentation identified through co-citation analysis, the present study does not directly assess the geographical distribution, platform coverage, sampling strategies, or research designs of individual studies. These dimensions therefore remain outside the evidential scope of the current analysis and should be examined through future systematic reviews and content analyses.

The research contains various methodological limitations that impact the study findings. The analysis relies solely on Scopus-indexed, peer-reviewed publications. Although Scopus is one of the most comprehensive databases, relevant works indexed

exclusively in Web of Science, IEEE Xplore or regional databases may have been omitted. The exclusion of conference proceedings from the analysis follows the journal article focus but could result in missing important technical breakthroughs. The search strings and inclusion criteria which researchers carefully constructed still influence the final collection of research, but they failed to retrieve every possible study about AIGC. Bibliometric indicators together with network maps show how papers relate to each other, yet they do not assess research quality or establish cause-and-effect relationships between studies. Thus, the results need to be evaluated with these study restrictions in mind.

Future research

There is a need to develop AIGC-specific theoretical frameworks that move beyond generic technology acceptance or social media models. Such frameworks could, for example, conceptualise human–AI co-creation, perceived algorithmic authenticity, or the negotiation of agency and responsibility in AI-mediated communication. Theory development that integrates insights from communication studies, human–computer interaction, critical data studies and media ethics would help consolidate the currently fragmented knowledge base.

Future work should broaden the geographical and cultural scope of AIGC in social media research. Comparative and cross-cultural studies, particularly from under-represented regions such as Africa, Latin America and Southeast Asia, are needed to examine how local values, regulatory regimes and media ecologies shape attitudes towards AIGC, perceptions of risk and patterns of adoption. Such work would contribute to a more geographically and culturally inclusive understanding of AIGC in social media.

The growing emphasis on ethics and trust calls for closer dialogue between technical and social-scientific research. Interdisciplinary studies that combine explainable AI (XAI) techniques with user-centred methods could investigate how algorithmic transparency, disclosure and control mechanisms influence trust, perceived bias and engagement on social platforms. This would transition from theoretical ethical concepts to specific assessments of practical design implementations.

Academic institutions need to develop better connections with industrial organisations for future research to produce more robust empirical evidence. The development of standardised metrics for AIGC real-world effectiveness assessment in communication and marketing becomes possible through co-designed studies which measure user behaviour and brand equity and return on investment. The development of new theories combined with diverse academic involvement and open research methods and practical results validation will transform AIGC social media research from landscape mapping to responsible human-centred equitable landscape shaping.

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From fandom to citizenship: Digital identity formation and hybrid campaigning in Indonesia's 2024 Election

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ABSTRACT

This study examines how digital political campaigning shapes youth engagement and political identity through a qualitative case study of the "Anies Bubble" campaign during Indonesia's 2024 Presidential Election. Drawing on debates surrounding digital political communication, fandom politics, youth participation, and hybrid campaigning, the study investigated how meme aesthetics, influencer-mediated communication, peer circulation, and online-offline campaign practices influence how Generation Z and Millennial voters interpret and engage with electoral politics. Data were collected through three focus group discussions involving six to eight participants aged 17–30 and 12 semi-structured interviews with students, young professionals, activists, and community organisers who were familiar with or engaged in the campaign. The data were analysed through thematic analysis supported by NVivo 12. The findings show that Anies Bubble made politics appear more relatable, emotionally resonant, and socially shareable. Memes, visual storytelling, influencer amplification, and peer interaction translated formal political messages into participatory cultural expressions that encouraged discussion, content creation, symbolic identification, and a sense of collective belonging. However, the campaign's reliance on platform visibility, humour, and aestheticized communication also created risks of superficial engagement, unequal access, and limited policy understanding, particularly among less-connected and non-urban voters. The study concludes that fandom-based campaigning can broaden youth participation, but its democratic value depends on whether affective engagement is connected to substantive civic education, inclusive offline mobilisation, and sustained deliberative practice. By demonstrating how political fandom, digital identity formation, influencer credibility, peer validation, and hybrid mobilisation interact within a candidate-centred campaign, this study contributes to scholarship on youth political communication in developing democracies.

Keywords: ***Digital politics, youth political identity, fandom politics, Anies Bubble, hybrid campaigning***

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INTRODUCTION

The 2024 Indonesian Presidential Election marked an important stage in the country's democratic development, as digital technologies increasingly shaped how candidates communicated with voters, circulated political narratives, and mobilised support. The election involved three major candidates—Anies Baswedan, Prabowo Subianto, and Ganjar Pranowo—whose campaigns reflected different political legacies and communication styles. Within this competitive environment, campaigning shifted further from conventional rallies, canvassing, and mass media exposure towards targeted, interactive, and data-driven digital ecosystems (Ma et al., 2024; Tasenţe, 2021).

This transformation is especially significant in Indonesia, where mobile internet use, platform-based communication, and a large youth electorate have altered the conditions of political participation. Campaigns increasingly rely on user-centred communication that emphasises personalisation, interaction, and participation rather than party-centred messaging alone (Solito & Sorrentino, 2018). Social media has also opened new channels between political actors and citizens, although its democratic value depends on whether it promotes substantive issue-based communication instead of visibility alone (Beers, 2014).

The "Anies Bubble" campaign provides a relevant case for examining these changes. It combined fan-based political marketing, meme aesthetics, influencer amplification, and online–offline engagement to build emotional proximity between Anies Baswedan and young supporters. Instead of relying exclusively on formal persuasion, the campaign used humour, visual storytelling, remix culture, and community participation—practices familiar to young social media users. This strategy reflects the growing overlap between fandom and youth activism (Andini & Akhni, 2021; Wahyuningroem et al., 2023).

Changing patterns of political information consumption strengthen the relevance of this case. A 2022 Centre for Strategic and International Studies (CSIS) survey found that 59% of Indonesian voters aged 17–39 used social media as their primary source of political information, compared with 39.5% in 2018, while reliance on television declined from 41.3% to 32% (Fernandes et al., 2023). These changes indicate that youth-oriented campaigns must be digitally accessible and culturally compatible with young citizens' everyday media practices. This pattern is consistent with the concept of social media political information dependency, which explains how young people use social media to meet informational, orientational, social, and participatory needs (Tan & Firdaus, 2023).

Table 1. Sources of information for young Indonesian voters (2018 vs 2022)

Source of Information	2018 (%)	2022 (%)
Social media	39.5	59.0
Television	41.3	32.0
Online news	8.2	6.3
Newspaper	1.3	1.0
Radio	0.8	0.3
Podcast	-	0.3
More	1.1	0.3
No Answer/Unknown	7.7	0.9

Source: Fernandes et al. (2023)

Table 1 shows that social media has become the dominant political information source among young Indonesian voters. Political engagement is therefore increasingly shaped by platform interaction, peer circulation, and affective content (Hassim et al., 2020).

Indonesia's improving digital literacy further supports this shift. The national Digital Literacy Index increased from 3.46 in 2020 to 3.54 in 2022. During the same period, digital skills rose from 3.34 to 3.52, while digital culture increased from 3.55 to 3.84 (OpenGov Asia, 2023).

Table 2. Indonesia's Digital Literacy Index (2020–2022)

Component	2020	2021	2022
Digital Literacy Index	3.46	3.49	3.54
Digital Skills	3.34	3.44	3.52
Digital Ethics	3.72	3.53	3.68
Digital Safety	3.24	3.10	3.12
Digital Culture	3.55	3.90	3.84

Source: OpenGov Asia (2023)

Despite these advances, digital divide continues to restrict political information and participation among rural, low-income, and less-connected communities (Livingstone & Helsper, 2007; Ng et al., 2024).

This situation highlights the importance of hybrid campaigning. Digital mobilisation can generate visibility, emotional affiliation, and rapid circulation, but offline engagement remains necessary to reach digitally marginalised voters and sustain participation beyond platform-based interaction (Ohme, 2019; Sanders & Scanlon, 2021). Influencers and buzzers can also extend campaign reach and make political messages more relatable, but their involvement raises concerns about disinformation, declining trust, personality-based support, and temporary engagement (Dewantara et al., 2022; Wiredarme & Muttaqin, 2022).

These dynamics create an important democratic tension. Fan-based political communication can make politics more accessible and socially meaningful, yet engagement organised primarily around affect, personality, and platform visibility may weaken critical evaluation and encourage loyalty-based judgement (Banerjee, 2024). In Indonesia, digital media have become important platforms in which democratic ideals, ideological practices, and public deliberation are negotiated (Wahid et al., 2025). The key issue is therefore whether fandom-based engagement strengthens youth citizenship or produces only symbolic and short-term participation.

Although previous studies have examined social media campaigning, influencer communication, digital activism, and youth participation, limited empirical attention has been given to how fandom-based campaign practices operate in Indonesia's electoral context. Further research is needed to explain how meme aesthetics, influencer credibility, peer networks, digital inequality, and hybrid strategies interact in shaping youth political identity and democratic engagement.

This study addresses that gap by analysing the Anies Bubble campaign during Indonesia's 2024 Presidential Election. It asks: (1) How did young voters interpret Anies Bubble as a form of digital political identity formation? (2) How did memes, influencers,

and peer networks shape engagement and perceived campaign credibility? (3) What limitations emerged from fandom-based and platform-dependent campaigning regarding inclusivity, deliberation, and sustainable citizenship?

By situating Anies Bubble within debates on digital political communication, youth participation, fandom politics, and hybrid mobilisation, this study contributes to understanding how media practices shape political belonging in a developing democracy. It argues that digital campaigning matters not only because it attracts attention, but also because it influences how young citizens understand, perform, and negotiate political identity.

LITERATURE REVIEW

Digital political campaigning and youth engagement

Digital political campaigning has transformed electoral communication from a predominantly one-way model into a networked and participatory process. Contemporary campaigns increasingly depend on platform visibility, personalised content, peer circulation, and rapid audience feedback rather than rely exclusively on rallies, television, print media, and party-centred messaging.

For young citizens, social media functions as both an information source and a participatory arena. Political knowledge develops through deliberate information seeking, incidental exposure, and peer circulation (Jin, 2021; Lee & Kao, 2021; Poon, 2025). Tan and Firdaus (2023) described this as social media political information dependency, through which young people satisfy their informational, orientational, social, and participatory needs.

The democratic effects of digital campaigning remain ambivalent. Political content may influence attitudes towards candidates, parties, and democratic participation, particularly when messages address salient issues or identity concerns (Dong et al., 2022; Poon, 2025; Wang, 2024). However, social media may also expose young voters to misinformation, selective content, affective polarisation, and shallow participation. Its democratic value therefore depends on information quality, source credibility, openness of discussion, and whether online engagement contributes to informed civic action.

Fandom politics, meme culture, and affective political identity

Fandom provides an important framework for understanding youth-oriented political communication. In electoral campaigning, fandom involves emotional attachment, symbolic identification, collective enthusiasm, and participatory cultural practices in support of political figures or causes.

Fandom may convert affective attachment into political energy when supporters connect admiration for a public figure or symbolic narrative with broader civic goals (Biswas, 2022; Campus et al., 2024; Clue, 2023). Meme production, fan art, hashtag circulation, fundraising, and coordinated posting can create collective involvement, while rallies and community campaigning may extend affective attachment into offline participation (Borges et al., 2024; Suwantawit, 2024). Through shared symbols and narratives, supporters may identify not only as followers of a candidate, but also as members of a civic community associated with reform, justice, or generational change.

However, fandom-based politics also carries democratic risks. Emotional attachment may stimulate participation while shifting attention from policy evaluation towards personality-centred loyalty. When support is organised primarily through affect, charisma, or symbolic belonging, voters may become more vulnerable to celebrity-driven narratives, polarisation, and uncritical endorsement (Clue, 2023; Poon, 2025).

Meme culture is central to this process because it translates political messages into concise, humorous, and recognisable formats. Memes, images, short videos, and remixable content can circulate rapidly and become embedded in everyday online conversation. Visual memes function as narrative devices that simplify political claims, frame issues, and attach emotional meanings to candidates or events (Pang & Woo, 2022). They may lower the threshold for participation by making politics appear familiar and creative, but their emphasis on humour and virality can also reduce complex debates to fragmented messages. Meme culture may therefore encourage mobilisation while limiting policy understanding.

Influencer-mediated communication and peer networks

Influencers have become important intermediaries between political actors and young publics. Unlike formal campaign representatives, they often communicate through personal storytelling, humour, lifestyle content, and platform-specific language. Influencer credibility is commonly associated with authenticity, relatability, expertise, and alignment with youth concerns. When influencers are perceived as genuine and socially relevant, their messages may appear more trustworthy than formal party communication (Klüver, 2024; Lobo & Bhat, 2022). Badrul Hisham et al. (2025) described influencers as cultural intermediaries who mediate meaning, build communities, and shape identity within fan-based digital environments. Although their study concerns popular culture, the concept is relevant to electoral communication because it explains how influencers transform campaign messages into recognisable narratives.

Influencer communication can also create emotional proximity through parasocial interaction. Repeated exposure and affective storytelling may encourage audiences to feel personally connected to influencers and become more willing to share content, join discussions, or support offline activities. However, paid endorsements, unclear sponsorship, misinformation, and personality-driven persuasion may weaken political deliberation. Influencer credibility can attract attention, but it should not replace policy scrutiny.

Peer networks also shape youth engagement. Political information circulates through friendship groups, student networks, fan communities, and informal discussion spaces. According to Hassim et al. (2020), peer engagement on social networking sites can influence youth voting by making political discussion more socially connected. Yet peer communication may also generate conformity, echo chambers, and performative support when political preferences become tied to group identity. Peer networks therefore, both enable and constrain participation.

Digital citizenship, hybrid campaigning, and democratic inclusion

Digital citizenship involves evaluating political information, participating in respectful discussions, and connecting online expressions with civic action. Digital campaigns can expand access to information, but their democratic value depends on whether online

activity contributes to political learning, deliberation, and offline participation (Koren, 2023; Mirra et al., 2022).

Hybrid campaigning links digital visibility with offline engagement. Online platforms can extend reach, circulate narratives, and mobilise young voters rapidly, while community discussions, volunteer networks, rallies, and local outreach can deepen engagement and reach less-connected groups. Hybrid strategies therefore combine the scale of digital communication with the relational depth of face-to-face interaction.

This combination is particularly important in societies with unequal digital access. Digital-first campaigns may disproportionately benefit urban, educated, and highly connected voters while excluding citizens with limited infrastructure, skills, or platform access. Frey et al. (2024) contended that reducing digital inequality can narrow participation gaps, indicating that inclusion is democratic rather than merely a technical concern. Digital campaigns should therefore be evaluated not only by their visibility, but also by who can access, interpret, and act on their messages.

In Indonesia, digital media have become important spaces for political discourse and ideological negotiation. Beers (2014) demonstrated that social media has opened new channels between political actors and citizens, although its democratic contribution depends on substantive, issue-based communication. Wahid et al. (2025) similarly argued that Indonesia's digital political spheres are shaped by communicative discourses and ideological practices that influence democratic deliberation. The significance of digital campaigning therefore cannot be assessed solely through popularity or virality, but must also be judged by its contribution to informed, inclusive, and deliberative participation.

Research gap and analytical focus

Existing studies have examined digital participation, youth engagement, political fandom, meme culture, influencer communication, parasocial interaction, peer networks, and hybrid campaigning. However, these dimensions are often studied separately. Limited attention has been given to how they operate simultaneously within a candidate-centred electoral campaign in a developing democracy such as Indonesia.

Previous research shows that social media can expand political information and participation, fandom can mobilise affective attachment, memes can increase circulation, and influencers can enhance perceived authenticity. Less is known about how these mechanisms interact in shaping youth political identity, how digital enthusiasm is translated into offline engagement, and how platform inequality affects the inclusiveness and sustainability of participation. Existing research also provides limited explanation of the tension between emotional mobilisation and policy understanding.

This study addresses these gaps by examining the Anies Bubble campaign as an integrated case of digital political communication during Indonesia's 2024 Presidential Election. It focuses on four interconnected dimensions: affective political identity, fan-based and meme-driven participation, influencer-mediated credibility, and hybrid online–offline engagement. This framework supports the analysis of how young voters interpret campaign messages, negotiate political belonging, participate in digital communities, and assess whether emotionally resonant communication can develop into sustained citizenship.

METHODS

This study employed a qualitative case study to examine the strategies, meanings, and perceived effects of the "Anies Bubble" campaign during Indonesia's 2024 Presidential Election. A qualitative design was appropriate because the study sought to understand how young voters interpreted and experienced the campaign within its social and cultural context. The case study approach enabled an in-depth examination of a bounded contemporary phenomenon (Creswell & Poth, 2018; Yin, 2018). The case was bounded by the Anies Bubble campaign, the 2024 presidential election, and young voters who had encountered or engaged with the campaign.

Data were collected through focus group discussions (FGDs) and semi-structured interviews. FGDs were used to examine shared meanings, peer interactions, and areas of agreement or disagreement, while interviews provided more detailed individual accounts of political attitudes, digital media use, and perceptions of fan-based and influencer-mediated communication. These methods were selected because FGDs reveal how meanings develop through interactions, whereas interviews allow participants to discuss experiences that may not emerge fully in group settings (Morgan, 1997; Krueger & Casey, 2015).

Three FGDs were conducted, each involving six to eight participants aged 17–30. This group size allowed all participants to contribute while still generating diverse interactions (Krueger & Casey, 2015; Morgan, 1997). Participants included university students, young professionals, activists, and informal community organisers. They were recruited through purposive sampling based on their knowledge of, exposure to, or engagement with Anies Bubble. Purposive sampling was appropriate because the study required information-rich participants familiar with the case (Creswell & Poth, 2018).

Twelve semi-structured interviews were also conducted with participants who had substantial engagement with the campaign or grassroots digital activism. Combining FGDs and interviews enabled comparison between collectively negotiated meanings and individual interpretations of political identity, campaign credibility, and digital participation.

All sessions were audio-recorded with consent and transcribed verbatim. Field notes documented non-verbal cues, interactional dynamics, and contextual conditions. Trained moderators facilitated the FGDs in accessible settings, including community centres and university spaces. The interview guide was based on the research objectives and refined iteratively after the FGDs. Questions covered motivations for engaging with Anies Baswedan's campaign, perceptions of Anies Bubble, evaluations of its digital strategies, and the relationship between online participation and offline mobilisation.

Participants received information about the study's objectives, procedures, voluntary participation, confidentiality, and ethical safeguards before data collection. Written informed consent was obtained, and personal identifiers were removed or replaced with pseudonyms. The study received approval from the host institution's review board in accordance with institutional ethics procedures.

The data were analysed using thematic analysis supported by NVivo 12. Thematic analysis was chosen for its systematic and flexible approach to identifying and interpreting patterns across qualitative data (Braun & Clarke, 2006, 2021). NVivo 12 supported

transcript organisation, coding, excerpt retrieval, category comparison, and analytic memoing, while interpretation remained researcher-led.

The analysis followed six phases adapted from Braun and Clarke (2006, 2021): familiarisation with the transcripts and field notes, initial coding, grouping related codes into categories, developing candidate themes, reviewing themes against the dataset, and lastly, defining and naming the final themes. The final themes concerned political identity and belonging, meme-based expression, influencer-mediated credibility, platform limitations, and hybrid engagement.

Trustworthiness was strengthened through triangulation, member checking, retention of divergent accounts, and a reflexive journal documenting analytical decisions and potential bias.

The study did not seek statistical generalisation because participants were purposively selected for their familiarity with Anies Bubble. However, multiple data sources, transparent thematic procedures, triangulation, member checking, and reflexive documentation strengthened the credibility, dependability, and transferability of the findings.

FINDINGS AND DISCUSSION

This section presents findings from the focus group discussions (FGDs), semi-structured interviews, and field notes. Participants viewed Anies Bubble not merely as a promotional strategy, but as a youth-oriented political communication space where identity, emotion, humour, peer validation, and civic aspirations intersected. They described the campaign as relatable and socially shareable, while also raising concerns about superficial engagement, platform dependency, unequal access, and the limited conversion of online enthusiasm into sustained participation.

The thematic analysis generated five interrelated themes: youth political identity and peer belonging, meme culture and visual authenticity, influencer-mediated credibility, inclusivity and digital fragmentation, and hybrid campaigning. Together, these themes demonstrate that the campaign's appeal depended not only on its political messages, but also on the cultural forms, social relationships, and communication channels through which those messages circulated.

Youth political identity and peer belonging

Participants described Anies Bubble as a cultural space that made politics more accessible and connected to their everyday digital lives. Their interest in Anies was partly shaped by knowledge of his previous public leadership, including programmes such as JakLingko and the Jakarta International Stadium. However, these achievements became politically meaningful when translated into accessible digital narratives rather than technical policy language.

Andra, a 21-year-old student from Yogyakarta, stated:

> *Kalau lihat kampanye ini, rasanya kayak ada yang ngerti generasi kita. Nggak terlalu berat, tapi nyampe ke isu-isu yang kita pikirin.*
> [Looking at this campaign, it feels like someone actually understands our generation. It's not too heavy, yet it addresses the issues that are on our minds.]

The phrase *ngerti generasi kita* indicates that participants perceived the campaign as recognising young people's emotional and cultural language. They associated it with educational equity, inclusive leadership, urban accessibility, and political change, but encountered these issues mainly through personal stories, humour, visual symbols, and informal discussion.

Peer validation was also central. Seeing friends circulate campaign content made political participation feel more socially acceptable. Dina, a 23-year-old participant from Malang, explained:

> *Kalau teman share konten Anies, aku jadi ngerasa kayak ikut bagian dari gerakannya juga. Bukan cuma nontonin aja.*
> [When friends share content about Anies, I feel like I'm part of the movement too—not just watching from the sidelines.]

Sharing and commenting allowed participants to signal affiliation, affirm group membership, and feel part of a wider movement. This finding is consistent with evidence that peer interaction on social networking sites can make youth political participation more socially embedded (Hassim et al., 2020). It also supports Tan and Firdaus' (2023) argument that young citizens use social media to fulfil informational, orientational, social, and participatory needs.

Youth political identity is therefore shaped not only by issue agreement, but also by emotional recognition, shared aesthetics, and peer acceptance. Anies Bubble functioned as a space where participants could perform political belonging through familiar cultural practices rather than formal party affiliation.

Table 3. Dimensions of identity construction in the Anies Bubble campaign

Dimension	Expression in Anies Bubble
Digital Expression	Active engagement through memes, viral videos, Instagram stories, and Twitter/X threads
Cultural Relatability	Narratives about local justice, youth access to education, and economic equity
Political Socialisation	Sharing political opinions through digital forums, group discussions, and user-generated content
Influencer Amplification	Validation of political alignment by trusted youth icons and social media personalities
Emotional Connectivity	Narratives around hope, compassion, and change that evoke a sense of shared struggle
Challenges	Risk of exclusive discourse, shallow engagement, and visibility gaps across regions

Fan-like participation could make politics more engaging, but its democratic value depends on whether symbolic belonging developed into political understanding and sustained civic action.

Meme culture, visual authenticity, and fan-based engagement

Participants identified memes, short videos, symbolic gestures, and informal visual content as the campaign's most appealing elements. These formats were central to how they interpreted and circulated its political identity.

Examples included images of Anies walking with a cat, behind-the-scenes content, humorous edits, and the sign-language gesture for *perubahan* (change). Such content constructed a persona perceived as approachable and emotionally accessible. Raka, a 22-year-old student from Jakarta, shared:

> *Konten visualnya bikin Anies kelihatan kayak orang biasa, bukan elite yang jauh. Apalagi pas muncul meme yang lucu tapi tetap nyambung ke isu.*
> [The visual content makes Anies come across as an ordinary person, rather than a distant member of the elite—especially when funny memes appear that still tie back to the issues at hand.]

Visual content reduced the perceived distance between candidate and voter. Participants preferred political substance in culturally familiar formats, often describing memes as *ringan tapi nyampe* (light, but it gets the job done). This supports Pang and Woo's (2022) view of memes as devices that simplify political claims and attach emotional meaning.

Participants nevertheless recognised the risk of prioritising style over substance. Intan, a 25-year-old NGO volunteer from Bandung, cautioned:

> *Kadang jadi terlalu fokus gaya, bukan isi. Orang suka karena lucu, tapi nggak semua ngerti apa yang diperjuangkan.*
> [Sometimes the focus shifts too much to style rather than substance. People like it because it's funny, but not everyone understands what is being fought for.]

Humour and visual simplicity increased reach but did not necessarily deepen policy understanding. The qualities that made memes effective could also make aesthetic identity more memorable than political substance.

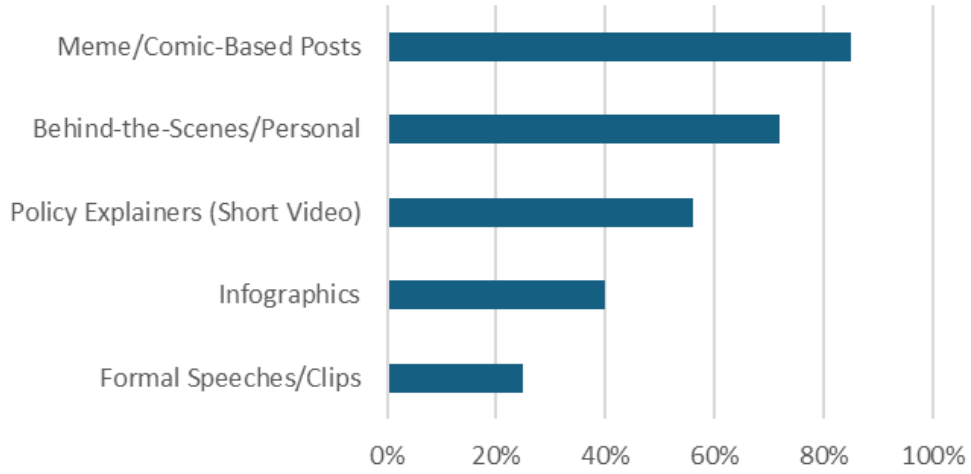

Figure 1. Most engaging content types among youth participants

Figure 1 presents the proportion of participants who identified each format as memorable, shareable, or persuasive; the figures are descriptive rather than statistically generalisable. Fan-based participation further strengthened supporters' sense of

ownership. Participants shared memes, produced fan art, designed merchandise, reposted slogans, and adapted campaign messages to their own online styles. Rizky, a 24-year-old designer from Surabaya, shared:

> *Aku ikut bikin desain kaos dan nyebarin stiker online. Jadi ngerasa kampanye ini kayak milik kita bareng.*
> [I took part in making t-shirt designs and distributing stickers online. So we feel like this campaign is ours together.]

Creative participation transformed supporters from audiences into co-producers of the campaign's symbolic identity. However, without civic education, policy clarity, and inclusive dialogue, such participation could remain symbolic rather than contribute to sustained democratic understanding.

Influencer credibility and traditional political outreach

Participants described influencers as more relatable and emotionally accessible than formal political figures. Influencers translated political issues into everyday language and communicated through platforms familiar to young voters, including TikTok, Instagram, YouTube, and podcasts. Fira, a 21-year-old university student from Malang, explained:

> *Aku nggak terlalu ngerti politik, tapi kalau ngomong soal Anies, aku jadi dengerin. Soalnya dia ngomongnya kayak temen, bukan kayak pejabat.*
> [I don't really understand politics, but when it comes to Anies, I actually listen. That's because he speaks like a friend, not like an official.]

Influencer credibility is therefore based less on policy expertise than on informality, familiarity, and perceived closeness. Traditional political communication, by contrast, was often considered scripted and distant. The FGDs revealed that influencers helped reframe issues such as educational access, anti-corruption, climate justice, and inclusive governance into shareable narratives.

This finding is consistent with research showing that influencer credibility is shaped by authenticity, relatability, and cultural proximity (Klüver, 2024; Lobo & Bhat, 2022). It also supports the view of influencers as cultural intermediaries who translate institutional messages into forms that resonate with digital communities (Badrul Hisham et al., 2025). However, participants questioned the durability of influencer-led engagement. Dimas, a 25-year-old freelance editor from Makassar, noted:

> *Kalau dukungannya cuma karena fans sama orangnya, nanti bisa gampang luntur. Harusnya juga dikasih pemahaman soal isu, bukan cuma gaya dukungannya aja.*
> [If support is based solely on fandom for the individual, it can easily fade. There should also be an understanding of the issues involved, rather than just focusing on the style of support.]

This statement highlights the risk of fandom fatigue. If support depends mainly on admiration for an influencer or candidate, it may decline when trends or reputations

change. Thus. influencer communication can attract attention and reduce communicative distance, but it cannot replace policy explanation, accountability, or sustained civic learning.

Table 4. Comparison between influencer-based and traditional political outreach

Aspect	Influencer-Based Outreach	Traditional Political Outreach
Communication Style	Informal, emotional, visual, and platform-native	Formal, structured, and policy-oriented
Audience Engagement	High among youth, especially Gen Z and Millennials	Higher among older or institutionally engaged demographics
Perceived Authenticity	High, based on familiarity and relatability	Moderate to low, often seen as elite or distant
Issue Framing	Value-based and emotionally driven	Procedural, often abstract or generalised
Sustainability of Engagement	Vulnerable to trend shifts and individual reputation	Potentially more stable, but may lack youth appeal
Accessibility of Channels	TikTok, Instagram, YouTube, and podcasts	Town halls, news media, and community forums

Table 4 indicates that influencers offer relatability, whereas traditional outreach provides greater policy depth and institutional continuity.

Inclusivity and digital fragmentation

Although participants generally viewed Anies Bubble as creative and effective among digitally active youth, they criticised its uneven reach. The campaign appeared strongest among urban, educated, and platform-literate voters, particularly those active on Twitter/X, Instagram, and TikTok. Participants questioned whether it reached young people outside major cities or those with limited digital access. Abrar stated:

> *Kalau hanya fokus Twitter, itu jadi bolong… TikTok harusnya juga lebih aktif, apalagi di luar Jakarta.*
> [If the focus is solely on Twitter, there will be gaps... You really need to be more active on TikTok as well, especially outside Jakarta.]

This comment points to the limits of platform concentration. Strong visibility on one platform does not ensure access among users of other platforms or digital cultures. Participants outside Jakarta also felt that the campaign's language and references were sometimes metropolitan-centred. Digital campaigns may therefore introduce civic inequality when visibility depends on algorithms, platform literacy, humour, and urban cultural knowledge. This finding supports research showing that digital inequality affects citizens' access to political information and participation (Frey et al., 2024).

Participants recommended broader use of TikTok, Instagram, WhatsApp groups, community radio, offline youth forums, and local influencers, alongside multilingual and regionally sensitive content. The popularity of Anies Bubble among digitally fluent youth should not be treated as evidence of universal engagement. Campaign reach should therefore be assessed through audience diversity and accessibility, not only engagement metrics.

Hybrid campaigning and the sustainability of engagement

Participants appreciated the creativity of Anies Bubble but considered online enthusiasm insufficient for sustained participation. They expected digital engagement to be linked to local discussions, volunteer initiatives, youth forums, and community events. Hanif, a 24-year-old community organiser from Surabaya, explained:

> *Kontennya bagus dan bikin semangat, tapi nggak cukup kalau cuma di medsos. Harus ada kegiatan langsung supaya gerakannya nyata.*
> [The content is great and inspiring, but social media alone isn't enough. There need to be in-person activities to make the movement tangible.]

Participants distinguished digital visibility from civic substance. Viral content generated attention, but offline activities made the campaign more tangible, credible, and socially rooted. Thus, direct engagement is associated with dialogue, trust, and deeper political learning. Participants from non-metropolitan areas also regarded offline outreach as essential for inclusion. Aulia, a 23-year-old student from Pontianak, stated:

> *Kampanye digital banyak yang keren, tapi kalau nggak sampai ke kota kecil atau desa, ya dampaknya timpang.*
> [There are many great digital campaigns, but if they don't reach small towns or villages, the impact is uneven.]

Hybrid campaigning is therefore important not only for sustaining existing support, but also for reducing inequality in campaign access. This finding supports the argument that digital participation gains democratic value when it contributes to political learning, deliberation, and civic action (Koren, 2023; Mirra et al., 2022).

Table 5. Comparison of engagement modes

Mode	Strengths	Weaknesses	Ideal Use-Case
Online (Anies Bubble)	Rapid dissemination, viral potential, emotionally engaging, and low cost	Risk of superficiality, digital divide, and limited intergenerational access	Raising awareness, youth mobilisation, and identity construction
Offline (Desak Anies, Meetups)	High credibility, trust-building, and inclusive of non-digital communities	Logistically intensive, less scalable, and vulnerable to regional disparities	Community building, direct persuasion, and trust reinforcement
Hybrid Strategy	Combining reach with depth fosters loyalty and sustained engagement	Requires resource alignment, strategic consistency, and coordination complexity	Sustained movement-building, narrative coherence, and identity anchoring

Hybrid campaigning combines these strengths, although it requires strategic coordination, adequate resources, and local adaptation. Overall, the findings show that political identity, fandom, meme culture, influencer credibility, peer validation, digital inequality, and hybrid mobilisation operated interdependently within the Anies Bubble campaign. The campaign made politics more familiar and socially meaningful, but the transition from fandom to citizenship remained conditional on policy understanding, inclusive communication, critical discussion, and sustained online–offline participation.

CONCLUSION

This study found that Anies Bubble translated electoral politics into cultural forms familiar to young voters. Through memes, visual storytelling, influencer communication, peer circulation, and hybrid practices, it supported expressive and community-based political identity beyond formal institutional affiliation.

However, the transition from fandom to citizenship was neither automatic nor complete. The campaign's reliance on humour, visual culture, influencers, and platform visibility created risks of superficial participation, unequal access, and limited policy understanding. Its stronger appeal among urban and digitally fluent youth also risked excluding rural, less-connected, and non-platform-centred audiences. Affective engagement therefore contributes to democratic participation only when linked to policy clarity, civic learning, inclusive communication, and sustained offline involvement.

This study contributes by showing how political fandom, digital identity, influencer credibility, peer validation, platform inequality, and hybrid mobilisation interact within a candidate-centred campaign. It demonstrates that platform-native communication can make politics more accessible, but its democratic value depends on whether symbolic participation develops into informed, inclusive, and sustained civic engagement.

Practically, youth-oriented campaigns should use memes, influencers, and visual storytelling as entry points rather than substitutes for substantive communication. Digital strategies should be supported by accessible policy explanations, cross-platform outreach, regional adaptation, offline deliberation, and community participation.

The study is limited by its purposive sample and focus on a single electoral period. Future research should compare candidate-centred campaigns, examine platform and regional differences, and assess whether fandom-based engagement produces durable political participation.

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Digital news storytelling in Malaysian newsrooms: Multimedia journalists' perspectives on cross-platform journalism

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ABSTRACT

The digital-first strategies in modern multimedia journalism have made digital news storytelling a central practice. This study investigates how Malaysian multimedia journalists (MJs) navigate this evolving landscape, focusing on their conceptualisation and implementation of digital storytelling strategies. As Malaysian newsrooms adapt to a digitised news ecosystem, MJs are tasked with balancing journalistic integrity with the demands of immediacy, engagement, and platform-specific formatting for diverse digital audiences. A qualitative approach, utilising in-depth interviews with 16 MJs from mainstream Malaysian broadcast newsrooms, was employed. Thematic analysis identified four key themes: audience-driven narratives, the challenge of sustaining journalistic ethics, the evolving criteria from newsworthiness to shareworthiness, and the strategic use of multimedia tools and techniques. The findings suggest that while the core journalistic values of accuracy, fairness, and credibility persist, MJs are adopting new storytelling practices to resonate with fragmented digital audiences. This study provides a timely contribution to the literature on digital journalism in Southeast Asia, offering insights into the changing roles and responsibilities of MJs in Malaysia.

Keywords: ***Digital journalism, multimedia journalists, digital storytelling, cross-platform journalism***

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INTRODUCTION

Over the past decade, the consumption of news has transformed, moving far beyond the boundaries of the television screen (Kim, 2023). Audiences who once relied on scheduled broadcasts now expect instant, interactive, and on-demand updates delivered through websites, mobile applications, social media platforms, and live streams (Ren et al., 2024). This evolution has redefined not only how news is accessed but also how it is experienced. Audiences are no longer passive recipients of information but active informants who share, comment, and even shape news narratives in real time. For Malaysian television newsrooms, this shift has created both an opportunity and a challenge; while digital platforms provide unprecedented reach, they also demand faster production cycles, platform-specific storytelling, and innovative approaches to sustain audience attention in an increasingly crowded information ecosystem.

In response to these shifting dynamics, broadcast organisations in Malaysia have restructured their operations, most notably by introducing and expanding the role of multimedia journalists (MJs). Himma-Kadakas and Mõttus (2021) described MJs as contemporary storytellers who continue to uphold the traditional values of journalism, such as truth, accuracy, fairness, and credible sourcing, while simultaneously adopting new techniques to meet the demands of digital-first audiences. In practice, this means MJs are no longer confined to the linearity of print or television reporting. Instead, they weave together text, visuals, audio, video, graphics, and interactive elements into cohesive multimedia narratives designed to capture and retain fragmented audiences across multiple platforms (Ren et al., 2024).

This transformation has been particularly visible in leading Malaysian news organisations such as Astro AWANI, RTM, BERNAMA TV, and Media Prima Berhad, all of which have implemented the MJ model to remain competitive in the digital news landscape (Esa et al., 2024). Beyond responding to technological disruptions, the MJ model also reflects an organisational strategy to maximise newsroom efficiency with leaner teams, requiring journalists to multitask across roles that were once clearly delineated. This dual pressure, to innovate creatively while working under increasingly compressed timelines, has made the MJ role both indispensable and demanding.

Against this backdrop, the present study investigates how Malaysian multimedia journalists are "telling the news differently". It explores the ways they conceptualise and practise digital storytelling, the multimedia tools and techniques they employ, and the ethical and professional challenges they encounter. By examining these lived experiences, the study contributes to a deeper understanding of how journalism in Malaysia is adapting to the realities of the digital era while remaining grounded in its enduring values.

PROBLEM STATEMENT

The integration of digital platforms into news production has transformed not only the technical processes of journalism but also the professional expectations placed on multimedia journalists (MJs) (Kusumawati, 2023). MJs are now expected to maintain an active presence across multiple platforms, engage directly with audiences, and deliver updates in real time. This has accelerated what scholars describe as "speed-driven journalism", where the race to be first often overshadows the need for depth, reflection,

and nuance (Ren et al., 2024). For Malaysian MJs, this constant cycle of content production sustains audience attention but simultaneously heightens the pressures of newsroom work (Esa & Wan Zainodin, 2025).

While digital technologies open new opportunities for creative storytelling, they also create profound challenges. MJs are frequently required to do more in less time, juggling filming, editing, writing, and publishing tasks single-handedly (Gushevinalti & Suparman, 2024). These demands often force them to balance speed with accuracy, leaving limited room for investigative reporting or in-depth analysis. Moreover, the emphasis on immediacy has reshaped the very nature of news, leading to formats that are shorter, more shareable, and often designed for virality rather than depth (Barnidge & Xenos, 2024). The rise of clickbait headlines and listicle-driven content further reflects this shift, raising concerns about how the journalistic values of credibility and fairness can be preserved in such an environment (Pengnate et al., 2021).

Despite the significance of these changes, research on how MJs themselves perceive and navigate this transformation remains limited, especially in Southeast Asia. Much of the literature on digital journalism is centred on Western contexts (Anis Sharadga et al., 2022; Himma-Kadakas & Mõttus, 2021), leaving a gap in understanding how Malaysian MJs conceptualise digital storytelling and negotiate the competing demands of speed, engagement, ethics, and cross-platform production. Addressing this gap is crucial, as their lived experiences provide valuable insights into the evolving nature of journalism in Malaysia, and doing so represents the primary contribution of the present study.

LITERATURE REVIEW

Digital storytelling has become a defining feature of modern journalism, enabling the use of multimedia elements, such as text, video, audio, graphics, and interactivity, to create narratives that enhance understanding and engagement (Kulkarni et al., 2022). Unlike traditional reporting that relied on linear formats, digital storytelling allows news to unfold across multiple entry points, giving audiences the choice to explore stories in immersive and personalised ways (Van Der Nat et al., 2021). This shift is not only technological but cultural, reshaping how journalists design experiences as much as how they deliver information (Planer et al., 2022).

The rise of social media has fragmented audiences, forcing newsrooms to distribute stories across multiple platforms, each with unique conventions and algorithmic demands (Indrati et al., 2021). This requires journalists to adapt the same story differently for television, websites, and platforms such as Instagram, TikTok, or X (formerly Twitter). Success is now measured not only by accuracy but also by metrics such as clicks, shares, and engagement, intensifying the demand for speed and consistency (Lim & Wilson, 2024). Multimedia journalists (MJs) must combine traditional reporting with skills in video editing, graphic design, and social media management (Cummings, 2020). While this versatility enables cross-platform storytelling, it also increases workload and raises questions about sustainability, particularly in resource-constrained newsrooms (Mohd Arsad et al., 2024).

The creative opportunities of digital storytelling are tempered by ethical challenges. The pressure to produce content quickly and capture attention can lead to

practices such as clickbait or emotional framing, which risk undermining credibility and eroding audience trust (Thomson et al., 2022). In Malaysia, Lim & Wilson (2024) showed that clickbait-driven viral journalism has become an established feature of the local news ecosystem, placing additional pressure on mainstream newsrooms to compete for attention without compromising professional standards. Algorithm-driven platforms also reward sensational or emotionally charged content, creating tension between journalistic integrity and commercial imperatives (Baranova et al., 2022). Multimedia storytelling has the power to shape public perceptions through visuals and framing, amplifying certain voices while marginalising others. This makes fairness, inclusivity, and balance even more critical in digital reporting, particularly in the Malaysian context, where journalists must also navigate cultural and religious sensitivities in their reporting decisions (Sabri & Abdullah, 2022).

Collectively, the literature highlights that digital storytelling is both an opportunity and a disruption: it fosters innovation and deeper engagement but also intensifies pressures related to speed, platform adaptation, and ethics. Nevertheless, most studies have focused on technological innovation or newsroom practices in Western contexts, leaving limited understanding of how Malaysian multimedia journalists, who operate at the intersection of traditional values and digital imperatives, experience and negotiate these changes. This gap provides the rationale for the present study.

THEORETICAL FRAMEWORK

This study adopted the News Value Theory, originating in Galtung and Ruge's (1965) seminal analysis of foreign news, as its foundational framework for exploring how news quality standards are constructed across cross-media platforms. Galtung and Ruge identified eight core news values, namely threshold, frequency, unambiguity, meaningfulness, consonance, unexpectedness, continuity, and composition, which have long served as essential criteria guiding news selection processes.

Subsequent scholarship has substantially revised and extended this taxonomy. Harcup and O'Neill (2017) tested Galtung and Ruge's criteria against the content of the British press and proposed a contemporary set of news values that incorporated, among others, celebrity, entertainment, and the news organisation's own agenda. Revisiting the framework in the social media era, Harcup and O'Neill (2017) added shareability, drama, and audio-visual appeal to their taxonomy, explicitly acknowledging that audience behaviour on digital platforms now shapes editorial judgements of newsworthiness. Caple (2018) advanced a discursive perspective, arguing that news values are not inherent properties of events but are constructed through the language and images of news texts, an insight that is particularly pertinent to multimedia storytelling. In computational journalism research, Trilling et al. (2017) introduced the concept of "shareworthiness", demonstrating that the characteristics that predict audience sharing differ from those underpinning traditional newsworthiness. Ittefaq (2018) likewise highlighted the necessity of revisiting classical frameworks to capture the dynamics of globalised journalism and the complexities of the digital media environment.

These theoretical developments resonate strongly with the Malaysian context, where mainstream broadcasters compete with viral, clickbait-driven digital content (Lim & Wilson, 2024) and where editorial judgement is negotiated within distinctive cultural,

religious, and regulatory sensitivities (Sabri & Abdullah, 2022). Applying the News Value Theory in this setting therefore requires attentiveness to how global platform logics intersect with local newsroom cultures.

Accordingly, this study utilised Galtung and Ruge's framework as a conceptual baseline while drawing on these subsequent refinements to interpret the findings. The News Value Theory served not merely as a framework for understanding news selection but as an interpretive lens for examining how Malaysian multimedia journalists negotiate the changing demands of digital journalism, and specifically whether traditional news values remain intact, are reweighted, or are supplemented by audience-oriented criteria such as shareability within the cross-platform practice (Harcup & O'Neill, 2017).

METHODS

This study adopted a qualitative research design to explore how multimedia journalists (MJs) in Malaysia understand and navigate digital storytelling. Sixteen (16) MJs were purposively sampled from four leading Malaysian newsrooms, namely Media Prima Berhad, Astro AWANI, Radio Televisyen Malaysia (RTM) and BERNAMA TV. These informants were selected based on their active involvement in producing digital-first content across multiple platforms, including social media, news websites, and television. The purposive approach ensured that informants possessed the relevant expertise and first-hand experience needed to address the study's objectives (Dhobi, 2022).

Data were collected through in-depth interviews conducted via Google Meet. Conducting interviews online proved both practical and effective, offering flexibility in scheduling and reducing geographical constraints. This was particularly important given the demanding nature of MJs' work, which required balancing study participation with professional commitments. The virtual format also provided a comfortable and familiar environment for informants, encouraging more open and reflective responses (Carignani & Burchi, 2022).

The interview guide was carefully developed to capture MJs' conceptualisations of digital storytelling, their adaptations to newsroom workflows in the digital era, and the challenges they faced in producing content across multiple platforms. All interviews were audio-recorded with informed consent, transcribed verbatim, and systematically organised for analysis. Data analysis followed Braun and Clarke's (2021) six-phase thematic analysis framework. NVivo 12 software was employed to facilitate systematic coding, management, and interpretation of the large volume of qualitative data. Coding was conducted at three levels: open coding, axial coding, and selective coding.

Open coding allowed the researchers to break down the data into initial categories that captured the diverse ideas expressed by informants. Axial coding then linked these categories by identifying relationships and patterns, thereby refining the emerging structure. Finally, selective coding enabled the integration of these patterns into core themes that directly addressed the research objectives. This three-level approach ensured analytical depth and rigour, as it moved from surface descriptions towards more abstract, conceptual insights (Deterding & Waters, 2021). The use of NVivo 12 enhanced transparency and consistency throughout the process, allowing the themes to emerge organically while maintaining methodological robustness.

Following Braun and Clarke's six phases, the researchers repeatedly read the transcripts to achieve familiarisation before generating initial codes. Related codes were subsequently grouped into broader categories, which were refined into four overarching themes through iterative comparison and discussion among the research team. This process ensured that the themes remained grounded in informants' lived experiences while reflecting the study's research objectives.

Table 1 presents the professional profiles of the informants, offering contextual insights to situate the subsequent discussion of findings.

Table 1. Informants' profile

Informant	Age	Position	Working Experience (years)
MJ1	30	Multimedia journalist	6
MJ2	25	Broadcast journalist	3
MJ3	31	Broadcast journalist	7
MJ4	34	Multimedia journalist	10
MJ5	36	Broadcast journalist	11
MJ6	29	Broadcast journalist	5
MJ7	28	Broadcast journalist	4
MJ8	36	Multimedia journalist	12
MJ9	33	Broadcast journalist	8
MJ10	32	Broadcast journalist	8
MJ11	27	Broadcast journalist	4
MJ12	30	Multimedia journalist	6
MJ13	33	Broadcast journalist	9
MJ14	35	Broadcast journalist	10
MJ15	29	Broadcast journalist	5
MJ16	37	Senior broadcast journalist	13

FINDINGS AND DISCUSSION

This study reveals that Malaysian multimedia journalists (MJs) are not simply adapting to digital platforms but are actively telling the news differently by reshaping narratives around audience needs, expectations, and behaviours. Digital storytelling here represents a recalibration of practice, where speed is balanced with verification, and innovation with integrity. Rather than abandoning journalism's principles, MJs reinterpret them to sustain trust and engagement in fast-paced media spaces. Four key dimensions emerge from the analysis: (i) audience-driven narratives, (ii) sustaining journalistic ethics, (iii) newsworthiness to shareworthiness, and (iv) multimedia tools and techniques.

Audience-driven narratives

In the eyes of these MJs, digital storytelling is no longer about merely transferring traditional television scripts onto social media feeds. Instead, it is about reimagining the story: tailoring language, visuals, and formats to capture attention, spark interaction, and sustain trust in an increasingly competitive digital landscape.

As informants emphasised, audiences today expect more than just information. They want clarity, immediacy, and relevance across the platforms they inhabit. This requires MJs to blend the traditional journalistic values of accuracy, fairness, and credibility with new forms of storytelling that make news both informative and engaging (Salawu et al., 2022). Two MJs reflected on this balance by noting:

> *Ensure accuracy whether through social media or TV news. Stick to what was discussed in the media session. Deliver news that benefits the people. Avoid unnecessary details and self-made assumptions, as they can lead to issues.*
> (MJ 11, RTM)

> *For example, during a minister's press conference, what are the key points? In that one hour, what do we most want to convey? What do people want to know? Which parts will benefit them the most?* (MJ 10, AWANI)

In this sense, telling the news differently involves sustaining journalistic standards while experimenting with creative storytelling methods that meet audience demands. Informants described how stories are now extended across platforms, with different angles highlighted for different communities. For instance, a breaking news report may be presented as a concise update on X, a visually compelling infographic on Instagram, and a longer analytical video on YouTube or television. Rather than duplicating content, these strategies allow newsrooms to create multiple entry points for audiences to engage with the same story (Lischka & Garz, 2021).

This shift is also driven by competition with digital-only outlets, content creators, and online communities that often break stories first or shape conversations through alternative framings. Informants acknowledged that these actors influence audience expectations of speed and interactivity, sometimes even setting the agenda for mainstream media to follow. However, MJs insisted that what sets professional journalism apart is its capacity to verify, contextualise, and provide depth, qualities that reinforce credibility in a crowded digital environment. As one MJ explained:

> *As authorised media, we may not feel directly challenged by digital platforms and citizen journalists, but we must keep pace with them. They are our competitors, so we must recognise the competition and not concede defeat.*
> (MJ 8, BERNAMA TV)

Thus, telling the news differently is not simply about embracing virality but about strengthening journalism's role in filtering and authenticating information. Informants framed their efforts as a form of responsibility: while attention-grabbing strategies such as thumbnails, captions, or trending hashtags are used to attract younger audiences, these are always tied to the larger goal of informing the public truthfully. As one MJ highlighted:

> *Digital news platforms need to engage Gen Z differently than TV. To capture their attention, we use compelling thumbnails alongside headlines. This strategy increases clicks and broadens content reach.*
> (MJ 5, Media Prima Berhad)

These findings suggest that audience engagement has become an additional consideration alongside classical news values such as significance and meaningfulness, a pattern consistent with past research inclusion of shareability and audience appeal in their revised taxonomy. Rather than replacing traditional news values, digital storytelling reinterprets them within platform-specific environments. This recalibration reflects a shift in how audiences are perceived: not as passive consumers, but as active informants in the news process.

Sustaining journalistic ethics

The findings reveal that Malaysian MJs remain deeply committed to the ethical foundations of their profession, namely accuracy, impartiality, and credibility, even as they adapt stories for the fast-paced environment of digital platforms. While the demand for speed is greater than ever, these MJs emphasise that haste must never override truth. Accuracy is safeguarded through verification, corroboration, and source triangulation, practices that are seen as central to sustaining credibility in an era where misinformation spreads rapidly and irreversibly (Baranova et al., 2022).

The informants highlighted the weight of responsibility that comes with publishing in real time. Aware that even small inaccuracies could erode trust, they described accuracy as their profession's distinguishing hallmark in comparison with citizen journalism:

> *I prioritise accuracy, balance, and clarity, setting us apart from citizen journalists. Our credibility stems from reliable sources, distinguishing us significantly.* (MJ 14, AWANI)

This professional ethos situates mainstream media as custodians of accountability, where truth is non-negotiable. Journalists described the routine of double-checking facts not merely as a safeguard, but as the very foundation of their legitimacy:

> *In court cases, we first give a general update, then details in a subsequent tweet. On Twitter, mistakes are irreversible and risk our reputation. If something feels off, especially with figures, we double-check.* (MJ 15, RTM)

> *There is more fake news than authentic news. Our advantage is connecting with sources to verify authenticity. We must confirm and get consent from relevant parties before posting.* (MJ 9, Media Prima Berhad)

This emphasis on careful validation reflects what Ojala (2021) termed "dual-purpose ethic": fact-checking protects the public from misinformation while simultaneously reinforcing the media's own reputation as a reliable authority. In this way, digital storytelling does not weaken journalistic standards. Instead, it adapts verification to platforms like Twitter and Instagram, where speed and accuracy must coexist.

Equally important is clarity. Amid the noise of convergent media, MJs noted that presenting information in clear, digestible forms is essential to avoid confusion. In sustaining ethical standards, clarity operates as a safeguard against misinterpretation, ensuring that storytelling remains both engaging and responsible (Sabri & Abdullah, 2022). As noted by one MJ:

> *We aim for balance, presenting perspectives from all sides to maintain neutrality. Quality reporting blends viewpoints, allowing readers to form judgments based on facts.* (MJ 1, Media Prima Berhad)

Such commitment reflects the role of MJs as not only gatekeepers of information but also mediators of trust in a fragmented media environment. By emphasising balance and diversity of perspectives, they reinforce journalism's public service function while resisting the polarisation that thrives on algorithm-driven platforms (Grygiel & Lysak, 2021). As one MJ observed:

> *Speed isn't enough; information must be accurate, especially in social media spaces. As mainstream media, we're trusted representatives. We verify news before release: fast, accurate, and authenticated.* (MJ4, BERNAMA TV)

Ultimately, sustaining journalistic ethics is not merely about preserving tradition in the face of change; it is about fortifying journalism's relevance in a digital era. Through careful fact-checking, balanced storytelling, and an unwavering commitment to truth, Malaysian MJs demonstrate that digital storytelling can coexist with, and even strengthen, the core values of the profession.

From the perspective of the News Value Theory, these findings indicate that traditional values such as meaningfulness and continuity continue to underpin editorial decision-making despite increasing technological pressures. While digital platforms encourage rapid dissemination and continuous updates, Malaysian MJs consistently emphasise verification and balance before publication. This suggests that digital transformation has not diminished the importance of classical news values; rather, it has reinforced their significance as mechanisms for maintaining public trust in increasingly competitive and information-saturated media environments.

Newsworthiness to shareworthiness

Traditionally, the concept of newsworthiness has been the cornerstone of journalism, guiding decisions about which events deserve public attention. Caple (2018) defined newsworthiness as content deemed inherently worthy of being published as news. However, in the contemporary digital environment, this standard has expanded beyond editorial judgement to include audience interaction, platform dynamics, and the capacity of stories to travel through networks of sharing and engagement. In this context, the concept of shareworthiness emerges not as a replacement for newsworthiness, but as an extension that reflects the realities of digital journalism (Munger, 2020).

Szymanski et al. (2017) explicitly argued that shareability has become a criterion in assessing the value of news. The rise of social media platforms has transformed news distribution into a participatory process, where the act of sharing functions as both validation and amplification. Tenenboim (2022) underscored this shift by noting that the "share" button has become a mechanism of civic engagement, capable of reshaping narratives and sparking national or even global conversations. For Malaysian MJs, this means that stories are no longer evaluated solely on their alignment with classical values such as significance, timeliness, or conflict. They must also be assessed for their potential to resonate with audiences in ways that encourage interaction and virality.

This evolution is particularly evident in the highly competitive Malaysian media ecosystem, where mainstream broadcasters now compete directly with digital-only outlets, independent content creators, and citizen journalists (Shiang & Wilson, 2024). Informants in this study described how this competition has intensified the pressure to deliver real-time updates while simultaneously maintaining credibility. For them, speed is an unavoidable imperative, yet accuracy and trust remain non-negotiable. As one MJ stressed:

> *In social media, timeliness is crucial for breaking news, but accuracy mustn't be sacrificed. Credibility, comprehensive content, and verification from authoritative sources enhance news quality.* (MJ 2, AWANI)

Here, the balancing act is clear; audiences demand immediacy, but they also hold mainstream media accountable for trustworthiness. This dual expectation has reshaped newsroom practices, with journalists investing more effort in rapid verification, cross-checking with authoritative sources, and ensuring that their updates are both timely and reliable.

One strategy adopted by MJs to meet these competing demands is adherence to the KISS principle, "keep it short and simple" (Luping, 2022). In an age of scrolling feeds and fleeting attention spans, concise news packages allow audiences to absorb information quickly without being overwhelmed. This principle is not merely about brevity, but about distilling complex realities into accessible forms while safeguarding factual accuracy. As one informant explained:

> *On TV, news segments are straightforward and concise, delivering breaking news promptly. Content is distilled to its core due to time limits, ensuring clarity and comprehension for our audience.* (MJ 12, BERNAMA TV)

Beyond concision, however, the findings highlight that shareworthiness is equally about sustaining engagement. MJs are increasingly using techniques of continuity and creativity to hold audience attention across platforms. Instead of treating stories as one-off reports, they construct narratives sequences, breaking a story into parts or following it up with additional context. This approach not only maximises reach but also deepens public engagement by encouraging audiences to return for updates (Hermida & Mellado, 2020). As one informant observed:

> *Quality news often has continuity, with part one and part two stories. MStar, an online portal, is criticised for creating suspenseful stories. Despite this, the strategy engages netizens and boosts their social media popularity.* (MJ 3, RTM)

This continuity-based storytelling illustrates how shareworthiness extends beyond the superficial act of sharing; it taps into the audience's desire for unfolding narratives, inviting them to participate in the story's development.

The findings also reveal how platform-specific tailoring has become integral to the news production process. In broadcast news, headlines and story angles are still shaped

around national significance and collective concerns. In contrast, social media requires more emotive, eye-catching, or "catchy" hooks to drive clicks and engagement. Journalists carefully calibrate these angles depending on the medium:

> *Social media and TV headlines differ based on audience preferences. Some stories fit both platforms, while others trend mainly on social media, such as accidents. TV prioritises national issues.* (MJ 10, AWANI)

Rather than a simple process of repurposing the same content across multiple platforms, MJs now curate their storytelling with platform sensitivity, ensuring that each version resonates with its intended audience. Such adaptability is critical in sustaining both newsworthiness and shareworthiness, as it acknowledges that audiences engage with news differently depending on the medium. At the same time, informants repeatedly emphasised that this pursuit of shareworthiness does not entail abandoning professional ethics; credibility and accuracy remain the backbone of their work, and MJs see themselves as custodians of trust in an environment saturated with misinformation and viral speculation.

This finding lends empirical support to arguments that contemporary news value increasingly incorporates audience-oriented criteria alongside editorial judgements of significance, timeliness, and proximity (Harcup & O'Neill, 2017; Trilling et al., 2017). In digital journalism, the capacity of a story to generate audience interaction through sharing, commenting, and engagement has emerged as an additional indicator of news value. Rather than replacing traditional newsworthiness, shareworthiness complements it by reflecting how audiences participate in the circulation and amplification of news across digital platforms. Accordingly, the findings suggest that news values are becoming increasingly participatory, with editorial priorities shaped not only by journalists' professional judgement but also by anticipated audience behaviour and platform dynamics.

Multimedia tools and techniques

The findings of this study reveal that Malaysian MJs are telling the news differently not only through what they report but also through how they craft and deliver stories using a wide range of multimedia tools and techniques. The evolution of digital journalism demands that journalists step beyond their traditional role of writing and editing text. As Boukes et al. (2020) argued, contemporary journalism is characterised by the fusion of technical expertise and narrative ability, where journalists must balance the craft of storytelling with the technical skills of producing and curating multimedia content. These skills include capturing and editing photos and videos, designing infographics, processing data, and, increasingly, experimenting with technologies such as artificial intelligence (AI), augmented reality (AR), and 3D visualisation (Ganzabal Learreta et al., 2023).

The integration of multimedia is not simply an aesthetic choice, it is a strategic response to the expectations of digital audiences. Readers today are no longer satisfied with static narratives; they anticipate immersive, engaging, and visually dynamic stories (Martin & Murrell, 2021). By blending images, video clips, graphics, and interactive features, MJs are able to simplify complex issues, maintain audience attention, and offer richer contexts without overwhelming the viewer. This approach aligns with the "keep it

short and simple" (KISS) principle, which underscores the need for clarity and accessibility in fast-paced digital environments (Fürst, 2020).

Informants in this study emphasised that visual elements often carry as much weight as textual narratives, especially on social media platforms where images and infographics function as hooks to draw audiences into the story. As two MJs explained:

> *In TV news, facts are key, but visuals like still photos are equally important. Visual elements are appealing and effective, just like on social media, where images and infographics enhance engagement.* (MJ 16, BERNAMA TV)

> *We use bullet points on social media, TV, and the web for clear information. For example, we summarise the Health Minister's press conference with key points. We work with graphics team for quick infographics.* (MJ 6, AWANI)

Beyond visuals, journalists are also experimenting with new technologies that deepen engagement. For instance, one newsroom used AI and 3D graphics during flood coverage to illustrate water levels and affected areas, offering audiences a vivid and contextualised understanding of the crisis:

> *Multimedia elements and AI enhance audience engagement. For example, during recent flood coverage, we used AI and 3D graphics to visualise floodwater height, captivating viewers' attention.*
>
> (MJ 13, Media Prima Berhad)

These examples demonstrate how multimedia techniques enable journalists to transform routine news into interactive, audience-centred experiences. A recurring theme in the interviews was the central role of dedicated digital teams in sustaining this new form of storytelling. Informants consistently highlighted that while field reporters remain responsible for gathering information, the digital team assumes the responsibility of enhancing and adapting stories for diverse platforms. This team typically collaborates with editors and producers to incorporate multimedia features that strengthen the impact of the narrative. As Esa and Wan Zainodin (2025) suggested, such collaboration is now integral to the newsroom workflow, ensuring that stories are both journalistically rigorous and digitally engaging. One MJ reflected on this collaborative model:

> *At RTM, we upload stories directly to social media and WhatsApp groups. The duty editor ensures accuracy, and the digital team enhances content with posters or infographics if needed. My role as a field journalist concludes once I provide the news.* (MJ 7, RTM)

Another stressed the speed required in this process, particularly during crises:

> *For critical assignments with top officials, our online team swiftly gathers information from field reporters for breaking news, especially in disasters. They create graphics, identify affected areas, and produce illustrations as needed, ensuring prompt coverage.* (MJ 1, Media Prima Berhad)

What emerges from these accounts is a workflow that is both meticulously coordinated and highly responsive to the speed of digital news circulation. The immediacy of online journalism demands fast turnarounds, and digital teams act as crucial intermediaries in ensuring that stories are not only timely but also visually compelling and contextually rich. This synergy between journalists and digital specialists transforms what might otherwise be a straightforward report into a dynamic multimedia narrative tailored for cross-platform engagement.

Ultimately, the study suggests that multimedia storytelling in Malaysia is not about replacing traditional journalistic values but about amplifying them through new tools and formats. Credibility, accuracy, and clarity remain central, but these values are now delivered through layered, visually rich, and technologically enhanced narratives. The presence of digital teams ensures that this transformation is systematic rather than ad hoc, embedding multimedia practices into newsroom routines and sustaining the relevance of mainstream journalism in an era where attention is fragmented and competition from digital-native content creators is fierce.

These findings further indicate that multimedia technologies have expanded how the News Value Theory operates within digital journalism. Traditional news values such as meaningfulness and composition are no longer conveyed exclusively through written narratives but are increasingly communicated through visual storytelling, infographics, video, artificial intelligence, and interactive multimedia elements, echoing Bednarek and Caple's (2017) argument that newsworthiness is constructed through the semiotic resources of news texts themselves. Malaysian MJs therefore reinterpret established news values by selecting storytelling formats that enhance audience comprehension and engagement while maintaining editorial integrity.

CONCLUSION

This study has examined how Malaysian multimedia journalists (MJs) are telling the news differently in the digital age, reshaping professional practice around four key dimensions: audience-driven narratives, sustaining journalistic ethics, the shift from newsworthiness to shareworthiness, and the integration of multimedia tools and techniques. Together, these dimensions reveal how journalism is evolving from a primarily broadcast-oriented model to one that is participatory, platform-sensitive, and technologically mediated, while still anchored in the enduring values of credibility and accuracy.

The implications are twofold. Theoretically, the findings contribute to the ongoing refinement of the News Value Theory by showing how classical news values are reweighted and supplemented by audience-oriented criteria in a Malaysian cross-platform context. Practically, they call for greater investment in digital skills training, collaborative editorial workflows, and organisational support systems that enable journalists to fully leverage multimedia and immersive technologies without compromising professional standards.

Future research could extend this inquiry by exploring how audiences themselves interpret and respond to these new forms of digital storytelling, or by examining comparative practices across different national and cultural contexts. Equally, studies on the role of emerging technologies, such as artificial intelligence and extended reality, in shaping newsroom routines and narrative strategies would provide valuable insights into journalism's next frontier.

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Connectivity and control: ICT growth and the politics of free expression in Southeast Asia's core states

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ABSTRACT

The rapid diffusion of information and communication technologies (ICTs) has reshaped political communication across Southeast Asia, raising persistent questions about whether digital connectivity strengthens freedom of expression or consolidates state control. This study examines the relationship between internet penetration and freedom of expression across six ASEAN countries (1990–2022), combining pooled panel regressions with country-specific analyses. The findings decisively reject the notion of a uniform, positive link between connectivity and freedom. Pooled models show weak and unstable effects of internet usage, with explanatory power driven almost entirely by national context rather than technology or economic wealth. Country-level regressions reveal sharp divergences: internet penetration is positively associated with freedom in Malaysia, Singapore, and marginally in Indonesia, but negatively associated in the Philippines and Thailand, while insignificant in Vietnam. When controlling for GDP per capita, the effect of internet usage disappears or turns negative in several states, whereas GDP exerts a modest but more consistent positive influence. These results demonstrate that the internet is not an autonomous driver of political liberalization in Southeast Asia; rather, its impact is conditional on pre-existing institutional and political conditions. The study contributes to debates on digital democracy by showing that the internet amplifies national trajectories of freedom and control, underscoring the centrality of state context in shaping the politics of connectivity.

Keywords: ***Digital authoritarian, freedom of expression, Southeast Asia***

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INTRODUCTION

The internet embodies a central paradox of the twenty-first century: it is at once a powerful enabler of democratic participation as well as a sophisticated instrument of state control. Digital technologies have transformed communication, allowing individuals to connect, organize, and voice opinions across social and political boundaries. Yet, as Hamel (2010) observed in his seminal UNDP (United Nations Development Programme) paper on ICT4D (Information and Communication Technology for Development) and freedom of expression, the potential of ICTs (Information and Communication Technologies) to expand human rights is undermined when states adopt policies that privilege control over openness. He argued for policy coherence, a deliberate alignment of technological development and rights protection to ensure that digital growth advances, rather than restricts, democratic freedoms.

Nowhere is this paradox more visible than in Southeast Asia, a region of vibrant digital economies and divergent political systems. Over the past two decades, countries such as Malaysia, Indonesia, Thailand, Singapore, and Vietnam have made significant investments in ICT infrastructure, mobile connectivity, and digital governance. This expansion has enabled millions to engage in online discourse, activism, and creative expression. However, it has also led to intensified state efforts to monitor, regulate, and discipline the digital sphere. Governments increasingly deploy cybersecurity laws, content moderation mandates, and surveillance technologies under the banners of national security and online safety creating an environment where connectivity coexists with constraint.

Freedom on the Net 2022 (Shahbaz et al., 2022) highlighted this global trend of authoritarian adaptation, showing how states are reshaping the internet to consolidate power rather than distribute it. In 2023 again, Shahbaz et al. (2023) further warned that the integration of artificial intelligence (AI) into online monitoring systems has deepened state capacity for repression, allowing governments to automate censorship and predict dissent.

Beyond the political dimension, the developmental implications of restricted expression are profound. Drawing on Amartya Sen's "capability approach", Bahr et al. (2025) demonstrated that freedom of expression via ICTs is integral to human development outcomes. Their study found that societies enabling open online communication experience stronger social progress and innovation, while those constraining digital expression tend to limit citizen participation and creativity. Thus, understanding ICT growth in Southeast Asia requires bridging the domains of political communication, governance, and development studies.

Against this backdrop, this paper seeks to interrogate the complex relationship between digital connectivity and political control in Southeast Asia's core states. It asks: 1) How has ICT adoption and internet penetration influenced freedom of expression in Southeast Asia? 2) Does greater connectivity foster democratic communication, or reinforce authoritarian resilience? By addressing these questions, this study contributes to the growing body of political communication scholarship on the competing trajectories of digital democracy and digital authoritarianism. It does so by situating Southeast Asia within the broader global discourse on digital governance and by employing empirical data spanning multiple decades to trace how technological growth intersects with political power.

Problem statement

Despite rapid ICT adoption and internet penetration across Southeast Asia, freedom of expression demonstrates uneven and often contradictory trends, advancing in some states while contracting in others. As Hamel (2010) cautioned, technological development without coherent rights-based policies risks reinforcing structural inequalities and enabling state control over digital spaces. This inconsistency reflects not only a failure of technology, but the political contexts into which it is embedded.

Empirical assessments by Freedom House (Gorokhovskaia et al., 2023; Shahbaz et al., 2022) indicate that the global expansion of digital networks has been accompanied by the institutionalization of online repression, especially in hybrid or authoritarian regimes. Their findings reveal that Southeast Asian governments increasingly leverage laws, technical systems, and algorithmic tools to monitor citizens, regulate content, and shape online narratives. Bahr et al. (2025) extended this argument by demonstrating that such restrictions erode the developmental benefits of ICT growth, constraining citizens' capabilities to engage freely in public life.

Accordingly, this paper argues that Southeast Asia's digital transformation cannot be understood solely in terms of connectivity metrics or infrastructure expansion. Instead, it must be analysed through the lens of political control, policy coherence, and communicative freedom. This study positions itself at the intersection of technology and politics, by looking at the comprehensive panel data on internet growth and freedom of expression. It is also contributing empirically and conceptually to the literature on how ICTs both enable and endanger freedom of expression in emerging digital societies.

BACKGROUND

The rapid expansion of information and communication technologies (ICTs) has fundamentally transformed how people in Southeast Asia communicate and participate in society. This growing connectivity opened new possibilities for freedom of expression, allowing citizens to voice concerns and connect across political boundaries. Yet, this transformation has created a complex paradox; the same technologies that enable citizens to speak freely have provided governments with powerful tools to monitor and control online spaces. Across Southeast Asia, states often justify digital restrictions as necessary to curb misinformation or safeguard national security. In practice, however, these interventions can narrow the public sphere and reinforce political control.

To explore this evolving tension, this study focused on six core ASEAN countries Singapore, Malaysia, Thailand, Indonesia, the Philippines, and Vietnam, selected based on their varying economic performances[1]. This economic diversity illustrates the region's uneven digital landscape, where high, middle, and lower-middle-income countries face distinct challenges in balancing technological progress with democratic freedoms. Early scholarship attempting to link ICT growth with freedom of expression in Asia

[1] The GDP per capita figures reported here are drawn from the Maddison Project Database, which reports values in constant international dollars adjusted for purchasing power parity (PPP). This differs from the nominal GDP per capita figures commonly reported by the World Bank or IMF (and often cited in media or Google summaries), which use current US dollars. PPP-adjusted values are particularly useful for cross-country comparisons of living standards, as they account for differences in the cost of living and inflation across countries.

produced mixed findings, often cautioning that in societies where power structures remain centralized, the internet could easily become a tool for monopolizing information (Abbott, 2001; Agrawal, 2001). Fast forward two decades, and the region has witnessed exponential growth in internet penetration.

Recent research reveals that while the internet has expanded opportunities for individual expression, it has also become a highly contested space. States increasingly use regulatory frameworks to erode media freedom under the guise of protecting public order (Asia Centre, 2022). As Ambay et al. (2019) argued, many Asian governments have adopted practices of digital authoritarianism, utilizing state surveillance and broad cyber laws to constrain public discourse. The absence of effective legal frameworks for digital rights effectively discourages open dialogue and weakens the public's ability to hold authorities accountable (Sivaprakasam, 2019). Consequently, the relationship between ICT growth and freedom of expression remains contested, with empowerment and control coexisting uneasily.

LITERATURE REVIEW, THEORETICAL FRAMEWORK, AND HYPOTHESIS

The evolution of internet connectivity in Southeast Asia has been characterized by rapid growth interspersed with persistent challenges related to access, affordability, and digital literacy. Early internet infrastructure development in the region displayed distinct patterns of expansion, driven by both governmental and private sector initiatives seeking to enhance telecommunications infrastructure and digital inclusion. Governments across Southeast Asia recognized the transformative potential of the internet as a catalyst for economic modernization and global competitiveness, while private telecommunications companies expanded networks to meet the growing demand for connectivity among increasingly urbanized and tech-savvy populations.

Culturally, Southeast Asia presents a complex landscape when examining the intersection between technological advancement and freedom of expression. One might assume that traditional Asian societies grounded in collectivist values, respect for hierarchy, and social harmony may not prioritize freedom of expression as a core social value. Some even perceive it as a challenge to the norms and the perceived beauty of traditional Asian culture. However, Shen and Tsui (2018) provided a compelling counterpoint to this assumption. Their study, covering countries such as Hong Kong, India, Indonesia, Japan, South Korea, Malaysia, Pakistan, Singapore, Taiwan, Thailand, and Vietnam, found that at the individual level, Asian values were positively associated with strong support for internet freedom and freedom of expression. This finding challenges the conventional East–West dichotomy and suggests that the desire for expressive freedom can coexist with, rather than oppose, traditional cultural values.

Early scholarship attempting to link internet or ICT growth with freedom of expression produced mixed findings. Agrawal (2001), one of the earliest researchers to explore this relationship in the Asian context, analysed India, the world's largest democracy, and cautioned against viewing the internet as a remedy for limitations on free speech. He argued that in Asian societies, where power structures often remain centralized, the internet could just as easily become a tool for monopolizing information

and reinforcing state control. His foresight has proven strikingly relevant, as many governments today employ digital surveillance, restrictive laws, and online censorship under the pretext of maintaining social order or national security. Similarly, Abbott (2001), in his comparative study of China and Malaysia, noted that the democratic potential of the internet depends heavily on accessibility. In his view, freedom of expression online remains meaningful only to those who can access and effectively use digital platforms, a point that underscores the digital divide prevalent during the early 2000s.

At that time, limited accessibility posed a significant barrier, with internet penetration still concentrated in urban areas and among elite populations. Consequently, these early studies could not yet assess the broader societal impact of connectivity. Fast forward two decades, however, and the picture has changed dramatically. The region has witnessed exponential growth in internet penetration, mobile connectivity, and social media usage. Yet, this growth has also brought new complexities to the question of online freedom.

Recent research reveals that while the internet has expanded opportunities for individual expression, it has also become a contested space shaped by laws, surveillance, and political control. *Media Freedom in Southeast Asia Report* (Asia Centre, 2022) notes that digital platforms have enabled citizens to creatively express their opinions and ideas, but at the same time, new regulatory frameworks have emerged that erode media freedom under the guise of protecting public order or national stability. The report highlights how states are using these mechanisms not only to monitor citizens but also to control narratives and limit dissent.

Similarly, Ambay et al. (2019) argued that many Asian governments despite championing democratic institutions and electoral processes have adopted practices of digital authoritarianism. Through state surveillance, cyber laws, and the suppression of online dissent, these regimes have constrained public discourse while maintaining the outward appearance of democracy. Sivaprakasam (2019) further observed that the absence of effective legal frameworks for digital rights has resulted in a situation where citizens bear the burden of penalties under ambiguous or overly broad cyber laws. This legal imbalance effectively discourages open dialogue and weakens the public's ability to hold authorities accountable.

In the ASEAN context, Gilder (2023) pointed out that several governments have used legislation to curb online mobilization and suppress opposition movements. This strategic use of digital regulation reflects a broader tension between technological modernization and political control. Furthermore, Asia Centre (2021) documents show journalists and media professionals across Southeast Asia facing increasing threats, including physical attacks, office raids, tax penalties, license revocations, arrests, and prosecutions. Such pressures have, paradoxically, fuelled the rise of alternative media actors like independent organizations, citizen journalists, and social media influencers who have stepped in to fill the void left by weakened traditional media institutions.

The internet has undeniably expanded access to information and provided new avenues for participation, creativity, and civic engagement. However, it has also opened new pathways for state surveillance, legal restrictions, and the manipulation of digital spaces. As the region continues to grapple with these contradictions, it becomes

essential to explore not only how the internet influences freedom of expression but also how individuals and groups navigate, resist, and reshape these digital boundaries.

Digital tools today continue to function as vital spaces for freedom of speech and civic participation. Howard and Hussain (2013) found that ICT played a critical role in facilitating the circulation of information when traditional, state-controlled media seeks to suppress political reporting. International news outlets such as Al Jazeera English and the BBC leveraged online platforms to bypass government restrictions, offering alternative narratives that countered state-managed broadcasts. Citizens, in turn, shared this information through social media networks, generating widespread awareness, anger, and ultimately, mass mobilization. This episode underscores how online communication can disrupt state monopolies on information and catalyse public demands for political accountability.

As Tufekci (2020) observed, social media movements and online activism demonstrate citizens' willingness to engage in democratic processes. Yet, the extent to which individuals can exercise genuine freedom of expression remains contested. Governments around the world face the dilemma of balancing freedom with control seeking to maintain stability while addressing public demands for openness and transparency. This ongoing tension reveals that digital freedom is not absolute; rather, it exists within complex power structures shaped by political, legal, and social constraints.

From Castells' (2015) perspective, the proliferation of protests and social movements in the digital age can be seen as a natural expression of democracy where citizens utilise the internet and ICT to voice discontent, mobilize supporters, and hold leaders accountable[2]. Papacharissi (2014), further emphasized that online networks serve as "affective publics", spaces where emotions and political engagement intersect. In democratic societies, such mobilizations can be viewed positively, as they provide mechanisms for civic feedback and governmental accountability. However, distinguishing between peaceful expression and violent mobilization remains a significant challenge for states worldwide.

Recent evidence from a Pew Research report (Poushter et al., 2025) underscores the continuing importance of the internet as a medium for free expression and public dialogue. The report highlights that global citizens overwhelmingly view digital platforms as essential for voicing opinions and accessing information. Nonetheless, the same study raises growing concerns about the prevalence of fabricated or misleading information commonly referred to as fake news.

To understand the complex relationship between internet progression and freedom of expression, this study adopted the framework of the "Dictator's Digital Dilemma" (Gunitsky, 2015; Howard & Hussain, 2011). This framework describes the structural paradox that autocrats and hybrid regimes face regarding the adoption of information and communication technologies. On one hand, authoritarian regimes require widespread internet connectivity to facilitate economic modernization, technological advancement, and global market integration. On the other hand, this exact connectivity

[2] Although I contend that my own findings suggest a weak correlation between internet accessibility and protest participation. Understanding this general trend remains valuable for contextual analysis, thus we think there is no issues to put it here. Here is the link for the full research:
https://etheses.dur.ac.uk/14475/1/AAA_Thesis_Correction_June_2022_FINAL.pdf?DDD35+

inherently threatens state control by democratizing information, lowering barriers to collective action, and exposing regimes to unfiltered public discourse and oppositional coordination (Howard & Hussain, 2011).

Because shutting down the internet entirely would paralyze national economies and cripple government agencies, regimes can no longer rely solely on access denial. To navigate this paradox, regimes increasingly rely on digital authoritarianism, which is defined as the utilization of the internet and related technologies to increase socio-political control, undermine civil liberties, and decrease public trust in democratic institutions (Tran, 2025). By shifting from mere negative control to proactive co-optation, modern autocracies deploy sophisticated methods of censorship, surveillance, and discourse framing to transform digital networks from engines of protest into mechanisms for regime resilience (Gunitsky, 2015).

In order to link this framework to the key variables, this study operationalised the Dictator's Digital Dilemma by mapping its structural tensions directly onto three core macro-level variables: Internet Penetration, Gross Domestic Product (GDP) per capita, and the Freedom of Expression Index. Internet Penetration (The Digital Infrastructure): This variable operationalizes the state's push for connectivity. As regimes expand their digital networks, they lay the necessary technological groundwork for economic activity, while "accidently" enabling the proliferation of digital news and oppositional narratives (Sinpeng & Koh, 2022).

For GDP per Capita (The Economic Imperative): This reflects the fundamental motivation driving the expansion of the internet despite the inherent political vulnerabilities it introduces. Maintaining economic development and global market integration is vital for authoritarian survival, performance legitimacy, and the generation of national wealth (Gunitsky, 2015). Freedom of Expression Index (The Political Outcome): This metric captures how actively regimes suppress speech whether through legal frameworks, technical blockages, or psychological influence to resolve the digital dilemma, neutralize the democratizing effects of connectivity, and preserve state control (Tran, 2025).

In the context of the Association of Southeast Asian Nations (ASEAN), states have developed distinct strategies to manage this digital dilemma, aiming to keep their digital economies open while aggressively restricting political speech. Across Southeast Asia, member states have witnessed an overall decline in internet freedom alongside a growing wave of cyber-authoritarianism (Sinpeng & Koh, 2022). Regimes in the region utilise stringent cyber laws, extensive surveillance, and state-sponsored propaganda to subvert the cyber commons. Furthermore, several ASEAN governments actively exploit the pretext of combatting "fake news," terrorism, or national security threats to justify legal crackdowns on opposition voices, activists, and journalists (Sinpeng & Koh, 2022; Tran, 2025).

This environment fundamentally alters the normative role of the press in the region. As (Waheed & Hellmueller (2021) observed in their comparative study of journalism models, media systems in Southeast Asia, particularly in Malaysia, often operate under developmental or managed frameworks that prioritize national stability over absolute press freedom. Furthermore, the rapid digitization of information has created new vulnerabilities, complicating how media professionals verify facts and combat state-sponsored narratives. The challenge of navigating this digitized, highly regulated landscape is further exacerbated by systemic gaps in digital and data journalism training

among media practitioners and educators in the region (Aksar et al., 2025), leaving citizens increasingly susceptible to the "fake news" regulations used by autocrats to justify censorship.

For example, Vietnam has implemented strict cybersecurity laws requiring data localization and the rapid removal of "false" content to suppress anti-state discourse, even as its digital market generates billions in revenue. Malaysia relies on laws governing fake news and disorderly communication to silence dissenting voices. Similarly, Thailand employs its Computer Crime Act to crack down on opposition, the Philippines leverages its Cybercrime Prevention Act to legitimize hostile interventions in cyberspace, and Indonesia mandates content removal by internet service providers to systematically police digital environments (Sinpeng & Koh, 2022; Tran, 2025).

Thus, ASEAN states illustrate modern authoritarian adaptation, as what we can understand, by aggressively leveraging digital infrastructure for economic gain while simultaneously deploying digital authoritarianism to restrain press freedom and civil liberties. Hence, drawing on the Digital Dilemma framework, this study hypothesizes that:

> *H1: In Southeast Asia's core states, the relationship between internet penetration and freedom of expression is not uniformly positive, but rather conditional upon the economic (GDP per capita) and institutional context of the state.*

To test the hypothesis, the methodology section that follows explains how these concepts are operationalized, how the progression of internet access, digital adoption, and freedom of expression are measured and compared across core Southeast Asian countries and over time.

METHODOLOGY

This section details the robust, cross-national time-series data, selection criteria, and variables used to test the hypothesis. A primary challenge in studying Southeast Asia is the scarcity of reliable, structured, and comparable data across its constituent nations. To overcome this limitation, this study leveraged cross-national datasets from Our World in Data (OWID)[3]. OWID aggregates and centralizes data from renowned primary sources such as the World Bank, the United Nations, and various academic research institutions, making it a valuable repository for comparative longitudinal research.

Regarding the trustworthiness of the dataset, it is important to note that OWID is a widely cited and respected platform in the scientific community. Its methodology is transparent, providing clear documentation on the provenance and construction of each indicator. While the ultimate reliability of the data depends on the original sources, OWID's rigorous curation process ensures a high degree of consistency and credibility, making it a suitable source for this regional analysis. From the comprehensive OWID collection, we extracted two primary datasets relevant to our research question: Regional

[3] https://ourworldindata.org/ - Our World in Data is a project of Global Change Data Lab, a nonprofit based in the UK.

Internet Penetration Data and Freedom of Expression Data. These two datasets capture the accessibility of the internet and the legal and political environment for online speech. For the operationalization of these datasets, 1) *Internet Penetration*: Represented by the percentage of the population using the internet. 2) *Freedom of Expression*: Captured through an index measuring the extent to which governments respect press freedom and allow for critical voices in the digital sphere.

The Southeast Asian region is characterized by a remarkable diversity in political regimes (from liberal democracies to authoritarian states) and markedly different trajectories of digital growth. This inherent heterogeneity provides a valuable natural laboratory for testing the relationships between technology, governance, and expression. Furthermore, while individual country case studies exist, there is a relative scarcity of quantitative, region-wide studies that employ a panel data methodology. The use of panel data is a significant strength of this study, as it allows for the control of unobserved, time-invariant country-specific characteristics and enables the analysis of dynamic changes over time. This approach will yield more robust and generalizable insights into the digital landscape of Southeast Asia.

Empirical strategy

To examine the relationship between internet usage and freedom of expression, the study employed three sets of regression analyses. First, country-level regressions were estimated separately for each ASEAN core state without control variables to capture the direct association between internet penetration and freedom of expression. Second, GDP per capita was introduced as a control to examine whether the relationship remains robust after accounting for differences in economic development. Third, panel regressions were conducted across all ASEAN core countries. A common critique of standard pooled OLS (ordinary least squares) in panel data is its failure to account for unobserved heterogeneity, which can lead to omitted variable bias, particularly regarding well-established determinants of freedom of expression such as regime type, media freedom, and governance quality.

To rigorously address this, our models progressed from baseline pooled specifications (Models 1 and 2) to Country Fixed Effects regressions (Models 3 and 4). The inclusion of country fixed effects (γ"“ Entity_i) is methodologically critical, as it mathematically controls for all time-invariant, country-specific characteristics, such as historical political culture, foundational institutional structures, and enduring regime tendencies. By holding these structural elements constant across the 1990–2022 period, the fixed effects specification isolates the dynamic impact of internet diffusion and economic growth, thereby substantially mitigating omitted variable bias and justifying the analytical approach over a standard pooled OLS.

Analysis 1: Country-level regressions (no control)

$$FreedomIndex_{it} = \alpha + \beta InternetUsage_{it} + \epsilon_{it}$$

Analysis 2: Country-level regressions with GDP as control

$$FreedomIndex_{it} = \alpha + \beta_1 InternetUsage_{it} + \beta_2 GDP_{it} + \epsilon_{it}$$

Analysis 3: Pooled regressions (ASEAN-6 panel, pooled OLS)

Model 1: $FreedomIndex_{it} = \alpha + \beta\ InternetUsage_{it} + \epsilon_{it}$

Model 2: $FreedomIndex_{it} = \alpha + \beta_1\ InternetUsage_{it} + \beta_2\ GDP_{it} + \epsilon_{it}$

Model 3: $FreedomIndex_{it} = \alpha + \beta\ InternetUsage_{it} + \gamma\ Entity_i + \epsilon_{it}$

Model 4: $FreedomIndex_{it} = \alpha + \beta_1\ InternetUsage_{it} + \beta_2\ GDP_{it} + \gamma\ Entity_i + \epsilon_{it}$

In all specifications, $FreedomIndex_{it}$ denotes the level of freedom of expression in country i at time t. The main explanatory variable is $InternetUsage_{it}$, which measures the proportion of individuals using the internet in country i at time t. The control variable GDP_{it} represents GDP per capita, capturing the level of economic development. The parameter α is the intercept term, while β, β_1, β_2 are the estimated coefficients of interest that indicate the marginal effect of the explanatory variables. The term $\gamma\ Entity_i$ captures country fixed effects, controlling for time-invariant unobserved heterogeneity across countries. Finally, ϵ_{it} is the error term.

The study employed three sets of regression analyses. First, country-level regressions were estimated separately for each ASEAN core state without control variables, to capture the direct association between internet penetration and freedom of expression. Second, GDP per capita was introduced as a control to examine whether the relationship remains robust after accounting for differences in economic development. Third, pooled regressions were conducted across all ASEAN core countries, with specifications both excluding and including GDP per capita, as well as country fixed effects, to account for structural cross-country heterogeneity.

If the coefficient on $InternetUsage_{it}$ is positive and statistically significant, this would lend support to the hypothesis that internet penetration enhances freedom of expression. Conversely, a negative or insignificant coefficient would suggest that internet usage does not systematically promote freedom of expression in the ASEAN-6 context, potentially pointing to institutional, political, or cultural constraints that limit the liberalizing effects of digital connectivity.

RESULTS

This section first presents descriptive statistics illustrating the progression of internet usage and the freedom of expression index. Both indicators are normalized in Figure 3 to clearly compare their relative trajectories. Next, the statistical analysis is structured into three tables: baseline regressions, models with economic controls for robustness, and additional specifications to capture nuanced relationships. The data in Figure 1 demonstrates significant variance in adoption rates and digital growth trajectories. While countries like Singapore, Malaysia, and Thailand experienced early and sustained increases in internet penetration often exceeding 80% by the early 2020s, others such as the Philippines, Vietnam, and Indonesia showed later but rapid growth post 2010, largely driven by mobile internet adoption.

In Figure 2, The Freedom of Expression Index reveals a unique pattern for each of the six core Southeast Asian countries. Most of these countries began providing freedom of speech to their citizens from the year 2000 onwards. However, Thailand and the Philippines show a sharp decline in their indexes after 2000, while Vietnam shows no change. This variation in how speech is expressed across these ASEAN nations is very interesting to observe

Figure 3 presents normalized trends in internet usage and freedom of expression across six Southeast Asian countries, highlighting the complex relationship between digital connectivity and civil liberties. While internet penetration has increased consistently across the region, the trajectory of freedom of expression varies widely, sometimes showing stagnation or even regression, despite rising connectivity. This divergence is especially prominent in countries like the Philippines, Thailand, and Vietnam, where increased internet usage has not necessarily led to parallel expansions in expressive freedoms. The visualization underscores that access to digital tools does not automatically translate into empowered civic participation or promoting freedom of speech.

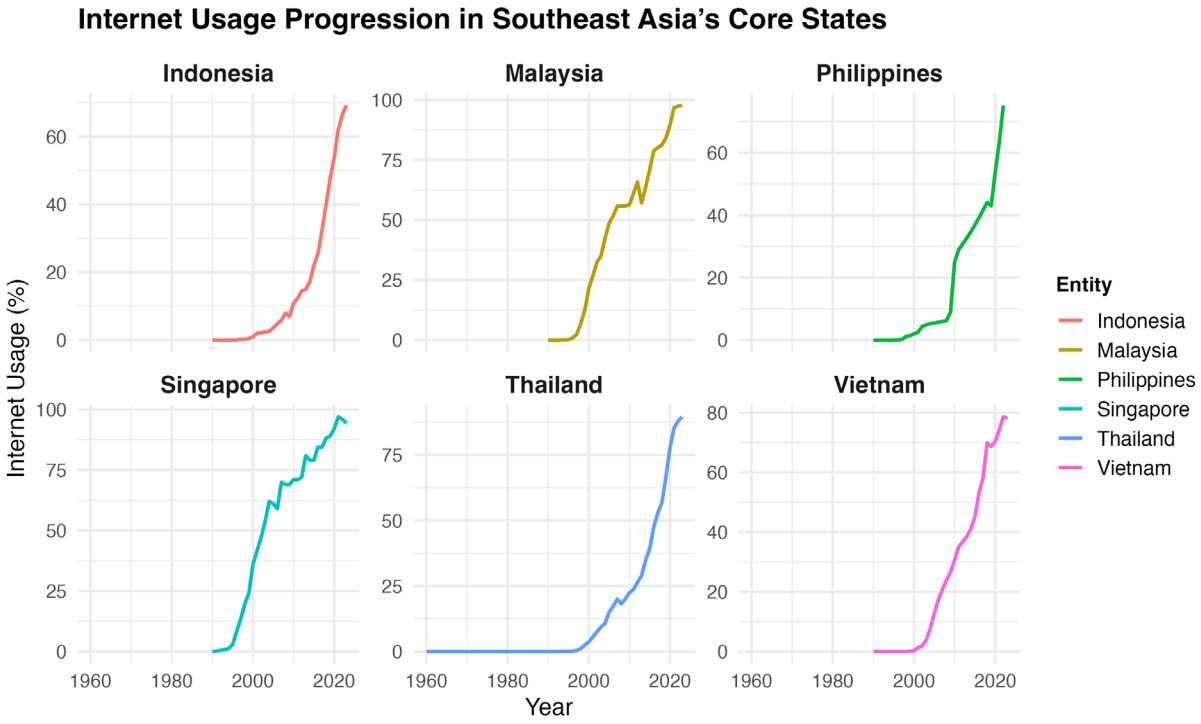

Figure 1. Internet usage progression in Southeast Asia (1960–2022)

Figure 1 illustrates the progression of internet usage (as a percentage of the population) across six Southeast Asian countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

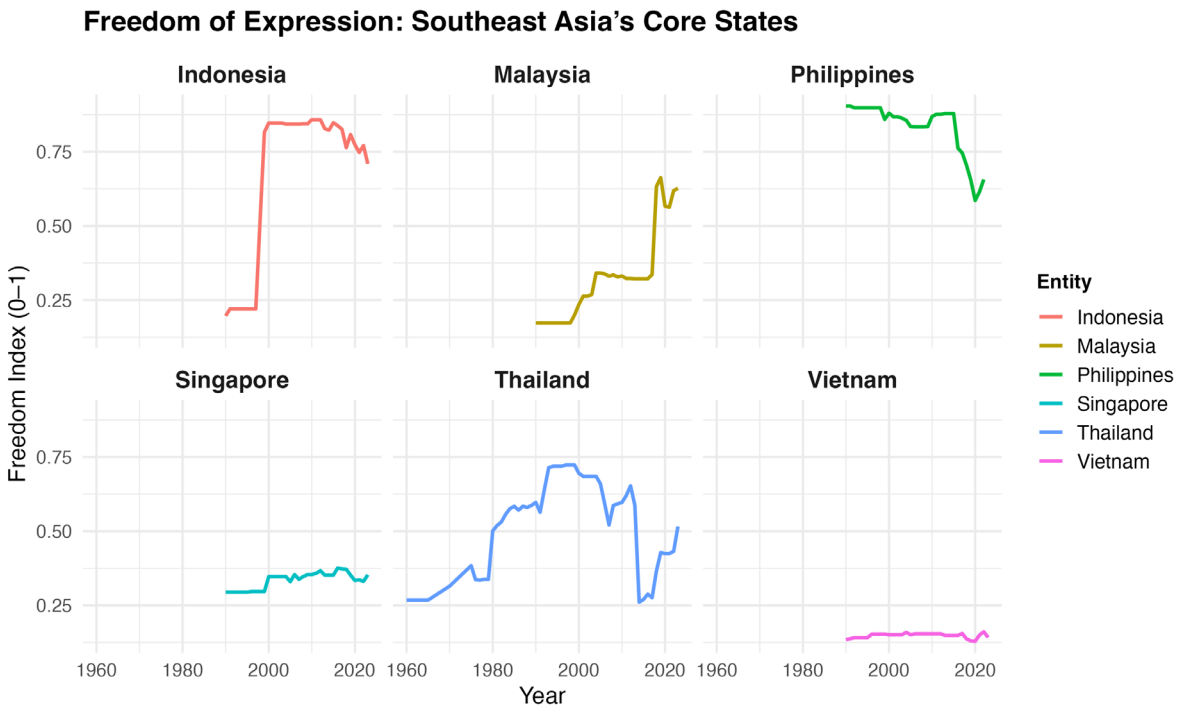

Figure 2. Freedom of Expression Index

Figure 2 shows the trend of freedom of expression index measured by interval 0-1, where 0 is no freedom, and 1 is where individuals can practice full freedom of expression.

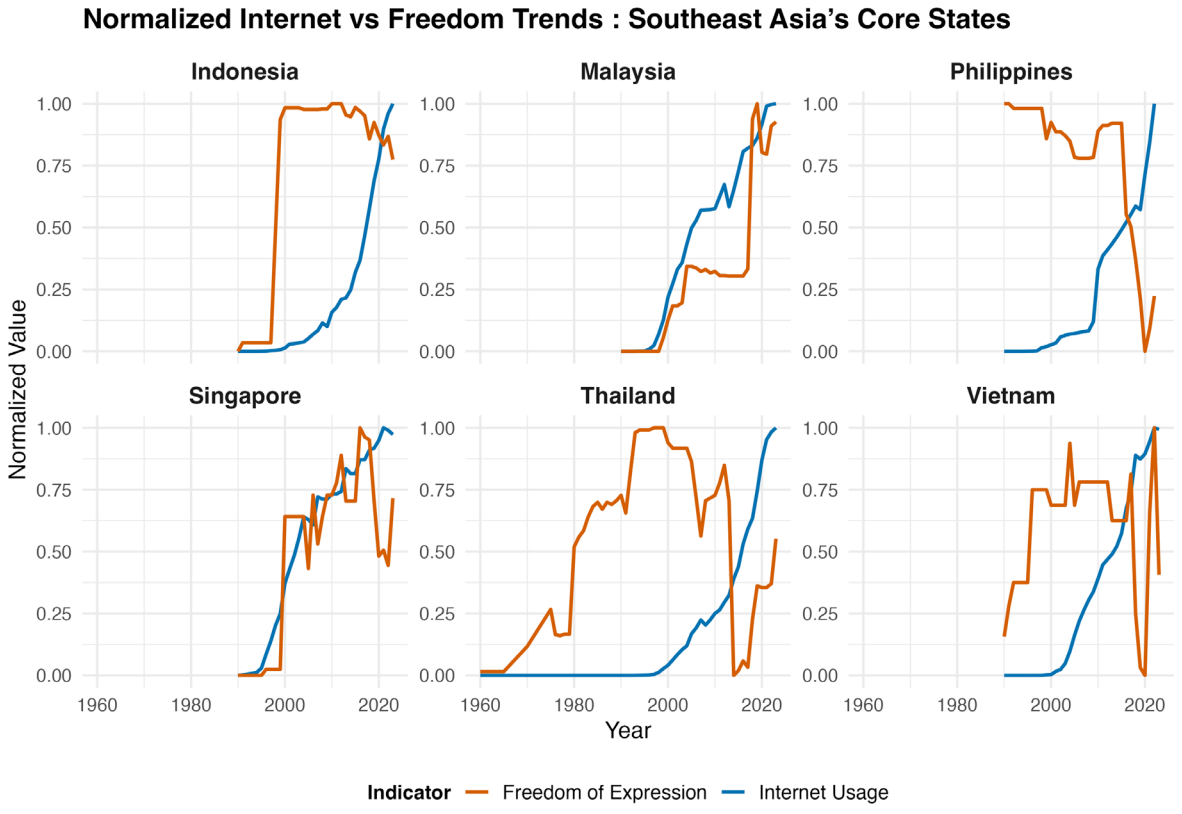

Figure 3. Normalized internet usage vs. freedom of expression trends in Southeast Asia core states (1990–2022)

Figure 3 compares normalized values of internet penetration (blue line) and freedom of expression (red line) across six Southeast Asian countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. While these descriptive trends provide a useful overview, they cannot establish a causal or correlational link. Therefore, we now turn to inferential statistics to formally test the hypothesis. This study tested the hypothesis that higher internet penetration predicts greater freedom of expression in the ASEAN-6 nations (Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam) from 1990 to 2022.

Using a fixed effects model with GDP per capita as a control variable, Table 1 presents country-specific regression estimates of Internet usage on the Freedom Index. The relationship varies substantially across ASEAN states. Malaysia and Singapore show a significant positive association, where increased internet penetration is linked to higher levels of freedom of expression. Indonesia also shows a positive effect, though only marginally significant ($p = 0.055$). By contrast, the Philippines and Thailand exhibit significant negative associations, indicating that higher internet usage coincides with declining freedom of expression. In Vietnam, the relationship is statistically insignificant.

Table 1. By country regression estimates

Country	Intercept (β_0)	InternetUsage (β_1)	Std. Error	t-statistic	p-value
Indonesia	0.608	0.0041	0.00206	1.99	0.055
Malaysia	0.148	0.00396	0.00037	10.8	<0.001
Philippines	0.893	–0.00336	0.00044	–7.64	<0.001
Singapore	0.298	0.00069	0.00008	9.12	<0.001
Thailand	0.562	–0.00195	0.00077	–2.53	0.015
Vietnam	0.149	–0.00004	0.00005	–0.76	0.455

Table 2. By country regression estimates with control variable

Country	InternetUsage (β_1)	p-value	GDPperCapita (β_2)	p-value
Indonesia	–0.0112	0.024	0.000125	<0.001
Malaysia	0.0024	0.098	0.0000087	0.306
Philippines	–0.00178	0.187	–0.0000211	0.215
Singapore	0.00115	<0.001	–0.00000087	0.048
Thailand	–0.00745	<0.001	0.0000341	<0.001
Vietnam	–0.00101	<0.001	0.0000139	<0.001

When controlling for GDP per capita, the relationship between internet penetration and freedom of expression becomes mixed across ASEAN. In Table 2, Malaysia and Singapore, higher internet usage remains positively associated with greater freedom, though the effect is much stronger in Singapore.

Table 3. Overall regression estimates with control and fixed effect

	Dependent variable: FreedomIndex			
	(1)	(2)	(3)	(4)
InternetUsage	–0.001**	–0.001	0.001**	–0.0002
	(0.001)	(0.001)	(0.0004)	(0.001)
GDPperCapita		–0.00000		0.00000**
		(0.00000)		(0.00000)
Malaysia			–0.367***	–0.385***
			(0.036)	(0.037)
Philippines			0.158***	0.172***
			(0.035)	(0.036)
Singapore			–0.364***	–0.498***
			(0.037)	(0.073)
Thailand			–0.143***	–0.147***
			(0.032)	(0.032)
Vietnam			–0.531***	–0.505***
			(0.035)	(0.037)
Constant	0.517***	0.528***	0.661***	0.642***
	(0.024)	(0.025)	(0.025)	(0.027)
Observations	221	216	221	216
R^2	0.028	0.041	0.711	0.719
FE	No	No	Yes	Yes
Control	No	Yes	No	Yes
Adjusted R^2	0.024	0.032	0.703	0.709

Note: *p<0.1; **p<0.05; ***p<0.01, Standard error (in parentheses)

By contrast, in Indonesia, Thailand, and Vietnam, internet penetration is negatively associated with freedom, while GDP per capita consistently exerts a positive effect. In the Philippines, neither internet nor GDP shows a significant effect. These results suggest that economic development is a more robust predictor of freedom of expression in the region, while the impact of internet growth is highly context dependent.

The initial regression models, which did not account for cross-country differences, revealed a weak and inconsistent association between internet usage and freedom of expression. Model 1 suggested a small negative relationship, but the low explanatory power ($R^2 = 0.028$) indicates that internet usage alone explains almost none of the variation in freedom levels. Adding GDP per capita in Model 2 rendered the internet effect insignificant, and GDP itself showed no clear impact, suggesting that without accounting for national context, neither internet penetration nor economic wealth are reliable predictors.

The results change fundamentally with the introduction of country fixed effects in Model 3, which control for time-invariant national characteristics. This adjustment increased explanatory power dramatically ($R^2 = 0.711$), showing that most variation in the Freedom Index is attributable to structural country differences. The country coefficients indicate that the Philippines has a higher baseline level of freedom compared to Indonesia (the reference), while Malaysia, Singapore, Thailand, and Vietnam score

significantly lower. In the full specification (Model 4), which includes both country fixed effects and GDP, the effect of internet usage disappears entirely. GDP per capita becomes statistically significant but substantively negligible, underscoring that economic development plays only a marginal role. The persistence of large, significant country coefficients across Models 3 and 4 confirms that national context, not internet penetration or GDP, is the dominant determinant of freedom of expression in the ASEAN region.

CONCLUSION

This study set out to test the hypothesis that higher internet penetration is positively associated with greater freedom of expression in the ASEAN-6. The results do not provide support for a uniform regional relationship. Instead, the effect of internet usage varies sharply across countries, shaped by domestic political and institutional contexts.

The country-level regressions without controls indicate heterogeneous effects: internet penetration was positively associated with freedom of expression in Malaysia, Singapore, and marginally Indonesia, but negatively associated in the Philippines and Thailand, and insignificant in Vietnam. These findings suggest that, in some contexts, expanding connectivity coincided with greater openness, while in others, it paralleled declining liberties.

When GDP per capita was added as a control, the picture shifted significantly. Singapore remained strongly positive, Malaysia stayed weakly positive, but Indonesia reversed to a negative association, while Thailand and Vietnam also showed strong negative effects. In contrast, GDP per capita was consistently positive in most countries, underscoring that economic development is a more stable predictor of freedom of expression than internet growth.

The "success" of internet expansion in Southeast Asia must not be judged solely by adoption rates, but by how states manage the political externalities of connectivity. Viewed through the lens of the Dictator's Digital Dilemma, the uneven relationship between internet penetration and freedom of expression reveals a region actively calibrating the trade-off between economic modernization and political control. The absolute divergences observed across the ASEAN-6 require contextual explanation beyond the statistical output. The significant negative association between internet usage and freedom of expression in Thailand and the Philippines reflects specific socio-political environments where the digital dilemma was resolved through aggressive cyber-authoritarianism.

In Thailand, successive governments may have weaponized the Computer Crime Act and strict laws to turn the expanding internet into a highly surveilled domain, actively shrinking the space for free expression as connectivity grew. Similarly, in the Philippines, the introduction of broad cyber-libel laws and the state-sponsored manipulation of social media have actively curtailed digital civil liberties despite massive infrastructural growth. Conversely, the results in Singapore and Malaysia which maintain robust digital economies (high GDP) alongside tightly managed digital spheres suggest a different resolution to the dilemma. These states have cultivated a highly regulated public sphere where digital expression is permitted within clearly demarcated legal boundaries to support broader digital economy goals, preventing the severe negative regressions seen elsewhere.

Meanwhile, Vietnam's model of rigid digital autocracy, characterised by strict cybersecurity laws and data localization mandates, ensures that technological expansion translates to economic gain without yielding any political liberalization, explaining its negative or insignificant association. Ultimately, the core finding of this research is that the internet does not act as a deterministic force for political liberalization in Southeast Asia. Instead, its progression follows a political logic of containment. There is no consistent, regional relationship between connectivity and freedom. The internet's impact is entirely contingent on the specific institutional environment into which it is introduced, acting as a sophisticated amplifier of existing state-level tendencies, rather than an independent agent of democratic change.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

While these findings provide a crucial corrective to technological determinist views, this study has several limitations that point the way for future inquiry. The analysis relied on country-level data, which, while revealing macro-level trends, cannot capture the individual-level mechanisms through which internet usage influences or is influenced by political expression. The choice of control variables is also necessarily limited; incorporating factors such as regime type, the strength of civil society, or specific internet governance laws could yield a more nuanced model. Furthermore, while the fixed-effects models successfully accounted for time-invariant structural factors, this approach does not fully resolve potential endogeneity issues.

The relationship between digital connectivity, economic growth, and freedom of expression is likely bidirectional; for instance, states experiencing political instability or a decline in freedom of expression may proactively manipulate digital infrastructure to consolidate power. Additionally, time-varying omitted variables such as sudden regime shifts or the rapid ad-hoc introduction of new cyber legislations cannot be perfectly captured without highly granular, time-series governance indices. Consequently, the findings herein should be interpreted as robust conditional associations rather than definitive causal effects. Future research should consider employing dynamic panel models, such as the Generalized Method of Moments (GMM), or instrumental variable (IV) approaches to better isolate causal mechanisms and directly address endogeneity in digital authoritarianism studies.

Despite these limitations, this research successfully opens a new dimension for understanding the internet-freedom nexus, demonstrating that the relationship is fundamentally conditional. The findings provide an essential initial backdrop, establishing that the national political context is the dominant variable. This necessitates a shift towards more comparative, state-by-state investigations to unravel the specific political and institutional conditions that determine whether the internet becomes a tool for liberation, control, or something in between.

DATA AVAILABILITY

The data for this study are available from the corresponding author upon reasonable request.

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Digital harassment in gaming communication: Identifying types of cyberbullying among Malaysian gamers

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ABSTRACT

Digital harassment in online gaming is on the rise due to the misuse of communication features, including voice chat, messaging, and in-game interactions. Such harassment has a significant impact on gamers' mental health, gaming experience, and social interactions within virtual communities. This study examines types of cyberbullying among Malaysian gamers through a qualitative inquiry using thematic analysis. Semi-structured interviews were conducted between January and April 2023 with four expert informants: an academic researcher, a cybersecurity expert, a game developer, and a licensed counsellor. The findings reveal six distinct types of cyberbullying: verbal bullying, avatar bullying, sexual bullying, racial bullying, newbie bullying, and cyberstalking. Avatar bullying and newbie bullying emerged as novel forms unique to gaming environments, where harassment occurs through attacks on players' virtual representations. The study extends existing cyberbullying typologies to encompass gaming-specific manifestations, highlighting the importance of cultural context within Malaysian gaming communities. These findings contribute to understanding digital harassment in gaming contexts and inform the development of targeted intervention strategies to protect gamers from cyberbullying.

Keywords: ***Cyberbullying, gaming communication, digital harassment, thematic analysis***

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INTRODUCTION

Gaming platforms have emerged as a significant communication environment for young people, facilitating social interactions that extend beyond traditional gameplay activities (Zhang et al., 2022). Unlike conventional social media platforms, gaming environments facilitate real-time interactions through voice chat, text messaging, and avatar-based communications during emotionally charged competitive scenarios (Vergel et al., 2024). These unique communication characteristics create conditions that may intensify aggressive behaviours, as demonstrated by Moral-García et al. (2025), who found significant associations between bullying, cyberbullying, and inappropriate use of the internet, cell phones, and video games among children and adolescents. Consequently, cyberbullying has evolved beyond traditional platforms into gaming environments, representing what Nixon (2014) identified as an international public health concern among adolescents.

Cyberbullying has become a global phenomenon affecting young people across diverse digital platforms, with prevalence rates ranging from 14.6% to 52.2% for victimization and 6.3% to 32% for perpetration worldwide (Zhu et al., 2021). Recent international studies reveal that approximately one in six school-aged children experiences cyberbullying, with rates continuing to increase due to the growing digitalization of youth interactions (WHO Europe, 2024). Within the Asian context, this issue has garnered particular attention due to the region's high internet usage and unique sociocultural factors that influence online behaviours (Park et al., 2014). Malaysia presents a particularly compelling case, ranking second in Asia for cyberbullying problems. Kee et al. (2023) reported that 3 out of 10 young Malaysians experience cyberbullying, while Lai et al. (2023) documented a 1-month cyberbullying victimization prevalence of 2.4% among young adults in urban Selangor. However, these studies primarily focused on general social media platforms, leaving gaming-specific cyberbullying patterns largely unexplored.

Cyberbullying manifests through various forms of digital aggression, including flaming, harassment, cyberstalking, denigration, masquerading, outing and trickery, and exclusion, each with unique methods and distinct psychological impacts on victims (Tan et al., 2019; Zhu et al., 2021). Contemporary research recognizes that cyberbullying extends beyond peer relationships to include harassment targeting strangers, public figures, and broader social groups across digital platforms (Mohd Ramly et al., 2025; Ray et al., 2024). More recent developments include comprehensive classification systems that incorporate aggression, repetition, intent to harm, and peer occurrence as core elements of cyberbullying detection (Ejaz et al., 2024), alongside systematic reviews confirming the need for standardized conceptual frameworks across different age groups and digital contexts (Ray et al., 2024).

However, research specifically examining cyberbullying within gaming environments remains limited, with only a handful of studies investigating gaming-specific harassment patterns, cybersecurity intervention strategies, and measurement instruments to address this growing concern (Che Omar et al., 2024; Che Omar, Abdullah et al., 2025; Che Omar, Saad et al., 2025; Cotler et al., 2017; Hu et al., 2025). While previous studies provide valuable insights for understanding types of cyberbullying behaviours, they were primarily developed for conventional social media

platforms. They may not adequately capture the unique manifestations of harassment within gaming environments, where avatar-based interactions, real-time competitive dynamics, and anonymous gaming identities create distinct communication contexts that may facilitate novel forms of digital harassment (Hu et al., 2025).

Current cyberbullying research has predominantly focused on social networking sites such as Facebook, Instagram, and Twitter, with gaming environments receiving significantly less attention despite their growing prevalence among youth (Bansal et al., 2024; Chan et al., 2020; Ray et al., 2024). While existing studies have identified various cyberbullying categories, these classifications were primarily developed for conventional digital environments and may not adequately capture the unique manifestations of harassment within gaming contexts. Malaysian research has similarly concentrated on general cyberbullying experiences, with Mat So'od et al. (2023) and Balakrishnan (2015) identifying broad cyberbullying categories among youth. This research gap is particularly significant, given that the distinctive communication features of gaming environments may enable unique forms of cyberbullying that existing classification systems do not capture. Therefore, it is essential to understand how cyberbullying manifests specifically within gaming contexts to develop targeted prevention strategies and create safer digital gaming environments for the Malaysian youth.

The present study addresses this research gap by examining types of cyberbullying specifically within Malaysian gaming communication contexts through a qualitative inquiry involving in-depth interviews with four expert informants: game developers, counsellors, academics, and cybersecurity professionals. The identification of culturally informed, gaming-specific types from multi-stakeholder professional perspectives holds significant implications for educators, platform designers, policymakers, and families working to create safer digital gaming environments while preserving the positive benefits that gaming communities can offer.

LITERATURE REVIEW

Cyberbullying in digital environments

Cyberbullying has evolved from traditional bullying to encompass aggressive behaviours conducted through digital technologies, characterized by intentional and repeated harm inflicted upon individuals who cannot easily defend themselves (Nixon, 2014). The phenomenon differs from conventional bullying in several critical ways, including the potential for anonymity, the persistence of digital evidence, and the ability to reach victims beyond physical boundaries (Ray et al., 2024). Recent research emphasizes that cyberbullying should be examined as a distinct category rather than merely an extension of traditional bullying, particularly given the unique technological affordances that enable new forms of harassment (Bansal et al., 2024).

Gaming platforms have transformed from simple entertainment tools into complex communication ecosystems that facilitate extensive social interactions among users (Zhang et al., 2022). These environments possess distinctive characteristics that differentiate them from conventional social media platforms, including real-time voice communication, text-based messaging during gameplay, avatar-based interactions, and competitive dynamics that may intensify emotional responses (Vergel et al., 2024).

The immersive nature of gaming environments creates unique opportunities for both positive social connections and negative harassment behaviours.

Recent studies have identified gaming-specific harassment behaviours such as griefing (disrupting other players' gameplay), spawn camping, and deliberate team sabotage that extend beyond traditional cyberbullying classifications (Hu et al., 2025; Kanasan, 2024). The competitive nature of many games can normalize aggressive communication patterns, potentially blurring the lines between acceptable competitive banter and harmful cyberbullying (Vergel et al., 2024). Meanwhile, real-time interactive features enable immediate and persistent harassment that may follow players across multiple gaming sessions.

Existing types and classifications

Contemporary developments include comprehensive classification systems for cyberbullying detection that incorporate four key aspects: aggression, repetition, intent to harm, and peer occurrence (Ejaz et al., 2024). Building on these foundational elements, researchers have developed more nuanced classifications that focus on direct versus indirect aggression, using the quadripartite violence typology to categorize aggression as rage, revenge, reward, or recreational (Graf et al., 2020). These classifications distinguish between direct forms of aggression, which include threatening messages, and indirect forms involving social exclusion or reputation damage, with recent comparative studies revealing that cyberbullying is more likely to result from recreational aggression compared to offline bullying (Graf et al., 2022). Furthermore, recent systematic reviews have identified various manifestations, including group violence, visual violence, impersonation and account forgery, privacy disclosure, sexual harassment, and cyberstalking as common forms across digital platforms (Zhu et al., 2021).

However, these classification systems were primarily developed for general social media contexts and may not adequately capture the unique manifestations of harassment within gaming environments. For instance, "flaming" in gaming contexts may involve verbal abuse through voice chat during competitive matches. At the same time, "exclusion" might manifest as the deliberate exclusion of players from team strategies or guild memberships (Kou, 2020). The interactive and immersive nature of gaming platforms may facilitate distinct forms of cyberbullying that require specialized categorization frameworks.

While frameworks such as Willard's (2007) typology provided a foundational understanding, Hu et al. (2025) confirmed that research specifically examining cyberbullying within gaming environments remains limited. Studies by Hu et al. (2025) and Cotler et al. (2017) were among the few investigations into gaming-specific harassment patterns. Therefore, the definitional landscape of cyberbullying remains complex, with notable inconsistencies across studies regarding core elements and measurement approaches, particularly when applied to gaming contexts that feature unique communication features and social dynamics (Ray et al., 2024).

Cyberbullying in the Malaysian context

Recent studies indicate that Malaysia ranks second in Asia for cyberbullying problems, with global statistics placing the country sixth out of 28 countries globally, where 1 in 4 Malaysian parents reported that their child has experienced cyberbullying

(Kee et al., 2023). According to the United Nations Children's Fund (UNICEF), 3 out of 10 young Malaysians reported being cyberbullied, with the youth representing the highest number of victims in Malaysian cyberbullying cases (Kee et al., 2023). Malaysia presents a particularly compelling context for cyberbullying research, with significant prevalence rates among youth populations.

Research conducted in Selangor found that the prevalence of cyberbullying victimization was 24.4%, whilst 13.0% reported cyberbullying perpetration over the past six months (Ayub et al., 2023). A cross-sectional study among Malaysian adolescents found that, over the past month, the prevalence of cyber-victimization and cyber-perpetration was 31.6% and 20.9%, respectively. However, this increased more than twofold when extended to a past 3-month period (73.7% and 64.2%, respectively) (Sivabalan et al., 2021). The prevalence of cyberbullying among Malaysian youth demonstrates concerning patterns across different contexts.

Research has identified the development of hate speech detection frameworks, specifically for the Malay language, highlighting the multilingual nature of online harassment in Malaysian digital spaces, where users communicate across Bahasa Malaysia, English, and other local languages (Maity et al., 2023). In response to these multilingual challenges, the regulatory landscape in Malaysia continues to evolve, with the Malaysian Communications and Multimedia Commission actively addressing cyberbullying concerns through existing legislation. However, specialized frameworks for gaming environments remain underdeveloped (Razali & Nawang, 2022).

METHODOLOGY

Qualitative method and research design

The qualitative methodology was selected to capture nuanced understandings of cyberbullying manifestations that might not be apparent through quantitative measures alone, as it allows for a detailed exploration of complex phenomena and enables researchers to understand professional perspectives across multiple domains (Creswell & Poth, 2018). Given the limited existing research on gaming-specific cyberbullying typologies (Hu et al., 2025), the exploratory nature of a qualitative inquiry was particularly well-suited to identifying and understanding emerging patterns and novel forms of harassment in gaming contexts. The flexibility of qualitative research enables the comparison of findings across expert viewpoints (Bogner et al., 2009), allowing for comprehensive conclusions about gaming-specific forms of cyberbullying.

Informants

The population of interest consisted of professionals with expertise relevant to gaming cyberbullying issues in Malaysia. Four expert informants were selected using purposive sampling to represent diverse professional perspectives, which are essential for understanding cyberbullying in gaming contexts. As noted by Guest et al. (2006), experts with specialized knowledge can provide comprehensive insights with smaller sample sizes than general population studies. Research demonstrates that theme saturation can be achieved within 4–12 interviews when working with focused populations with specialized knowledge (Wutich et al., 2024). The inclusion criteria for potential

informants were: (1) minimum 10 years of professional experience in their respective domains, (2) direct exposure to gaming-related cyberbullying issues through professional work, (3) ability to provide informed perspectives on Malaysian gaming contexts, and (4) willingness to participate in comprehensive interviews.

Informant 1, an academic researcher with 10–15 years of research experience in digital media studies and online harassment among Malaysian youth, was selected to provide theoretical frameworks and empirical insights essential for understanding cyberbullying patterns and developing evidence-based typologies. Informant 2, a cybersecurity expert with 30 years of experience in cybersecurity and online threat assessment, was chosen for their expertise in technical detection mechanisms and legal frameworks crucial to identifying and addressing gaming cyberbullying from a regulatory perspective.

Informant 3, a game developer with 10 years of experience in multiplayer communication systems and community management features, was included to provide insider knowledge of platform design elements, technical vulnerabilities, and industry practices that may inadvertently facilitate or prevent harassment. Informant 4, a licensed counsellor with 15 years of experience treating cyberbullying cases among adolescents and young adults, was selected to provide clinical insights into psychological impacts, victim responses, and therapeutic intervention approaches specific to gaming-related harassment cases.

Instrument and procedure

The primary data collection instrument was a semi-structured interview guide designed to explore experts' perspectives on the types of cyberbullying in Malaysian gaming communication contexts. The interview guide was designed to systematically identify and categorize different manifestations of cyberbullying specific to gaming environments, building on existing typologies from the literature (Kou, 2020) and incorporating insights from multiple professional domains. Following Kallio et al.'s (2016) recommendations, the instrument underwent validation by two qualitative research experts to ensure content validity, clarity, and logical flow across all four expert domains. The final interview guide included opening questions to build rapport, core questions addressing cyberbullying typologies in gaming contexts, targeted probing questions to enable detailed categorization, and closing questions to elicit additional insights, ensuring comprehensive identification of gaming-specific harassment behaviours while maintaining flexibility for expert-led discussions.

Data collection was conducted through semi-structured interviews with four expert informants via online platforms (Google Meet and Webex) to accommodate geographical dispersion and professional constraints. Each interview lasted 60–90 minutes and was conducted in Malay, according to the informants' preferences, using a progressive questioning approach that began with general concepts of cyberbullying and progressed to specific gaming-related manifestations (Kvale & Brinkmann, 2015). The researcher established rapport through professional introductions, clarified technical terminology, and encouraged informants to provide concrete examples from their professional experiences to illustrate different types of cyberbullying in gaming contexts. All interviews were digitally recorded with the informants' explicit consent, transcribed verbatim, and translated into English, ensuring technical accuracy was

preserved. Ethical protocols included institutional approval letters, signed consent forms in both languages, confidentiality assurances using pseudonyms, and informant verification of interview summaries before analysis, which was conducted in NVivo 14.

Data analysis

Data analysis followed Braun and Clarke's (2006) six-phase thematic analysis approach, which involves systematic identification, analysis, and reporting of patterns within qualitative data. The analysis process consisted of: familiarization with data through repeated reading of transcripts; initial coding of segments describing cyberbullying behaviours and manifestations; development of potential themes representing distinct types of gaming cyberbullying; review and refinement of themes to ensure internal coherence and external distinctiveness; definition and naming of final themes; and report writing with supporting informant quotes.

The constant comparative method was employed throughout the analysis to identify similarities and differences across expert accounts. Particular attention was paid to coding segments that described different types of cyberbullying behaviours, communication channels through which harassment occurred, and contextual factors specific to gaming environments in Malaysia. To enhance trustworthiness, member checking was conducted by sharing preliminary findings with informants for verification and feedback. Additionally, peer debriefing sessions were held with research team members to discuss emerging themes and ensure analytical rigor. Inter-coder reliability was established by two researchers independently coding 20% of transcripts, yielding 92% agreement in thematic categorization.

FINDINGS AND DISCUSSION

Through the thematic analysis of in-depth interviews with four expert informants, this study identified six distinct types of cyberbullying occurring within Malaysian gaming communication contexts. The findings reveal unique manifestations of harassment enabled by the specific technological and social features of gaming platforms. Each type represents a distinct pattern of harmful behaviour that emerged consistently across expert perspectives, demonstrating the complex nature of cyberbullying in gaming environments.

Verbal bullying

The findings reveal that verbal bullying emerged as the most commonly discussed form of cyberbullying across all expert informants, manifesting through both voice chat and text-based communication channels in gaming platforms. This type involves using harsh, insulting, or threatening language directed at other players via real-time communication features.

Informant 1 noted that, *"players use harsh, insulting, or threatening words against other players through voice or written chat,"* highlighting the dual communication channels through which verbal abuse occurs. Informant 2 emphasized the intentional nature of such behaviour, explaining that, *"the malicious intent to bring down and shame someone can be easily implemented"* and that, *"cyberbullying involves harming and*

attacking victims through harsh words and using tricks to achieve their goals." Informant 4 provided a comprehensive categorization of verbal bullying behaviours, noting that *"cyberbullying criteria include insulting words, threats, sarcasm, body shaming, and so forth."* This broad spectrum of verbal abuse demonstrates the varied manifestations of this cyberbullying type within gaming contexts.

Verbal bullying emerged as the most prevalent form across all expert domains, utilizing gaming's dual-channel communication system of real-time voice chat and text messaging in online games. Games such as PUBG Mobile, Mobile Legends (MOBA), and Valorant provide extensive communication features that enable players to coordinate strategies and interact during gameplay (Kou, 2020; Vergel et al., 2024). However, these same communication channels become conduits for verbal harassment, particularly in competitive gaming environments where high-stakes gameplay intensifies emotions and aggressive behaviours. The behavioural spectrum ranges from insulting words and threats to sarcasm and body shaming.

From a technical perspective, Informant 3 identified significant challenges in detecting and moderating verbal bullying, stating that *"in gaming voice chat, players often use harsh language to insult opponents. Automatic moderation systems find it difficult to detect all forms of verbal abuse."* This technical limitation creates environments where verbal harassment can occur with limited oversight, particularly in voice communications where automated detection systems struggle to identify contextual abuse.

Avatar bullying

Avatar bullying represents a unique form of harassment that exploits players' emotional investment in their virtual identities. Informant 1 explained that, *"players attack or demean other players' characters or avatars in the game by causing harm or damaging their gaming experience."* In contrast, Informant 2 highlighted that, *"attacks on player avatars can involve manipulating character data or stealing virtual items that have value in the game."* Informant 3 noted that, *"avatar bullying is unique in gaming - players can repeatedly attack characters, or block other players from completing objectives,"* while Informant 4 emphasized that, *"attacks on player avatars can cause emotional stress because players associate their identity with characters in the game."*

The findings reveal that avatar bullying operates on two interconnected dimensions that distinguish it from conventional cyberbullying. The first dimension involves technical exploitation through tactics such as repeated character attacks, data manipulation, and virtual item theft, where perpetrators weaponize game mechanics to harass victims. The second and more critical dimension is psychological, occurring when players who have invested emotional identity in their avatars experience virtual attacks as personal threats, resulting in real emotional distress. This dual nature creates a unique form of harassment that exploits both technological vulnerabilities and the blurred boundaries between virtual and personal identity in gaming environments.

These findings align with existing research indicating that gaming platforms facilitate distinct forms of cyberbullying that require specialized categorization frameworks beyond those used in traditional social media contexts (Kou, 2020; Vergel et al., 2024). These findings suggest the need for comprehensive protection systems and

heightened awareness among game developers regarding their responsibility to create safe gaming spaces that address both mechanical exploitation and psychological harm.

Sexual bullying

Regarding sexual bullying, Informant 1 defined sexual bullying as *"sexual harassment of players, inappropriate comments, or gender-based bullying of other players."* Furthermore, Informant 2 highlighted that, *"one example of a situation that often arises is obscene behaviour where perpetrators try to accuse others of creating such images."* He also noted that, *"many online games display inappropriate images or characters, causing teenagers to play these games more frequently."* Similarly, Informant 4 raised concerns about game content, stating that, *"there are many games made involving pornographic elements and so on, which are not very suitable for those individuals."* Informant 3 observed that, *"female players often face sexual harassment in voice chat. This forces them to mute their microphones or stop playing."* Sexual bullying in gaming contexts involves harassment of a sexual nature, including inappropriate comments, sexual advances, and gender-based discrimination.

The presence of sexualized game content, such as provocatively dressed female characters in popular games like PUBG, Mobile Legend, and other mainstream titles, appears to normalize inappropriate behaviours within gaming environments, as research has shown that playing with a sexualized female character increases adolescents' acceptance of rape myths and tolerance for sexual harassment (Driesmans et al., 2015). This poses significant risks given the widespread exposure of children and adolescents to these popular online games. This concern is substantiated by research indicating that 42% of Malaysian respondents aged 16–24 engage in daily online gaming (Kamal & Wok, 2020). Therefore, this study recommends enhanced parental oversight of children's online gaming activities and the establishment of content filtering mechanisms to protect young users from inappropriate material.

Racial bullying

Findings also reveal that racial and ethnic bullying involves discrimination and harassment based on players' racial or ethnic identities, representing a particularly concerning form of cyberbullying in Malaysia's multicultural gaming environment. Informant 1 described this phenomenon as situations where *"players bully other players based on race or ethnicity by insulting or making discriminatory comments."* Informant 2 provided crucial cultural context, noting that, *"in the context of multiracial Malaysia, slurs and discriminatory comments based on ethnicity often occur on gaming platforms."* Informant 4 highlighted the psychological impact, contending that, *"victims of ethnic bullying in gaming often experience trauma and withdraw from gaming communities due to continuous discrimination."* From a technical perspective, Informant 3 emphasized that, *"reporting systems in games need to be sensitive to the Malaysian cultural context to detect and control racial discriminatory comments."*

Online games feature an inclusive concept that allows people of all races to participate together (Shliakhovchuk, 2018). However, racial and ethnic bullying in Malaysian gaming environments presents unique challenges in the country's multicultural context. The findings reveal that victims experience psychological trauma leading to withdrawal from gaming communities, while current moderation systems

prove inadequate for detecting Malaysia-specific ethnic harassment patterns. The research highlights the need for culturally sensitive reporting mechanisms that can identify and address discriminatory language specific to Malaysian ethnic dynamics. These findings suggest that effective intervention requires specialized moderation systems that recognize local ethnic slurs and culturally informed policies that address the specific multicultural challenges in Malaysian gaming environments.

Newbie bullying

According to Informant 1, newbie bullying is described as situations where *"more advanced players mock, belittle, or insult new or inexperienced players."* Informant 2 connected newbie bullying to broader patterns of harassment, noting that, *"cyberbullying also includes repeated harassment and stalking, which makes victims feel pressured and eventually leave the group."* Informant 3 emphasized the business implications, stating that, *"newbie bullying is a serious problem in game design. New players who are bullied will stop playing, affecting player retention."* From a psychological perspective, Informant 4 noted that, *"new players who experience bullying often lose self-confidence and interest in continuing to play or learn new skills."*

This study describes how newbie bullying operates through gaming power dynamics, where experienced players repeatedly attack weaker or less skilled players, transforming educational interactions into cycles of harassment. This repetitive targeting behaviour meets the core criteria of cyberbullying, creating emotional distress among victims who lack defensive skills (Nixon, 2014). The power imbalance enables experienced players to exploit newcomers' vulnerabilities, leading to systematic intimidation rather than supportive mentorship. The emotional impact is particularly evident when siblings play together, where the stronger player repeatedly defeats the weaker one, often causing the losing sibling to become upset and cry. These findings suggest that gaming environments amplify existing power structures, creating toxic learning spaces that ultimately harm community growth and player retention.

Cyberstalking

Cyberstalking in gaming contexts involves persistent monitoring, following, and harassment of targeted players across gaming platforms. Informant 1 defined cyberstalking as situations where *"players constantly pursue other players, monitor their activities, or make threats through private messages or social media."* Informant 2 provided technical insights, explaining that, *"cyberstalking in gaming involves tracking player activities across different platforms, from game profiles to social media."* Informant 3 identified specific technological enablers, noting that, *"stalkers can use in-game features like friend requests and guild systems to monitor victims continuously."* From a psychological perspective, Informant 4 emphasized the severe impact, stating that, *"victims of cyberstalking in gaming often experience anxiety and paranoia, afraid to log in or join game sessions."* The identification of gaming-specific cyberstalking reveals how the persistent, interconnected nature of gaming platforms creates unique opportunities for stalking. Unlike traditional cyberstalking, which may be limited to specific platforms, gaming-related stalking can span multiple games, social features, and external platforms, creating a more comprehensive harassment experience.

Cyberstalking in gaming environments exploits the interconnected nature of modern gaming ecosystems to persistently harass across multiple platforms. Stalkers systematically join all servers where victims play, follow them across different games, such as PUBG, Mobile Legends, and Free Fire, and monitor their social media profiles to track their gaming schedules (Weekes et al., 2025). The creation of multiple accounts enables stalkers to circumvent blocking mechanisms, while cross-platform pursuit eliminates safe gaming spaces for victims. Therefore, this study's findings reveal that cyberstalking transforms recreational gaming into a source of anxiety, forcing victims to choose between complete gaming withdrawal or continued exposure to persistent harassment across their entire digital gaming identity. Previous research has shown that cyberstalking victimization is associated with significant psychological impacts, including depression and a decline in academic performance (Wright, 2018), with victims experiencing prolonged distress that extends beyond the digital environment.

IMPLICATIONS AND CONCLUSION

This study contributes to the theoretical understanding of cyberbullying by identifying six distinct types of harassment specific to gaming environments, such as verbal bullying, avatar bullying, sexual bullying, racial bullying, newbie bullying, and cyberstalking. The findings extend traditional cyberbullying frameworks by revealing how gaming-specific features create unique forms of harassment that differ significantly from those found on conventional social media platforms. The identification of avatar bullying as a distinct category demonstrates how investment in virtual identity creates new vulnerabilities for players, while the documentation of cross-platform newbie bullying reveals the complexity of harassment in interconnected gaming ecosystems. These findings suggest that existing cyberbullying theories need to be expanded to account for the unique technological and social dynamics of gaming environments.

The research findings have significant implications for game developers, platform administrators, and policymakers in Malaysia. Game developers must implement culturally sensitive moderation systems that can detect Malaysia-specific ethnic slurs and harassment patterns, particularly given the country's multicultural context. Platform administrators should develop comprehensive protection mechanisms that address both technical exploitation and psychological harm, especially for vulnerable groups such as new players and female gamers. Critically, recommendations for game developers and policymakers must be specifically tailored to protect children and adolescents, who represent the most vulnerable population in gaming environments. To address sexual bullying, game developers should enforce stricter content moderation policies, remove sexualized character designs targeting young audiences, and implement mandatory reporting mechanisms for sexual harassment within gaming platforms. To combat cyberstalking, policymakers should advocate for cross-platform blocking systems, real-time monitoring tools, and stronger legal frameworks that criminalize persistent online harassment in gaming contexts. The study's findings also indicate the need for enhanced parental oversight tools and content filtering systems to protect young users from inappropriate material, given that 42% of Malaysian youth aged 16–24 engage in daily online gaming.

This study's limitations include its reliance on expert perspectives rather than direct victim experiences and its focus on the Malaysian context, which may limit generalizability to other cultural settings. Future research should employ digital ethnography to observe cyberbullying behaviours as they naturally occur within gaming environments, providing authentic insights into harassment dynamics that expert perspectives alone cannot capture. In-depth interviews with victims and perpetrators would offer first-hand accounts of gaming-specific cyberbullying experiences, while surveys conducted across diverse gaming communities could establish prevalence rates and identify demographic patterns among those affected. Longitudinal studies examining the long-term psychological impacts of gaming-specific cyberbullying would contribute valuable insights for intervention development. Additionally, comparative studies across different cultural contexts could help identify universal versus culture-specific patterns of gaming cyberbullying, with particular attention to ethical considerations in research involving vulnerable populations such as minors.

This study successfully identified six distinct types of cyberbullying in Malaysian gaming environments: verbal bullying, avatar bullying, sexual bullying, racial/ethnic bullying, newbie bullying, and cyberstalking. Each type represents a unique manifestation of harassment that exploits specific features of gaming platforms and the social dynamics within gaming communities. The findings reveal that gaming environments create distinctive cyberbullying experiences that require specialized understanding and intervention approaches beyond traditional social media contexts. Traditional social media cyberbullying typically involves static content like posts and comments, whereas gaming-based cyberbullying occurs through real-time, interactive gameplay involving avatars, voice chat, and cyberstalking across multiple games or servers. The research contributes to both theoretical knowledge and practical applications by providing a comprehensive framework for understanding cyberbullying in gaming contexts while offering concrete recommendations for prevention and intervention tailored to protect children, adolescents, and other vulnerable groups. As online gaming continues to grow in popularity, particularly among young people in Malaysia, understanding and addressing these gaming-specific forms of cyberbullying becomes increasingly critical for creating safe and inclusive digital spaces for all players.

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Visual storytelling through mise-en-scène: Investigating multidimensional audience engagement in short films on social media

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ABSTRACT

The growing popularity of short films on social media has positioned visual storytelling as a key strategy for sustaining audience engagement. However, existing research has focused mainly on short-form videos and platform characteristics, with limited attention to cinematic visual elements such as mise-en-scène. This study examines how mise-en-scène, as a visual storytelling mechanism, shapes cognitive, affective, and behavioural engagement among social media short-film audiences. Based on the Visual Rhetoric Theory (VRT), a cross-sectional quantitative study was conducted involving 280 young adults in Malaysia, aged between 18 and 35 years who regularly watch short films on social media. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings show that mise-en-scène has a significant positive effect on all three dimensions of engagement. Specifically, affective engagement recorded both the strongest direct relationship ($\beta = 0.634$) and the largest effect size ($f^2 = 0.674$), while cognitive engagement ($\beta = 0.483$) and behavioural engagement ($\beta = 0.472$) showed comparatively moderate direct effects. This indicates that affective engagement is the most strongly influenced by cinematic visual storytelling. The study findings also show that mise-en-scène not only plays a role as an aesthetic component in filmmaking, but it also acts as a persuasive visual storytelling mechanism in shaping audience interpretation, emotional engagement and participatory behaviour. This study contributes to the literature by extending the application of the Visual Rhetoric Theory to the contemporary context of short films on social media and providing empirical evidence that cinematic visual storytelling is still a key driver of audience engagement in today's increasingly competitive digital engagement ecosystem. In addition, the findings of this study also provide practical implications for filmmakers, digital content creators and marketers who wish to optimize audience engagement through more effective visual storytelling strategies, especially for short films.

Keywords: ***Mise-en-scène, short films, visual storytelling, engagement, social media, audience impact***

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INTRODUCTION

The revolution and rapid development of digital media has changed the way audiences access audio-visual content. This phenomenon includes changes in the style and way audiences watch films. Traditionally, films were distributed through cinemas, television broadcasts and film festivals; however, nowadays the shift in film distribution platforms has encouraged films to be produced with shorter durations (short films) so that they are accessible through digital platforms, to suit the social media environment, and to align with the needs of the audience (Hui & Yang, 2023; Kennedy-Karpat, 2022). In addition, the increasing popularity of these platforms has made short films an increasingly influential form of digital storytelling, especially among young people who use mobile technology and social media as the main medium to access audio-visual content and entertainment (Vardeman, 2024).

With the rise of short films in social media, visual storytelling has become one of the most significant communication forms in today's digital culture. Unlike traditional short-form videos that usually aim to convey information with no special structure, short films are created based on narrative structure, cinematic composition and visual aesthetics to construct meaning, evoke emotions and impact audience interpretation (Zimand, 2024). Through the strategic use of visual elements, short films are able to create a deep and immersive experience, help audiences understand the narrative, and also form emotional and behavioural relationships with the content presented. Along with this rapid development, digital audio-visual content on social media has become too dense and contributes to the phenomenon of the attention economy, which is a situation where content producers compete to attract and maintain audience engagement (Munaro et al., 2021).

In such an environment, audience engagement not only functions as an indicator of attention and interaction but also becomes an important determinant of content visibility, viral potential, audience retention and commercial sustainability of content (Hernández-Santaolalla & Barrientos-Bueno, 2020). Therefore, filmmakers and content creators increasingly rely on variety in producing their content to capture audience attention, generate emotional resonance and stimulate audience participation in highly competitive digital platforms. This has placed cinematic elements at the center of the content strategy.

Mise-en-scène is a key component of cinematic storytelling. It refers to the arrangement of visual elements within a film frame, including settings, props, costumes, makeup, lighting, color, actor movement and spatial composition (Astuti et al., 2024; Dite, 2023; Ekhato, 2024). In the field of film studies, mise-en-scène plays a role in shaping narrative meaning, emotional atmosphere, visual symbolism and audience interpretation (Noorman & Nafisah, 2016). In addition to its aesthetic function, mise-en-scène also functions as a strategic visual storytelling mechanism, which can influence the way audiences see, interpret and respond to cinematic narratives. For example, the use of appropriate settings and props can depict a caste or civilization that is presented, the use of appropriate costumes and makeup can convey the character being acted out, and the use of color tones in a film can give different emotions to the audience.

It is important to note that while this study is theoretically grounded in cinematic visual elements, particularly mise-en-scène, it does not assume that respondents were

able to consistently distinguish structured short films from unstructured short-form videos encountered on social media, given that this differentiation is itself an evolving conceptual boundary within the literature (Ding, 2024; Fu, 2024). Given that social media platforms present a continuum of short-form audio-visual content ranging from highly structured cinematic narratives to loosely structured, algorithm-driven clips (Fu, 2024), the operational scope of this study is defined at the level of short-form narrative videos encountered organically on social media platforms, of which cinematic short films exhibiting mise-en-scène qualities represent a central subset (Oblak, 2026). Accordingly, the findings should be interpreted as reflecting audience perceptions of mise-en-scène across this broader spectrum of short-form narrative content, rather than being confined strictly to a formally verified category of cinematic short films (Tsai, 2026).

Problem statement

Although social media has facilitated the distribution and delivery of short films, the practical challenge remains in ensuring that short films broadcast on social media are able to attract and sustain audience engagement. Shifts in media consumption habits and the growing fragmentation of digital audiences have made traditional storytelling approaches less effective, creating a need for more effective narrative and cinematic strategies to attract and retain audience engagement (Rafik et al., 2025). Unlike regular short-form videos, which are typically produced without structure, short films rely heavily on cinematic visual storytelling to attract attention, evoke emotions and encourage audience participation within a limited viewing period. Beyond this practical challenge, a corresponding gap exists in the literature.

Studies on audience engagement continue to focus mainly on platform characteristics, content formats and social media videos in general, while cinematic visual aspects, particularly mise-en-scène, remain under-recognized as a mechanism that influences audience engagement (Liu et al., 2021; Shreedhar, 2021). Furthermore, audience engagement is often studied in a fragmented manner: most studies measure only behavioural engagement, such as how viewers like, comment on, and share content, while comprehensive studies encompassing cognitive, affective and behavioural engagement together remain scarce (Mirbagheri & Najmi, 2019). Although mise-en-scène has long been recognized as an important element in film theory and visual storytelling, its influence on this multidimensional form of audience engagement, particularly in the context of short films on social media, remains poorly understood. This gap not only limits the development of theory related to cinematic visual storytelling, but also constrains its practical application in the contemporary digital environment.

Accordingly, this study investigates the role of mise-en-scène as a visual storytelling mechanism in shaping audience engagement with short films distributed through social media platforms. Specifically, this study examines the extent to which mise-en-scène influences audience engagement in a multidimensional manner, namely cognitive, affective, and behavioural engagement, among young adult viewers. By extending the application of cinematic visual storytelling into the social media environment, this study contributes to the development of literature that combines the fields of film studies, visual communication, and social media engagement research. It also offers practical implications for filmmakers and digital content creators who wish

to increase audience engagement through more meaningful and impactful visual storytelling strategies.

LITERATURE REVIEW

Visual storytelling in contemporary audio-visual media

Social media has changed the way audio-visual content is produced, distributed and consumed by audiences. In this context, visual storytelling has become an increasingly important form of communication in contemporary audio-visual media (Nikulina et al., 2024). In general, visual storytelling refers to the strategic use of visual, audio and narrative elements to convey meaning, experience and emotion to the audience (Fu, 2024; Vázquez-Herrero & Haan, 2022; Williams, 2019). Compared to traditional storytelling that relies more on dialogue or text, visual storytelling uses images, sounds, movement and visual composition as the main medium to shape the audience's understanding and experience.

In the field of film and audio-visual media, visual storytelling is often considered a communication system that combines various cinematic elements such as mise-en-scène, cinematography, editing, production design and sound design (Bagherzadeh et al., 2023; Ilmaranta, 2023; Tian, 2023). For example, the arrangement of space, lighting, objects and visual composition plays an important role in helping the audience understand the message to be conveyed (Ilmaranta, 2023). In addition, the use of cameras, colours and lighting not only functions as aesthetic elements, but also influences the attention, perception and emotional response of the audience (Bagherzadeh et al., 2023).

In the context of structured storytelling, the development of digital technology has also caused visual storytelling to shift from linear to more interactive and emotionally oriented storytelling (Ding, 2024; Katerynych et al., 2023). Meanwhile, studies have found that in the streaming media environment, virtual reality and social media, audiences are no longer just passively receiving information but are also involved in the process of experiencing and interpreting content (Zunjic, 2023). For example, studies related to immersive media show that visual storytelling is able to increase the experience of presence, empathy and emotional involvement of the audience (Pecheranskyi, 2023; Zunjic, 2023). Likewise, the development of streaming platforms and OTT content has also changed the structure of traditional storytelling by providing more flexibility in the way a narrative is constructed and delivered (Pandian & M., 2023).

Previous research has also shown that visual storytelling has a great influence on audience engagement. This influence occurs through various mechanisms such as narrative transportation, identification, empathy, and emotional resonance (Gracia et al., 2023; Oblak, 2026; Seidel et al., 2023). For example, the use of appropriate visual and audio elements has been found to increase audience attention, strengthen emotional experiences and influence the way they interact with the content being watched (Bagherzadeh et al., 2023; He, 2024; Yılmaz, 2024). Therefore, visual storytelling is now not only seen as a form of storytelling, but also as a communication mechanism that is able to shape the experience, emotions and engagement of the audience.

Short films as cinematic visual narratives

In general, short films are defined as cinematic audio-visual works that are created by combining narrative elements, mise-en-scène, cinematography, editing and sound to create meaning and experience for the audience (Bordwell et al., 2023). Short films have a shorter watching time but nevertheless have the essential qualities of a cinematic work such as storyline continuity, character development, audio-visual composition and emotional growth (Arifin, 2025; Ding, 2024; Fu, 2024). Recent studies have pointed out that today's short films are no longer just shortened audio-visual content. Instead, short films should be viewed as a cinematic narrative experience that utilizes visual storytelling techniques to construct meaning, to elicit emotions and to influence how audiences interpret things on various digital platforms (Katerynych et al., 2023; Oblak, 2026).

Academics have reached a consensus that short films are different from the usual short-form videos on social media in many aspects such as format, storytelling goal, cinematic composition and audience experience (Fu, 2024; Ding, 2024). Most short-form videos on social media are more focused on information and algorithm-driven visibility, while short films are more focused on story development, character development, emotional appreciation and continuity of audio-visual experience (Gracia et al., 2023; Oblak, 2026). Moreover, modern short films are also frequently experimenting with cross-platform and transmedia storytelling techniques, which enable the audience to interact with the narrative in several digital contexts (Fan, 2024; Katerynych et al., 2023).

Mise-en-scène as a visual storytelling mechanism

Mise-en-scène is a term derived from the French language, which literally means "putting on stage." In film studies, it refers to the arrangement of all visual elements within a film frame (Bordwell et al., 2023). These elements include the setting, props, costumes, make-up, lighting, actor movement, actor positioning (blocking), and spatial composition that collectively create the overall visual appearance of a film (Wikayanto et al., 2023). Mise-en-scène has long been considered to be one of the basic elements of film language as it contributes significantly to the creation of narrative meaning, atmosphere and audience interpretation (Gibbs, 2002). Rather than functioning solely as a visual or aesthetic element, mise-en-scène acts as a visual system that enables filmmakers to construct narrative worlds, communicate symbolic meanings, and influence how audiences perceive and understand a story (Gibbs, 2002).

Barnwell (2022) further explained that mise-en-scène is an important visual storytelling mechanism that helps filmmakers create believable narrative worlds and establish emotional connections between audiences and the stories being presented. Therefore, mise-en-scène should not be viewed merely as a technical or production element, but also as a storytelling strategy that shapes audience experience and interpretation of audio-visual content. For example, the use of specific lighting techniques can create different emotional atmospheres, while colour, spatial arrangement, and actor movement can influence how audiences perceive characters, settings, and narrative situations.

The study of mise-en-scène has been broadened in recent years to indicate its communicative, rhetorical and emotional role. Research has demonstrated that the use of visual elements like space, lighting, colour, composition and actor positioning can

have an impact on how the narrative is interpreted, how we feel and how we engage with the narrative (El-Malky, 2023; Ortiz, 2023). Likewise, studies on the architecture of films and the audio-visual space have shown that spatial design and visual arrangement have a great influence on the audience's attention, emotional experience, and comprehension of the film (Abu-Obeid & Abuhassan, 2023; Gracia et al., 2023). Furthermore, research in digital storytelling indicates that strategically designed visual contexts can enhance emotional impact, foster a sense of realism, and inspire audience engagement (Seidel et al., 2023; Wang & Zhong, 2023).

While there have been many studies on the importance of mise-en-scène in film narration, most prior research has concentrated on the text, film aesthetics, semiotics, and spatial design aspects, as outlined by Abu-Obeid and Abuhassan (2023) as well as Ortiz (2023). Less research has been done on the perception, interpretation, and response of the audience to mise-en-scène, especially in short films distributed via social media. Moreover, the responses of the audience have been studied individually, rather than multidimensional, including cognitive, affective and behavioural aspects. Thus, more investigation is required to comprehend the effect of mise-en-scène, as a visual storytelling mechanism, on audience engagement in contemporary digital viewing environments.

Audience engagement on social media

Audience engagement on social media is defined as the connection that audiences create by interacting, participating, and meaning-making with digital content (Shahbaznezhad et al., 2021). In recent years, engagement has been defined by contemporary scholars as a multidimensional phenomenon, including cognition, emotions, and behaviours in digital environments (Hollebeek et al., 2014; Liadeli et al., 2023). Unlike traditional media audiences, who are typically seen as passive receivers of information, social media audiences are active interpreters, evaluators, and co-creators of meaning, using the affordances of the platforms for commenting, sharing, remixing, and content participation (Hodson & O'Meara, 2023; Shahbaznezhad et al., 2021).

In addition to audience motivations, the recent studies indicate that the level of audience engagement can also be affected by audio-visual storytelling strategies, visual design, narrative structure, and algorithm-driven platform ecosystems (Cong, 2023; Fu, 2024; Schellewald et al., 2026). Consequently, Zuhudi et al. (2025) contended that images are crucial in shaping audience opinion and in the decision-making process. Thus, engagement has become more than just a measure of interaction; it now represents the audience's thinking, feeling, and doing when encountering media content. The current literature is unanimous that audience engagement has three interrelated aspects: cognitive engagement, affective engagement, and behavioural engagement. Cognitive engagement is a process of allocating attention to media content, processing information in the mind, interpreting information, and engaging in thinking about the media content (Achdiyah et al., 2023; Son & Sung, 2022). Affective engagement refers to the emotional resonance, empathy, identification, and emotional attachment that impact audience interpretation and subsequent actions (Fan, 2024; Kelders et al., 2024; Seidel et al., 2023).

Behavioural engagement is a representation of observable actions, including likes, comments, sharing, following, and content participation, that serve as indicators of audience engagement in social media environments (Hiromori, 2023; Tsai, 2026; Wu

& Yan, 2026). Engagement is a multidimensional concept, but its measurement and limits are controversial. While some studies still use behavioural metrics as their main measures, others believe that observable interactions are not sufficient to capture the cognitive and emotional experience audiences have (Akarsu & Sever, 2023; Zhang & Qiu, 2025). Hence, the debates illustrate the need to adopt a broader framework when contemplating how audiences engage with digital media.

Although there has been a surge in research on social media engagement, the majority of the existing studies have been limited to influencer marketing, live streaming, educational content, virtual communities, and general short-form videos (Alim et al., 2025; Su, 2025). However, limited research has been conducted to explore audience engagement in short films using cinematic storytelling in social media. Moreover, previous research tended to investigate cognitive, affective and behavioural engagement separately, and thus created a disjointed knowledge of the processes of audience engagement (Md Nasir et al., 2024; Stenberg & Switek, 2023). This study uses the multidimensional conceptualization of audience engagement to analyse the cognitive, affective and behavioural engagement of the audience in short films that are being distributed through social media. Therefore, it is expected that mise-en-scène will have a different impact on each dimension of engagement, as it acts as a visual storytelling tool, evokes emotional resonance, and stimulates participatory action. Based on this, the following hypotheses are proposed:

H1: Mise-en-scène in short films positively influences audiences' cognitive engagement on social media.
H2: Mise-en-scène in short films positively influences audiences' affective engagement on social media.
H3: Mise-en-scène in short films positively influences audiences' behavioural engagement on social media.

Underpinning theory: Visual Rhetoric Theory

The Visual Rhetoric Theory (VRT), founded by Foss (1994), provides a perspective on how visual elements are used persuasively to create meaning, shape interpretation, and elicit audiences' responses. According to Foss (1994), visual rhetoric is the symbolic use of visual images and forms to communicate ideas, evoke feelings, and persuade audiences.

This view is further broadened by more recent scholarship, which sees visual communication as a complex process that involves the creation, organization and interpretation of visual artifacts in various social and media settings (Miles, 2023). The application of VRT in film studies is particularly significant because film elements serve not only as aesthetic devices but also as persuasive visual signs that contribute to the narrative's meaning and the audience's interpretation. This underlines the idea that visual elements should not be used as mere visual aesthetics and instead as semiotic devices that influence the audience's reception, trust, and identification (Zuhudi et al., 2025). The concept of mise-en-scène has been used by classical film scholars to describe how filmmakers use the visual language to convey atmosphere, symbolism, emotion, and narrative intent (Bordwell et al., 2023; Gibbs, 2002; Monaco, 2009).

Likewise, Barnwell (2022) highlighted the visual design and production aspects as mechanisms of visual storytelling that affect the audience's perception and emotional

involvement. Recent research also indicates that the use of visual composition, human imagery, and audio-visual design can effectively attract attention, evoke emotions, and stimulate audience participation in digital media environments (Hubbes, 2022; Wang et al., 2023; Xu & Shanat, 2024). Thus, VRT offers a suitable theoretical basis for the present study as it helps in understanding the meaning of symbolic and aesthetic aspects of mise-en-scène as persuasive visual cues that affect cognitive, affective and behavioural engagement. This theory treats mise-en-scène in short films as visual "rhetorical artifacts" and provides a suitable framework for analysing the role of visual storytelling techniques in audience engagement in the current social media landscape.

Conceptual framework

This study suggests that intentional utilization of mise-en-scène in short films serves as a visual storytelling strategy that may influence audience cognitive, emotional, and behavioural engagement. Based on the Visual Rhetoric Theory (VRT), the conceptual framework presented in Figure 1 demonstrates the proposed relationships between mise-en-scène and the multidimensional aspects of audience engagement.

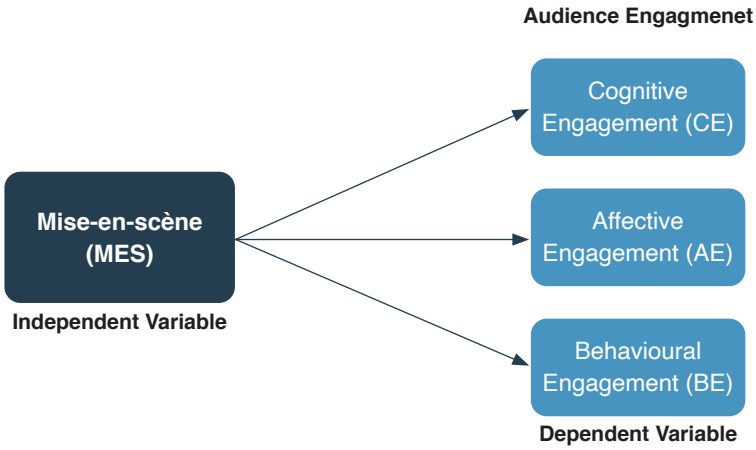

Figure 1. Conceptual framework

METHODOLOGY

Research design

This study employed a quantitative design with a cross-sectional survey approach to assess the influence of mise-en-scène in short films on audience engagement on social media. This design was chosen as it allows systematic empirical data collection to test the relationship between variables, particularly cinematic elements, visual presentation, and dimensions of audience engagement in the context of social media.

Sampling and data collection techniques

The survey sample consisted of 300 Malaysian social media users aged between 18 and 35 years who frequently watched short films on social media. For this study, short films are defined as short-form audio-visual narratives using conventions typically associated with cinematic storytelling (e.g., narrative, character development, and visual composition including mise-en-scène). Although respondents were briefed

on this conceptual distinction and provided with examples prior to completing the questionnaire, the study did not implement a mechanism to formally verify that this distinction was consistently maintained throughout the survey process, a limitation consistent with prior self-report-based engagement research that relies on participants' subjective recall of their viewing experiences rather than controlled stimulus exposure (Mirbagheri & Najmi, 2019). Therefore, the operational scope of this study is best understood as capturing user perceptions of mise-en-scène across short-form narrative videos encountered organically on social media platforms, rather than assuming strict respondent-level differentiation between cinematic short films and unstructured short-form videos (Fu, 2024; Ding, 2024).

A non-probability purposive sampling technique was employed to recruit respondents who met the following criteria: (1) aged between 18 and 35 years, (2) active social media users, and (3) experienced in watching short films on social media platforms. Prior to completing the questionnaire, respondents were provided with brief explanations and examples of short films and mise-en-scène to establish a common conceptual understanding. Respondents subsequently evaluated mise-en-scène based on their cumulative viewing experiences rather than a single controlled viewing stimulus. The minimum sample size (N=119) was determined using G*Power with a medium effect size ($f^2 = 0.15$), a significance level of 0.05, and a statistical power of 0.95. Data were collected online through Google Form that was distributed via WhatsApp, Telegram, and email.

Instrument and measurement

The research instrument was developed by adapting and modifying measurement items from previously validated studies that were conceptually aligned with the constructs investigated in this study. The questionnaire comprised 17 items measuring four constructs as presented in Table 1. All items were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Prior to the main data collection, the instrument underwent expert review, pre-testing, and pilot testing to ensure content validity, clarity, and comprehensibility. The pilot test results demonstrated acceptable reliability for all constructs (Cronbach Alpha > 0.70) (Hair et al., 2022).

Table 1. Measurement instruments

Construct	Source	Number of Items	Cronbach's Alpha
Mise-en-Scène (MES)	Ekhato (2024)	5	0.899
Cognitive Engagement (CE)	Mirbagheri & Najmi (2019)	4	0.925
Affective Engagement (AE)	Mirbagheri & Najmi (2019)	4	0.978
Behavioural Engagement (BE)	Mirbagheri & Najmi (2019)	4	0.902

Note: Cronbach's alpha values reported in Table 1 refer to pilot testing results

FINDINGS

Descriptive profile

As presented in Table 2, the respondents comprised a diverse group of active social media users aged between 18 and 35 years, with a relatively balanced gender

distribution, although the sample skewed towards younger respondents (18–20 years). The respondents demonstrated varying levels of exposure to short films on social media, with TikTok emerging as the most frequently used platform, followed by YouTube and Instagram. Most respondents did not possess formal educational backgrounds in film or media studies, indicating that the findings primarily reflect the perceptions and engagement behaviours of general social media audiences.

Table 2. Demographic profile of respondents

Demographic	Frequency	Percentage (%)
Gender		
Male	132	47.1
Female	148	52.9
Age		
18–20 years	153	54.6
21–24 years	58	20.7
25–29 years	64	22.8
30 years and above	5	1.9
Short Film Watching Frequency		
Rarely (less than once a week)	99	35.4
Sometimes (a few times a week)	102	36.4
Often (once or more daily)	79	28.2
Primary Social Media Platform for Watching Short Films		
TikTok	136	48.6
Facebook	12	4.3
Instagram	45	16.1
YouTube	65	23.2
Others	22	7.9
Educational Background in Film/Media		
Yes	38	13.6
No	242	86.4

Data analysis

From the initial 300 responses received, only 280 responses were accepted as suitable for the study. After a thorough data validation procedure that included removing outliers, straight-lining, and screening for missing data, 20 responses were eliminated. For this study, the partial least squares (PLS) method was used, and the analysis was conducted using the SmartPLS version 4.0. Structural equation modelling (SEM) was used to evaluate the measurement and structural models. The sample was determined to be adequate, based on Hair et al. (2022), suitable for small to medium size, especially in the presence of sophisticated models. The measurement model was used to assess the validity and reliability of the constructs and the structural model was used to test the hypothesized paths, following the standards set by Hair et al. (2022) and Sarstedt et al. (2014).

Measurement model

Given the quantitative nature of the research, it is often recommended to use Cronbach's α to ensure the construct's reliability. Furthermore, in structural equation modelling, the internal consistency of constructs is analysed using Composite Reliability (CR), as suggested by Fornell & Larcker (1981) and further supported by Hair et al. (2022), allowing for a more precise estimation. Therefore, the two validity categories that are discussed are discriminant validity and convergent validity.

Convergent validity

As indicated by Hair et al. (2019), the convergent validity of the measurement model was tested using factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). Figure 2 shows that all factor loadings exceeded the threshold value of 0.70, in keeping with Hair et al.'s (2019) guidelines, thereby supporting the convergent validity of the constructs.

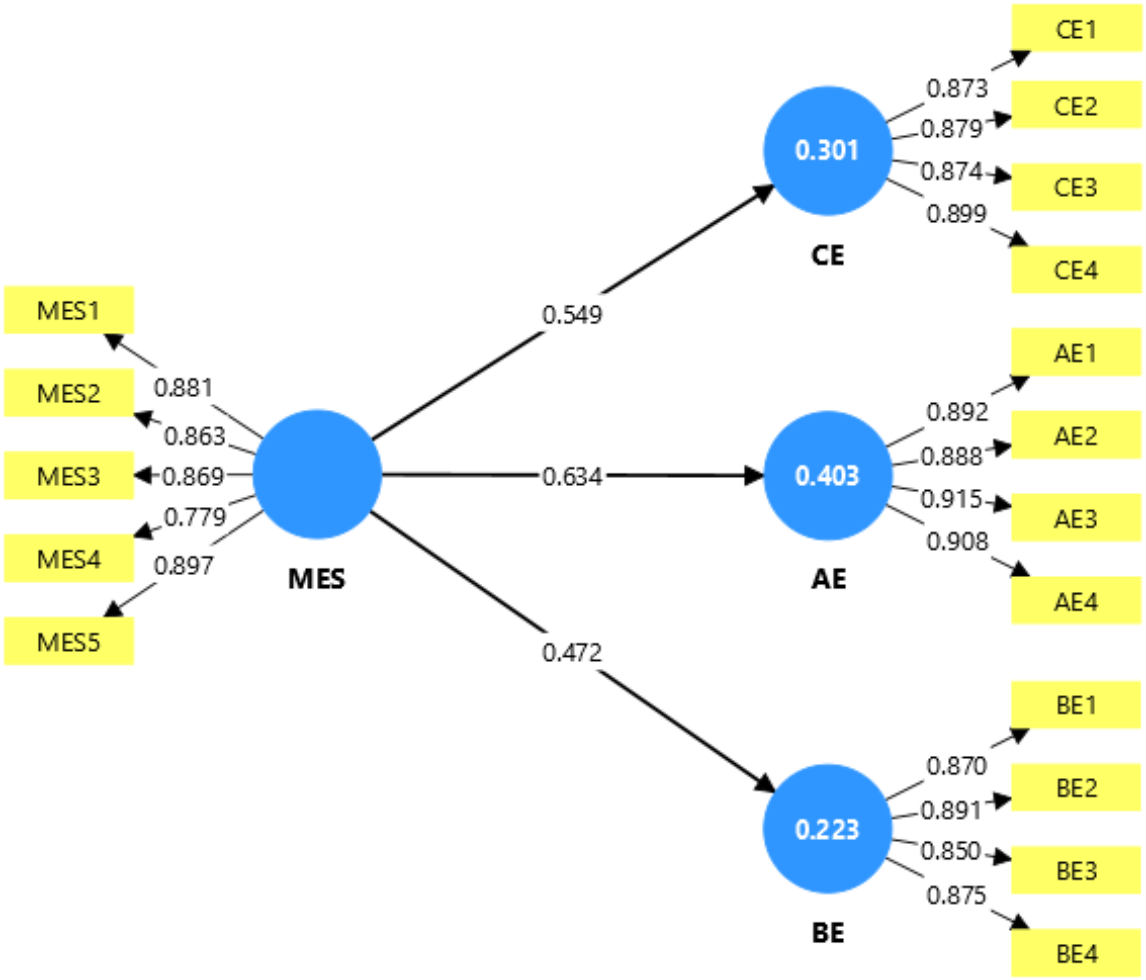

Figure 2. Measurement model

The measurement model was assessed in terms of collinearity, reliability, and convergent validity. As shown in Table 3, first, the variance inflation factor (VIF) ranged from 1.823 to 3.477, which are below the recommended threshold of 5.0 (Hair et al., 2022), indicating no multicollinearity issues. Next, the constructs demonstrated

satisfactory internal consistency reliability, with composite reliability (CR) values ranging from 0.927 to 0.945, exceeding the minimum cut-off of 0.70. In addition, the average variance extracted (AVE) values ranged from 0.738 to 0.811, surpassing the recommended threshold of 0.50 (Fornell & Larcker, 1981), thereby confirming adequate convergent validity. Overall, the results show that the measurement model indicates acceptable levels of reliability and validity.

Table 3. Results of measurement model

Construct	Item	Loading	VIF	Cronbach Alpha	CR	AVE
Mise-en-scène (MES)	MES1	0.881	2.984	0.910	0.933	0.738
	MES2	0.863	2.984			
	MES3	0.869	2.877			
	MES4	0.779	1.977			
	MES5	0.897	3.271			
Cognitive Engagement (CE)	CE1	0.873	2.194	0.905	0.933	0.777
	CE2	0.879	2.829			
	CE3	0.874	3.007			
	CE4	0.899	3.042			
Affective Engagement (AE)	AE1	0.892	2.958	0.922	0.945	0.811
	AE2	0.888	2.803			
	AE3	0.915	3.477			
	AE4	0.908	3.435			
Behavioural Engagement (BE)	BE1	0.870	3.312	0.897	0.927	0.760
	BE2	0.891	3.392			
	BE3	0.850	1.823			
	BE4	0.875	2.756			

Note: CE1 was subsequently removed from the final structural model following HTMT assessment (see Table 4); values reported here reflect the initial measurement model prior to item deletion.

Discriminant validity

Discriminant validity refers to how much an item differs from another construct. According to Fornell & Larcker (1981), it is evaluated by comparing possible overlapping constructs.

Heterotrait-Monotrait Ratio (HTMT)

The construct's discriminant validity was evaluated using the Heterotrait-Monotrait ratio of correlations (HTMT). All of the HTMT values in this study fell between 0.500 and 0.883, which is below the cut-off point suggested by Kline (2023) and Henseler et al. (2015). This indicates that the discriminant validity of the components is adequate. It is essential to note that one indicator from the Cognitive Engagement construct (CE1) was excluded, as its inclusion resulted in an HTMT value exceeding 0.90, indicating a potential threat to discriminant validity. After refining the model, the HTMT results in Table 4 indicate strong evidence that the constructs in this study are empirically distinct.

Table 4. Heterotrait-monotrait ratio (HTMT)

HTMT	AE	BE	CE	MES
AE				
BE	0.822			
CE	0.883	0.838		
MES	0.691	0.500	0.529	

Note: HTMT values below 0.90 indicate acceptable discriminant validity.
Item CE1 was deleted due to HTMT.

The Fornell and Larcker criterion

According to Fornell & Larcker (1981), the average variance shared between each construct and its measure should be greater than the variance shared between the constructs and other constructs. Table 5 shows the Fornell and Larcker criterion, which indicates that the square root of the AVE (as shown in bold values on the diagonals) was greater than the corresponding row and column values, demonstrating satisfactory discriminant validity.

Table 5. Fornell and Larcker criterion

Construct	AE	BE	CE	MES
AE	**0.901**			
BE	0.763	**0.872**		
CE	0.803	0.751	**0.911**	
MES	0.634	0.472	0.483	**0.859**

Note: Bold italic values on the diagonal represent the square root of AVE.
Item CE1 was deleted due to HTMT

Cross-loading

Additionally, according to Hair (2014), discriminant validity can also be assessed by evaluating the cross-loadings of indicators. Specifically, an indicator should exhibit a higher outer loading on its corresponding construct compared to its loading on other constructs. As shown in Table 6, all remaining items loaded more strongly on their respective constructs than on any other constructs, thereby confirming the presence of discriminant validity among the constructs.

Table 6. Loadings and cross-loadings

Construct	AE	BE	CE	MES
AE1	0.892	0.701	0.770	0.558
AE2	0.888	0.645	0.687	0.579
AE3	0.915	0.690	0.705	0.593
AE4	0.908	0.714	0.734	0.554
BE1	0.596	0.870	0.672	0.331
BE2	0.604	0.891	0.637	0.355
BE3	0.736	0.850	0.627	0.525
BE4	0.678	0.875	0.689	0.376

Table 6. (con't)

Construct	AE	BE	CE	MES
CE2	0.695	0.684	0.908	0.443
CE3	0.735	0.710	0.911	0.397
CE4	0.763	0.664	0.914	0.474
MES1	0.571	0.466	0.467	0.882
MES2	0.517	0.375	0.368	0.864
MES3	0.524	0.373	0.410	0.869
MES4	0.524	0.388	0.376	0.778
MES5	0.581	0.418	0.443	0.897

Note: Item CE1 was deleted due to HTMT assessment

Structural model evaluation

Following the measurement model assessment, the structural model was evaluated to examine the predictive relationships among the constructs. A bootstrapping procedure with 10,000 resamples was conducted using SmartPLS 4.0 (Ringle et al., 2015), as recommended by Hair et al. (2022), to ensure robust standard errors and confidence intervals. All constructs in the research model of this study are multi-item constructs conceptualized as reflective.

Collinearity assessment

Collinearity was assessed using the Variance Inflation Factor (VIF) to ensure that predictor constructs did not exhibit multicollinearity issues. The VIF values in this study are 1.000 for all constructs, which is well below the recommended threshold of 3 (Hair et al., 2019). These results confirm that collinearity is not a concern in the structural model.

Path coefficient (Hypothesis testing)

The results shown in Table 7 reveal that all hypothesized relationships are significant. Specifically, mise-en-scène (MES) has a significant positive effect on cognitive engagement, affective engagement and behavioural engagement (BE). Since the bias-corrected confidence intervals for all relationships did not include zero, H1, H2, and H3 were supported. The relationship between mise-en-scène and affective engagement demonstrated the strongest direct effect among the three dimensions of audience engagement. These findings suggest that audiences respond most strongly to the emotional and experiential qualities of cinematic visual storytelling in short films on social media platforms.

Table 7. Results of structural model analysis (hypotheses testing)

Hypothesis	Relationship	Beta	SE	T Value	P Value	BCI LL	BCI UL	Decision
H1	MES → CE	0.483	0.040	11.993	0.000	0.420	0.552	Supported
H2	MES → AE	0.634	0.033	19.412	0.000	0.582	0.690	Supported
H3	MES → BE	0.472	0.042	11.288	0.000	0.406	0.545	Supported

Note: Bootstrapping was performed using 10,000 resamples with 95% bias-corrected confidence intervals.

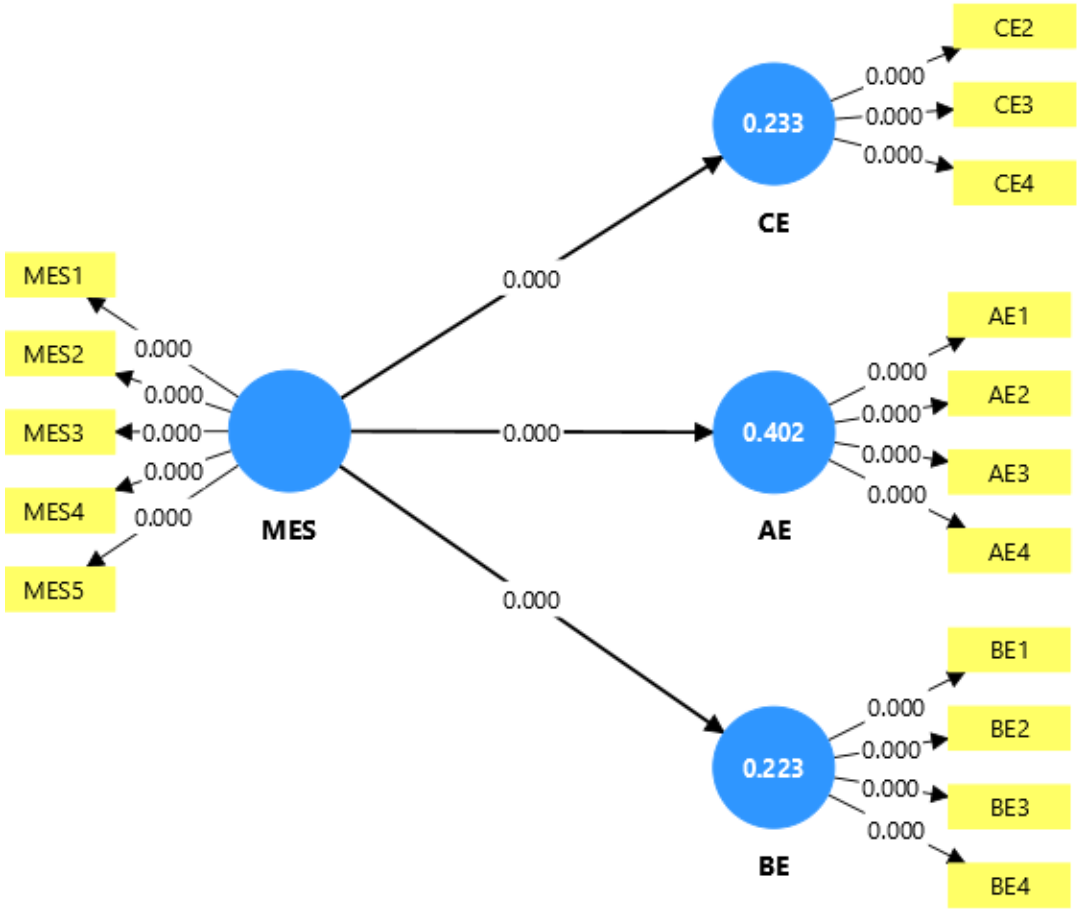

Figure 3. Structural model

Predictive power assessment

The predictive power of the structural model was evaluated using PLSpredict with 10-fold cross-validation and 10 repetitions (Hair et al., 2022; Shmueli et al., 2019). The results in Table 8 show that all indicators yielded positive Q^2 predict values, ranging from 0.098 to 0.347, which exceed zero and thus, confirming the positive predictive relevance of the proposed model.

Table 8. Predictive power assessment

Items	Q^2predict	PLS-SEM_RMSE	LM_RMSE
AE1	0.304	0.997	1.010
AE2	0.330	0.973	0.993
AE3	0.347	0.973	0.985
AE4	0.302	1.031	1.035
BE1	0.098	1.717	1.716
BE2	0.118	1.595	1.593
BE3	0.257	1.178	1.175
BE4	0.134	1.439	1.443
CE2	0.192	1.261	1.270
CE3	0.152	1.339	1.347
CE4	0.219	1.255	1.261

When comparing the root mean squared error (RMSE) values between PLS-SEM and the linear benchmark (LM), most indicators (e.g., AE1–AE4, CE2–CE4) demonstrated equal or lower RMSE values under PLS-SEM than LM, indicating adequate out-of-sample predictive accuracy. However, a few items, such as BE1–BE2), displayed marginally higher errors than LM, suggesting relatively weaker predictive accuracy on those indicators. Overall, the results show that the proposed model has satisfactory predictive power and most of the PLS-SEM indicators have a better or equal performance compared to the LM benchmark. The findings also provide further evidence of the strength of the proposed model in explaining audience engagement in the short film context of social media.

Evaluating effect size

Table 9 shows that the R^2 values of cognitive engagement, affective engagement, and behavioural engagement are 0.233, 0.402, and 0.223, respectively. All of these values are acceptable based on the cut-off criteria suggested by Cohen (1988). Then, the effect size (f^2) analysis shows that the effect of mise-en-scène was moderate for cognitive engagement ($f^2 = 0.305$), behavioural engagement ($f^2 = 0.287$), and large for affective engagement ($f^2 = 0.674$). This discovery indicates that affective engagement is the strongest pathway by which mise-en-scène affects audience reactions. The medium to large effect sizes suggests that mise-en-scène is a significant predictor, not a minor visual element, in influencing audience engagement.

Table 9. Evaluating effect size

	Hypothesis	R^2	f^2	Decision
	Cognitive Engagement	0.233		
	Affective Engagement	0.402		
	Behavioural Engagement	0.223		
H1	Mise-en-scène → Cognitive Engagement		0.305	Medium
H2	Mise-en-scène → Affective Engagement		0.674	Large
H3	Mise-en-scène → Behavioural Engagement		0.287	Medium

Note: f^2 thresholds: 0.02 = small, 0.15 = medium, and 0.35 = large.

DISCUSSION

The results indicate that mise-en-scène can have a significant effect on audience engagement with social media short films, suggesting that the visual elements of a film can serve as visual storytelling devices as well as aesthetic elements. Given the brevity of social media feeds and the need for a shorter story, audiences seem to be heavily dependent on visuals to help them understand, connect with, and interact with content. The results corroborate the idea that the interaction between the audience and short films is multidimensional, involving cognitive, affective, and behavioural reactions. Beyond confirming that these relationships exist, it is important to explain why mise-en-scène generates this pattern of differentiated effects across the three engagement dimensions, which reflects distinct underlying psychological processing mechanisms rather than a uniform response to visual stimuli, consistent with VRT's premise

that visual elements operate as multi-layered persuasive devices capable of shaping cognition, emotion, and behaviour through different rhetorical pathways (Foss, 1994).

First, mise-en-scène showed a significant positive relationship with cognitive engagement ($\beta = 0.483$), indicating that viewers rely on visual elements of the film to process and interpret the information in the story when viewing it in a short-form setting. The effect size was moderate ($f^2 = 0.305$), suggesting that mise-en-scène is a meaningful, though not the most dominant, factor in the construction of visual meaning and comprehension of the story. The findings are consistent with previous studies demonstrating that visual storytelling enhances audience attention, interpretation, and comprehension (Dite, 2023; Huang et al., 2023; Williams, 2019). In the perspective of VRT, visual elements are used as persuasive signs that influence the interpretation and cognitive response of the audience (Foss, 1994). This moderate rather than dominant effect can be explained by the fact that cognitive engagement requires audiences to actively decode and interpret visual cues as rhetorical signs, a process that demands conscious interpretive effort rather than immediate apprehension (Foss, 1994). Within the compressed viewing time typical of social media consumption, such deliberate processing is inherently slower and more effortful than automatic affective responses, which may explain why mise-en-scène's influence on cognitive engagement, while significant, remains less pronounced than its influence on affective engagement (Huang et al., 2023).

Second, mise-en-scène was found to have the strongest influence on affective engagement, both in terms of direct relationship ($\beta = 0.634$) and effect size ($f^2 = 0.674$), indicating that this is the most significant mechanism by which visual storytelling in cinema affects audience engagement. These results indicate that emotional processing is the most dominant pathway through which cinematic storytelling shapes audience engagement, more so than its influence on cognitive interpretation or behavioural participation. Moreover, these findings suggest that affective audience responses are influenced not only by narrative content but also by visual atmosphere, symbolic imagery, colour composition, and spatial arrangement. This discovery aligns with prior research that has shown the emotional impact and immersive qualities of visual design in movies (Astuti et al., 2024; Liu, 2024; Sinnerbrink, 2021; Wang et al., 2021; Wong et al., 2025).

In such social media contexts where the consumption of visual information is rapid, emotional resonance can thus serve as an important tool for maintaining the attention of the audience and deepening their engagement (Kennedy-Karpat, 2022; Vardeman, 2024). This pattern can be explained by the nature of affective processing itself, which tends to operate rapidly and automatically, often preceding deliberate cognitive appraisal, consistent with VRT's contention that visual imagery can evoke emotional responses independent of explicit verbal or narrative reasoning (Foss, 1994). Visual cues such as lighting, colour and spatial composition are capable of triggering an immediate emotional appraisal before the audience consciously interprets narrative meaning, allowing affective responses to form ahead of, and independently from, cognitive elaboration (Sinnerbrink, 2021). Given that short-form social media content offers only a brief viewing window, this capacity for rapid affective activation likely accounts for why mise-en-scène exerts its strongest influence through the emotional pathway rather than the cognitive one (Yılmaz, 2024).

Third, the results show that mise-en-scène has a significant effect on behavioural engagement, suggesting that the visual storytelling in film can go beyond interpretation and emotional response to the audience to evoke their participation. Visually engaging and emotionally resonant short films seem to be more likely to be liked, commented on, shared, and interacted with. This is in line with other research that has focused on the importance of visual storytelling to encourage audience participation in digital environments (de Oliveira Santini et al., 2020; Liu et al., 2021). The effect size for behavioural engagement ($f^2 = 0.287$) was not as high as that for affective engagement but still shows that mise-en-scène makes a significant contribution to audience participation behaviour. The results also corroborate the hypothesis that visually persuasive content can increase audience engagement and content visibility in today's attention economy (Hernández-Santaolalla & Barrientos-Bueno, 2020; Munaro et al., 2021).

This finding can be explained through VRT, in which persuasive visual elements function not merely as interpretive or emotional triggers but as rhetorical appeals capable of motivating audience action, much as visual rhetoric has been shown to prompt participation and response in other persuasive contexts, such as user-generated tourism imagery (Bakri et al., 2022) and political visual communication (Miles, 2023). When mise-en-scène generates cognitively and emotionally engaging visual experiences, audiences may also be more inclined to extend their engagement through participatory behaviours such as liking, commenting, and sharing that is consistent with the persuasive function that visual rhetoric plays in shaping audience response (Foss, 1994). Because behavioural engagement may require an additional step beyond perceptual and emotional response, its effect size may be somewhat lower than that of affective engagement, yet still meaningfully higher than would be expected from cognitive processing alone (Liu et al., 2021).

Theoretically, the results offer empirical evidence to support VRT that mise-en-scène is a persuasive visual system that can affect the cognition, emotion, and behaviour of the audience at the same time. More importantly, the findings reveal that affective engagement stood out consistently on both metrics, recording the strongest direct relationship and the largest effect size among the three dimensions. This suggests that emotional processing is the primary pathway by which visual storytelling in film affects the audience, more so than its cognitive or behavioural pathways. This finding complements previous visual storytelling and audience engagement research by showing that the persuasive effect of the visual elements in social media short films is not only the ability to convey meaning, but also to evoke emotions that enhance the overall audience engagement (Bakri et al., 2022; Martikainen & Sakki, 2023; Mirbagheri & Najmi, 2019).

Taken together, this hierarchy of effects, with affective engagement being the strongest, followed by cognitive and then behavioural engagement, suggests that rapid emotional appraisal may play a particularly prominent role alongside subsequent interpretive and participatory responses, consistent with VRT's view of visual persuasion as a layered process moving from perception to emotional and behavioural response (Foss, 1994). This explains why emotional resonance, rather than narrative comprehension alone, functions as the primary channel through which cinematic visual storytelling translates into audience engagement on social media (Martikainen & Sakki, 2023).

CONCLUSION

The results of this study show that the visual elements of the film (mise-en- scene) have an impact on the audience's engagement in cognitive, affective, and behavioural aspects, so that the application of visual elements in film is not just for aesthetic purposes but also as a means of creating meaning, evoking emotions, and involving the audience. Emotional processing (affective engagement) showed both the strongest direct relationship and the largest effect size, indicating that the emotional pathway of cinematic visual storytelling exerts the strongest influence on audience responses. The results also confirm that mise-en-scène remains persuasive in today's social media settings where narratives are compressed and attention spans are short.

This research will add to the literature by extending the use of VRT to the context of the short film in the social media era and by placing mise-en-scène as a strategic visual storytelling tool instead of just an aesthetic element in making short films. The results also help to extend the knowledge of audience engagement as a multi-faceted phenomenon that encompasses cognitive, affective, and behavioural engagements. This research offers cinematic visual storytelling strategies for filmmakers, content creators, digital marketers and media educators to enhance the attention, emotion and participative behaviour of the audience in the present attention-driven digital media era.

Limitations

Despite its contributions, this study has several limitations. This study was conducted with young adult social media users in Malaysia; thus, results may not be applicable to other age groups and cultural contexts. Additionally, this study relied on respondents' self-reported perception of mise-en-scène across their general viewing experience rather than a single controlled viewing stimulus. This design was chosen to preserve ecological validity by capturing engagement with the diverse range of short films encountered in naturalistic social media settings; however, it also means that the reported relationships reflect associations between perceived constructs rather than causal effects of a specific film stimulus.

Future research

Future studies might utilize a more representative sample of diverse groups, cultural settings, and social media platforms to increase generalizability of results. Experimental and longitudinal research designs can also provide insights into causal mechanisms and temporal dynamics of audience engagement. Comparative studies that examine the cinematic short film and the general short-form social media videos would further clarify the unique role of cinematic storytelling in the audience's response. Further research could also explore how other film aspects, including cinematography, editing, sound design, and visual effects, affect audience engagement, thereby enhancing the understanding of the mechanisms of audience engagement in the current digital storytelling context.

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Brand credibility in a social media ecosystem: Building trust between NGOs and donors

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ABSTRACT

This research examines how brand credibility functions within a social media ecosystem to shape trust between non-governmental organizations (NGOs) and their donors. As the Malaysian NGO landscape becomes increasingly crowded and competitive, with tens of thousands of registered organizations competing for limited resources, credibility has emerged as a critical differentiator that strengthens legitimacy, accountability, and public confidence. Yet donors increasingly struggle to determine which organizations are genuinely trustworthy, transparent, and effective in delivering on their missions. Guided by Erdem and Swait's brand credibility framework and Bourdieu's Theory of Practice, this research identifies the key organizational and digital signals that donors use to assess trustworthiness and expertise. Through semi-structured interviews with eleven NGO representatives, eight donors, and three sector experts, the study reveals that credibility is primarily built through transparent reporting, official registration, regular audits, consistent communication, and visible demonstrations of impact, particularly through social media platforms. Donors rely heavily on these cues when deciding whether to contribute, continue, or discontinue support, and they were shown to withdraw when transparency or accountability appeared compromised. The findings suggest that brand credibility is closely associated with donor trust, which in turn appears to strengthen long-term engagement and sustained giving. By integrating a measurable credibility framework with a socially grounded theory of practice, this study contributes to non-profit branding literature through an integrated model that explains how organizational practices and social media signals jointly shape donor behaviour. It also provides practical, evidence-based guidance for NGOs seeking to enhance credibility, maintain public trust, and build resilient donor relationships in an increasingly digital and networked environment.

Keywords: ***Brand credibility, donor trust, non-governmental organizations (NGOs), social media, non-profit branding***

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INTRODUCTION

The challenge of coordinating and collaborating among the many non-governmental organizations (NGOs) and their donors, each with diverse procedures and orientations, may have disrupted efforts to benefit beneficiaries. As of July 2026, there were at least 90, 288 NGOs in Malaysia (Jabatan Pendaftaran Pertubuhan Malaysia, 2026). This is a huge number, and imagine how much effort these NGOs have put into serving the community. In Malaysia, NGOs are generally grouped into eleven main categories: politics, mutual benefit, human rights, religious, professional, welfare, culture and arts, security, trade, recreation, and social.

However, this proliferation has created significant challenges for NGOs seeking to secure donor funding and maintain public trust. With numerous organizations competing for limited resources, donors increasingly face a credibility challenge: determining which NGOs are trustworthy, transparent, and effective in their missions. Chantal (2025) recognized that institutions such as NGOs function as critical agencies shaping social and economic systems. In Malaysia's context, this institutional role requires NGOs to establish credibility not only through their operational outcomes but also through transparent communication and consistent reputation management, especially as trust in digital contexts depends heavily on visibility and accessible information (Cordery et al., 2023; Ghoorah et al., 2025).

Despite the diversity of donors, NGOs have to consider that past research demonstrates a substantial dependence on funding and government approval, which may have an undesirable impact on the volume of funding they receive (Kuruppu & Lodhia, 2019). There are various issues pertaining to NGOs in Malaysia, such as the large number of NGOs, poor governance, accountability issues, and a lack of visibility and trust, which underscore the need for research on brand credibility.

As NGOs compete for limited donor resources, three interconnected challenges have emerged as critical to organizational success: visibility (Kousar et al., 2020), trust (Wakefield et al., 2018), and stakeholder engagement (Dewi et al., 2019). These factors collectively underscore the fundamental importance of brand credibility in the non-profit sector. Erdem and Swait (2016) emphasized that organizations must retain and increase their significance while maintaining consistency with their values, a principle that applies equally to NGOs navigating transitional operating environments. Yet despite this importance, the dynamic forces shaping the progression of brand credibility in NGOs remain poorly understood.

This knowledge gap is particularly evident when examining the relationship between organizational visibility and donor confidence. Assad and Goddard (2010) observed that while donors' willingness to fund NGOs is influenced by organizational transparency, the relationship between financial visibility and actual donor trust remains weak and underexplored. This suggests that visibility alone is insufficient; credibility must be actively built and communicated through strategic organizational practices. Building credibility, in turn, is closely associated with whether donors choose to contribute, sustain their engagement, or withdraw support (Harb et al., 2026).

The urgency of this issue has been magnified by recent transformations in the NGO operating environment. Traditional operational models are no longer adequate for meeting contemporary effectiveness demands. Recent scholarship demonstrates that

strategic management practices in NGOs must evolve significantly, with organizations increasingly adopting new operational models, restructuring, and implementing innovative funding approaches (Hadden & Teixeira, 2026; Zhang & Saadé, 2025). However, while these organizational transformations are necessary, little is known about how NGOs should strategically communicate their credibility during periods of operational change, or how donors interpret credibility signals within evolving digital and social media contexts.

Research questions

To address these gaps, this research poses the following questions:

1. How do NGO representatives build and communicate brand credibility through organizational practices and social media platforms?
2. How do donors perceive and interpret credibility signals when deciding whether to contribute, sustain, or withdraw support?
3. How can brand credibility be positioned as a key mechanism linking NGO practices to donor trust and sustained engagement?

While prior research has examined brand credibility and donor trust separately, limited scholarship explores how these interconnect within social media-mediated NGO environments. This study addresses this gap by providing an integrated model that links NGO practices to donor trust, applying Erdem and Swait's credibility framework to the non-profit context, and offering practical guidance for NGOs seeking to build credibility during organizational transformation.

LITERATURE REVIEW

Brand credibility: Definition and dimensions

A brand is defined as a name, term, sign, symbol, design, or combination thereof intended to identify and differentiate the goods and services of one seller or group of sellers from competitors (Kotler, 1997). The credibility of a brand signal is perhaps its most imperative characteristic, particularly in contexts where consumers must make trust-based decisions.

Erdem and Swait (1998, 2016) developed a foundational framework for understanding brand credibility. They defined credibility as the believability of an organization's intentions and its consistent ability to deliver what it promises. Their research identified two core dimensions of brand credibility: (1) Trustworthiness — the brand's willingness to deliver on its promises and act in the consumer's best interest, and, (2) Expertise — the brand's capability, knowledge, and resources to deliver quality outcomes.

Erdem et al. (2006) found that trustworthiness often has a stronger influence on consumer choice than expertise, suggesting that consumers prioritize integrity and reliability over technical competence alone. Their work suggests that brand credibility can be enhanced through consistent communication, transparent operations, and a demonstrated track record of delivering promised value.

NGOs and brand credibility in social media ecosystems

In the non-profit context, brand credibility functions differently from commercial marketing. NGO credibility is less about product quality and more about organizational integrity, impact delivery, and mission alignment (Ortega-Rodríguez et al., 2024). However, the core dimensions identified by Erdem and Swait, trustworthiness and expertise, remain relevant. Donors assess an NGO's trustworthiness by examining governance practices, financial transparency, and accountability mechanisms. They evaluate expertise by considering whether the organization has the competence, networks, and resources to effectively address social problems.

Social media has transformed this assessment process. Digital platforms enable NGOs to communicate credibility signals in real time and create opportunities for donors to verify claims through peer testimonials, donor reviews, and visual evidence of impact. Amelia and Dewi (2021) demonstrated that non-profit organizations increasingly use social media to demonstrate operational transparency and financial accountability. Digital communication reduces perceived risk for donors by providing accessible, verifiable information about organizational practices and program outcomes.

Basically, there are two types of NGOs: (1) specialist NGOs that are fixated on a specific segment of motion, and (2) generalist NGOs, categorized by the establishment of different amenities in numerous segments of motion (Batouth, 2021). NGOs are also divided into three broad areas: international, national, and grassroots. Other categories of NGOs include developmental, environmental, relief, women, and human rights NGOs (Shin-Wha, 2000).

Previous studies have shown that NGOs face significant financial challenges, relying heavily on fundraising efforts that are often difficult and unpredictable. Beyond direct care work, NGOs also engage in a range of research, education, and advocacy activities to address societal issues (Duvaga et al., 2026). Many NGOs in Malaysia emphasize community palliative care through home care and day-care services. This matter has also been established in our preliminary research. Funding is also a key limiting factor in expanding NGOs' service offerings (Durst & Gerstlberger, 2021). Thus, many NGOs are hesitant to expand not only their suite of services, but also their service coverage (Lau & Pickersgill, 2018). NGOs, in particular, have an increasing standing in the business network, and they can deliver and mediate services competently to achieve social acceptance (Cheah, 2019).

Malmir and Zobel (2021) applied a practical, multi-stakeholder approach in the context of humanitarian operations, and this study adopted a similar orientation to explore NGO credibility and donor trust in Malaysia. In research on social policy in Malaysia, Indonesia, Thailand, and the Philippines, it can be seen that the governments are devoted to the nation's humanitarian system, but it is also important to identify which institutional formations need growth in social spending (Putra, 2019).

Brand credibility in NGOs: Erdem & Swait and Bourdieu's Theory of Practice

Erdem and Swait (2016) defined brand credibility in two dimensions: trustworthiness (the willingness to deliver on promises) and expertise (the capability and resources to deliver quality outcomes). In the non-profit context, these dimensions manifest as organizational integrity, impact delivery, and mission alignment rather than product

quality (Ortega-Rodríguez et al., 2024). However, understanding how credibility operates within the NGO sector requires contextualizing these measurable dimensions within broader social dynamics. Bourdieu's Theory of Practice provides this context by examining how credibility functions as a symbolic capital, accumulated resources recognized and rewarded within a competitive field.

Bourdieu's framework posits that organizational practices are embedded in social fields where agents compete according to established rules and forms of capital. Within the NGO field, habitus (donors' internalized values and dispositions) shapes how individuals interpret credibility signals, while doxa (shared field expectations of transparency and accountability) establishes normative standards for organizational practice. Symbolic capital, reputation, and recognition accrue to NGOs that align their practices with both donor habitus and field-wide doxa. Social media platforms amplify this dynamic by making credibility signals visible and subject to peer evaluation, intensifying both signal production by NGOs and signal interpretation by donors.

The integration of these frameworks operates as follows: Erdem and Swait's dimensions provide specific, operationalizable indicators of credibility, while Bourdieu's theory contextualizes how these signals are produced, interpreted, and rewarded within the competitive NGO field. This combination addresses the research gap by explaining not merely what credibility is, but how it functions as a mechanism linking organizational practices to donor trust and sustained engagement. The framework informs the research questions by specifying: (1) which credibility signals NGOs communicate through practices and social media (trustworthiness and expertise indicators); (2) how donors interpret signals through their habitus and field expectations; and (3) how credibility accumulates as a symbolic capital that generates donor trust and support.

Table 1. Theoretical integration

Dimension	Erdem & Swait	Bourdieu	NGO Application
Content of Credibility	Trustworthiness and expertise	Symbolic capital	Measurable signals of integrity and capability
Signal Production	Organizational practices	Field positioning	Communication through transparency, accountability, and responsiveness
Signal Interpretation	Stakeholder judgment	Donor habitus	Values-based evaluation shaped by personal dispositions
Field Context	Trust determinants	Competitive arena (Field/Doxa)	NGOs compete for donors, visibility, and legitimacy
Outcome	Behavioural choice	Capital accumulation	Sustained donor engagement and resource allocation

By integrating Erdem and Swait's credibility dimensions with Bourdieu's field theory, this study provides a comprehensive framework for understanding how organizational practices translate into donor trust within social media ecosystems. The approach addresses the literature gap by explaining both what credibility signals mean and how they are socially constructed and valued within the NGO field. This integrated framework guides how NGO practices generate symbolic capital that sustains donor engagement.

METHODOLOGY

This study employed a qualitative research design to capture the complex social dynamics of brand credibility and donor trust in the Malaysian NGO context. Qualitative methods are particularly appropriate for this research because they enable in-depth exploration of how participants construct meaning around credibility, trust, and decision-making (Creswell, 2013), a phenomenon that cannot be fully understood through quantitative measurement alone.

Participant selection and sampling strategy

A combination of purposive, snowball, and convenience sampling was employed to recruit a diverse and relevant participant pool (Campbell et al., 2020). The study included 22 participants across three stakeholder groups.

NGO representatives (n=11): Senior staff members holding positions such as executive directors, program managers, or communications officers. Selection criteria included: (1) minimum two years of tenure in the organization; (2) direct involvement in organizational branding, communications, or donor engagement; (3) employment in Malaysian-registered NGOs; (4) willingness to participate and discuss organizational practices openly. These participants provided insights into how NGOs intentionally construct and communicate credibility.

Donors (n=8): Active donors to Malaysian NGOs with selection criteria including: (1) active donation to one or more Malaysian NGOs within the 12 months preceding the study; (2) minimum cumulative annual donation of RM1,000 or equivalent; (3) age 21 years or older; (4) willingness to discuss their motivations for donating and decision-making process. Donors were recruited from both individual and corporate donor populations. These participants articulated how they perceive and interpret credibility signals.

Sector experts (n=3): Individuals with at least five years of professional experience and representatives from NGO monitoring bodies. Sector experts provided contextual understanding of credibility challenges and best practices in the Malaysian NGO landscape.

Data collection procedures

Semi-structured interviews served as the primary data collection method. All interviews were conducted between July 2022 and November 2023, spanning approximately 17 months. Ethical standards were followed during the research. Before collecting data, participants were told about the research's purpose, that joining was voluntary, and that they could stop at any time without any consequences. All participants gave their permission, and their identities and answers were kept private by using anonymous data.

The interview format was flexible to accommodate participant preferences and scheduling. Among the eleven (11) NGO representatives, five were interviewed via online video conference and six in person. Of the eight donors, five participated in person and three via WhatsApp video call. All three sector experts were interviewed in person at their respective organizations. Interviews were scheduled in advance to align with participants' availability.

Each semi-structured interview lasted 45–70 minutes, with an average of 58 minutes. Interviews were audio-recorded with explicit written consent and subsequently transcribed verbatim. Interview guides were developed to ensure consistency across participants while allowing flexibility for follow-up questions and emergent topics. Interview schedules were tailored to each stakeholder group to reflect their unique perspectives; NGO staff were asked about credibility-building practices, donors about evaluation and trust-building factors, and sector experts about field-wide challenges and best practices.

As with any qualitative study, several boundaries define the scope of these findings. The sample size (n=22) and purposive sampling, appropriate for the study's in-depth, exploratory aims, mean the findings are analytically rather than statistically generalizable. Recruitment through professional networks may also have favoured more visible NGOs, and the cross-sectional design captures perceptions at a single point rather than over time. These boundaries are compensated by the depth and contextual richness of the data, which illuminate how brand credibility shapes non-profit–donor relationships in ways quantitative methods alone could not.

Data analysis: Thematic analysis

Data were analysed using reflexive thematic analysis, a method well-suited to qualitative research exploring complex social phenomena. The analysis process began with familiarization, in which researchers engaged in repeated readings of interview transcripts and field notes, taking preliminary notes on patterns and meanings. Line-by-line coding was then conducted to identify semantic units, with codes that were both data-driven (emerging from participants' language) and theory-driven (informed by Erdem and Swait's (2016) brand credibility dimensions and Bourdieu's (1990) Theory of Practice framework).

Related codes were systematically grouped into candidate themes reflecting key patterns in how participants discussed credibility, trust, and donor decision-making. Next, candidate themes were refined by revisiting the data to ensure they were grounded in participant responses, with clear boundaries and descriptive labels. All themes were then checked against the entire dataset to verify their coherence, distinctiveness, and representativeness. Finally, themes were named and defined, with illustrative quotations selected from the data to support each theme. Analysis was triangulated with theoretical frameworks to strengthen interpretations.

To ensure the trustworthiness and rigor of the qualitative analysis, this study applied established criteria outlined by Nowell et al. (2017). Dependability was ensured through careful documentation of methodological decisions, including sampling rationale, interview guide development, data collection procedures, and coding protocols. A detailed audit trail of analytical decisions enables readers to assess the transparency and logic of the research process. Transferability was enhanced through rich contextual descriptions and diverse participant perspectives, enabling readers to assess the applicability of the findings to similar contexts. The integration of Erdem and Swait's (2016) framework with Bourdieu's (1990) theory enhanced the credibility and richness of the interpretations.

FINDINGS AND DISCUSSION

Branding is crucial in determining the success and longevity of NGOs. A robust and clearly defined brand fosters trust, credibility, and recognition, enabling NGOs to secure funding, form partnerships, and engage a broader range of stakeholders (Becker et al., 2020). Aside from visibility, branding provides a clear mission and direction, ensuring that actions align with organizational objectives.

In the digital age, social media has broadened NGOs' influence, enabling them to tell stories, show impact, and encourage community engagement. Professional branding boosts credibility and impact, establishing NGOs as authoritative figures in policy dialogues. A robust brand consistently maintains awareness and donor support, helping NGOs remain significant and effective. In the end, branding serves not just as a marketing instrument but as a strategic basis for trust, impact, and lasting organizational power.

The role of brand credibility in NGO success

Brand credibility emerged from this research as a fundamental strategic asset for NGOs. Participants consistently emphasized that robust, clearly defined branding fosters trust, recognition, and donor engagement, enabling NGOs to secure funding, form partnerships, and connect with diverse stakeholders. This finding aligns with Becker et al. (2020), who established that non-profit branding significantly shapes public trust and donor relationships.

In the digital age, social media has amplified the importance of branding. NGOs increasingly use platforms such as Facebook, Instagram, and TikTok to tell stories, demonstrate impact through photos and videos, respond to stakeholder questions, and build community. This visibility serves not only a promotional function but also provides transparency that strengthens credibility. As one sector expert elaborated:

> *Social media is now where credibility is made or broken. When an NGO is transparent about their work, responsive to comments, and regularly shows outcomes, donors can see it directly. That visibility builds confidence.*
>
> (Expert 01)

This observation reflects the growing scholarly recognition that social media functions as a critical channel through which non-profits signal legitimacy and cultivate donor confidence (Harken, 2025). Professional branding establishes organizations as authoritative figures in policy dialogues and community conversations. Ultimately, branding functions not merely as a marketing tool but as a strategic foundation for trust, impact, and lasting organizational sustainability.

Brand credibility and donor behaviour

Donors' decisions to support NGOs were shaped by a blend of trust, personal connection, transparency, and perceived impact. Transparency and accountability, demonstrated through clear reporting on how funds are used, measurable outcomes, and credible leadership, appeared fundamental to building donor confidence. One donor explained:

> *I need to see where my money goes. Annual reports, audit statements, and program updates make me confident that the NGO isn't wasting funds. Without transparency, I'm giving blindly.* (Donor 03)

This emphasis on financial transparency corroborates findings by Dethier et al. (2024), who found that donor-perceived transparency has become a central mechanism by which non-profits respond to demands for accountability. Beyond financial transparency, personal connection to a cause, such as family involvement or prior volunteer experience, often deepened donor commitment. Alignment between the NGO's mission and the donor's personal values strengthened their decision to give, with many donors motivated by personal beliefs, religious duty, and empathy.

The ease of donating through digital platforms appeared to significantly lower barriers to contribution, enabling both regular and spontaneous giving (Shakil et al., 2023). Over time, giving often became a sustained habit, driven by continued trust, satisfaction with perceived impact, and a desire to make a meaningful difference. Ultimately, donors were most engaged when they felt confident that their contributions were being used effectively and aligned with missions that resonated with their personal and ethical values.

Recognition and donor motivation

For most donors in this study, the primary motivation for giving was selflessness and a desire to create meaningful change, rather than the pursuit of personal recognition. While formal recognition, tax benefits, or awards were appreciated by some, these incentives were generally viewed as secondary. Convenience and efficiency in the giving process also shaped behaviour, with many donors preferring automated or recurring donations, reflecting a mindset in which giving became a natural part of life rather than a deliberate act intended to seek attention. When recognition did occur, it could reinforce commitment, but it was rarely expected or the primary focus. In essence, donors were motivated by intrinsic satisfaction, empathy, and a sense of responsibility rather than by external validation.

Push and pull factors in donor contributions

Donors' decisions to contribute were shaped by push factors (discouraging giving) and pull factors (encouraging giving), often rooted in trust, transparency, and values alignment, as summarized in Table 2.

Table 2. Donor contribution dimensions

Dimension	Pull Factors (Encourage)	Push Factors (Discourage)
Trust & Transparency	Clear reporting, open use of funds, ethical practices, and audit statements	Lack of transparency, unclear/ incomplete reporting, missing financial statements
Impact & Effectiveness	Visible outcomes, evidence of real impact, photos/testimonials from beneficiaries	Doubts about effectiveness, perceived misuse or waste of funds, inability to verify outcomes
Communication Style	Respectful, informative, consistent messaging across platforms, responsive to inquiries	Aggressive solicitation, repeated/ pressured requests, poor or inconsistent communication

Table 2. (con't)

Dimension	Pull Factors (Encourage)	Push Factors (Discourage)
Values Alignment	Cause matches donor beliefs and personal values, the mission resonates with donor priorities	Misalignment with donor priorities or ethical concerns, perceived inconsistency with the stated mission
Experience of Giving	Easy digital payment options, emotionally fulfilling, inclusive culture, feedback loop	Complicated donation processes, poor customer service, a sense of insincerity, and a lack of impact updates

Donors reported being discouraged by aggressive solicitation tactics, such as repeated unsolicited calls and pressure to donate beyond their means, which caused discomfort and fatigue. Lack of transparency regarding fund use, unclear reporting on outcomes, and perceptions of unnecessary spending significantly eroded trust. One donor stated:

> *I stopped giving to one NGO after getting repeated phone calls pressuring me to donate more. That aggressive approach made me question whether they really needed my money for programs or just wanted it for themselves.*
>
> (Donor 05)

Conversely, donors were drawn to NGOs demonstrating credibility, transparency, and ethical practices. Clear communication about fund use, visual evidence of impact, and accessible financial information built confidence and loyalty, particularly when the mission aligned with personal beliefs and contributing brought emotional fulfilment.

Why donors discontinue support

Donors appeared to discontinue support when trust, transparency, or ethical standards were compromised. A major factor was a lack of accountability, including missing financial reports, unverified use of funds, or unclear reporting on how donations were spent. These gaps raised doubts about organizational integrity and actual impact. As one sector expert noted:

> *When NGOs don't report back to donors about what happened with their money, donors naturally become suspicious. They assume the worst and stop giving. Accountability and impact reporting are non-negotiable.* (Expert 02)

Loss of trust also occurred when donors encountered suspicious activities, such as repeated requests for large sums without clear justification, recycled beneficiary stories, or signs of potential scams (Ingard, 2021). This finding resonates with Dethier et al. (2024), who emphasized that perceived breaches of transparency may undermine donor confidence. Ethical concerns, such as suspicions that funds were misused for personal or excessive administrative purposes, further discourage continued support.

Social media signals and credibility building

This research identified several social media practices that donors interpreted as credibility signals. Transparent updates were among the most influential: NGOs that

regularly posted impact reports, audit summaries, and financial breakdowns appeared to signal trustworthiness and openness. As one donor explained,

> *When an NGO posts their audit results or shares detailed program updates on Facebook, it shows they have nothing to hide.* (Donor 02)

Closely related was visual evidence of impact, photos and videos from program sites, beneficiary testimonials, and before-and-after documentation, which made abstract claims concrete and verifiable. Notably, participants perceived authentic, unpolished field images as more credible than heavily edited promotional material.

Beyond content, the manner and consistency of communication also shaped perceptions of credibility. Donors valued responsiveness, particularly prompt replies to comments and inquiries, which signalled that organizations took stakeholder engagement seriously. Markers of legitimacy such as verification badges, official registration numbers, and consistent branding across platforms further reinforced perceptions of professionalism. Finally, NGOs maintaining regular posting schedules and coherent messaging appeared more stable and trustworthy than those with sporadic or contradictory communication. These findings align with recent evidence that meaningful, consistent social media interaction strengthens donor engagement and long-term retention (Harken, 2025).

Interconnectedness of brand credibility and donor trust

The findings suggest that brand credibility among NGOs is closely linked to donor trust. Credibility is built through consistent accountability, transparency, and visible impact. Participants emphasized that donors were more likely to support NGOs that were officially registered, regularly audited, and transparent in their operations, a pattern consistent with systematic evidence that financial transparency and accountability are foundational to non-profit legitimacy (Ortega-Rodríguez et al., 2024). The ability to demonstrate these qualities not only built trust but also enhances the organization's reputation, making credibility crucial for long-term sustainability (Table 3). As one NGO representative noted:

> *We understand that donors expect complete transparency from us. It's not negotiable; it's what donors believe we should do. So, we publish everything: audits, program reports, donor lists. That's the cost of running an NGO these days* (NGO 08)

Table 3. Bourdieu's Theory of Practice: Application to brand credibility and donor trust

Bourdieusian Concept	Application in NGO Context	Relevance to Brand Credibility
Habitus	Donors' ingrained values, beliefs, dispositions, and 'feel for the game' of giving	Shapes how donors evaluate and perceive credibility signals; trustworthy donors favour transparent NGOs
Field	Competitive NGO sector, where organizations compete for donors, visibility, and legitimacy	NGOs must establish credibility within this competitive space to differentiate themselves and attract support

Table 3. (con't)

Bourdieusian Concept	Application in NGO Context	Relevance to Brand Credibility
Capital	Professional systems, audit records, networks, reputation, and symbolic resources that NGOs accumulate	Brand credibility is a form of symbolic capital that donors recognize and reward through trust and donations
Doxa	Shared, taken-for-granted expectations that 'good' NGOs should be transparent, accountable, respectful, and impactful	NGOs that align with field doxa are perceived as more credible; misalignment erodes trust
Push-Pull Dynamics	Donors' positive experiences (pull) reinforce credibility and trust; negative experiences (push) challenge and disrupt it	Credibility is continuously negotiated through donor-NGO interactions; single failures can significantly erode trust

Collectively, these concepts demonstrate that brand credibility operates as socially constructed symbolic capital, continuously negotiated within the NGO field through the dynamic interplay of donor habitus, field-wide doxa, and organizational practices.

A conceptual model of brand credibility in NGOs

Figure 1 presents the integrated conceptual model derived from the study's findings. NGO practices, such as transparent reporting, official registration, regular audits, evidence of impact, and consistent communication, form the foundation on which brand credibility is built. Following Erdem and Swait's (2016) framework, these practices signal the two core dimensions of credibility, trustworthiness, and expertise, which, through Bourdieu's Theory of Practice, operate as symbolic capital accumulated within the competitive NGO field.

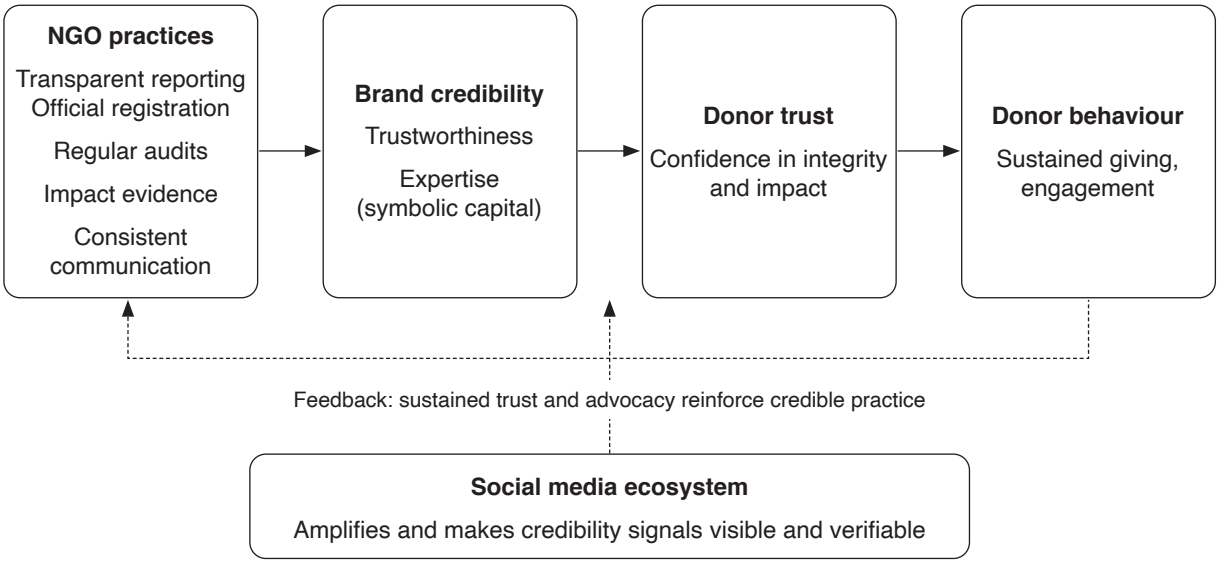

Figure 1. Conceptual model of brand credibility in NGOs

The model shows that credibility strengthens donor trust, which in turn encourages ongoing support such as regular contribution and long-term engagement. This relationship works both ways: positive experiences encourage NGOs to maintain good practices, while negative ones weaken the trust and reputation they have built.

Social media plays an important role throughout, making an NGO's credibility easier for donors to see and verify. The model therefore positions brand credibility as the key link that turns good organizational (NGO) practices into lasting donor relationships in today's increasingly digital environment.

CONCLUSION

This study demonstrates that brand credibility functions as the central mechanism linking NGO practices to donor trust and sustained engagement in Malaysia. Drawing on Erdem and Swait's credibility framework and Bourdieu's Theory of Practice, the findings reveal that credibility operates as a symbolic capital accumulated through transparency, accountability, and demonstrated impact, positioning NGOs competitively within their field and aligning them with donors' expectations of a trustworthy organization. These insights are synthesized in the study's proposed conceptual model (Figure 1), which maps how NGO practices translate into brand credibility, donor trust, and ultimately sustained donor behaviour, with social media serving as an amplifier and donor experiences forming a continuous feedback loop. This model represents the study's primary theoretical contribution, offering an integrated framework that connects organizational practice, credibility, and donor engagement within a single explanatory structure.

Critically, the findings show that donors today demand more than good intentions; they seek verifiable integrity, evidence of results, and consistent alignment with their values. Social media has become the primary arena where these credibility signals are communicated and evaluated, transforming transparency and responsiveness from optional virtues into fundamental expectations. As the Malaysian NGO sector confronts persistent challenges of accountability and financial governance, credibility emerges not merely as a reputational asset but as a safeguard for organizational legitimacy and survival. NGOs that embed credible practices into their operations, and communicate them effectively through digital channels, will be best positioned to sustain donor trust and secure their missions in an increasingly digital and scrutinizing environment.

While this study illuminates how credibility shapes donor trust, several questions remain open for future investigation. Future research could extend this study in three directions. First, Fraud Prevention and Credibility Recovery research could examine how brand credibility mechanisms serve as early warning systems for financial mismanagement, corruption, and fund misuse, a focus that is particularly critical in the Malaysian NGO context. Investigating how donors use credibility assessments to identify risk and how organizations restore trust following scandals would strengthen NGO governance and donor protection. Second, Longitudinal Studies tracking how perceptions of credibility and donor behaviour evolve over time would reveal how external events and organizational changes affect trust and giving patterns. Third, Cross-Cultural Comparative Studies examining how brand credibility shapes donor trust across different cultural and regulatory contexts would enhance theoretical generalizability and reveal context-specific credibility factors.

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A topic modelling analysis of mental health discourse in a social media platform

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ABSTRACT

The proliferation of social media platforms has fundamentally transformed the way individuals interact, communicate and consume information. Online peer-to-peer support groups have become an important resource for individuals facing mental health challenges, offering a digital space for connection, shared experiences, and mutual help. While existing studies primarily focus on the detection of mental health conditions on social media, work on detecting public discussions of support groups remains limited. This study aims to identify the critical themes and concerns discussed by the public regarding mental health on social media, specifically on Facebook. A preliminary dataset of 573 comments was collected from a Malaysian mental health support group on Facebook and analysed. Latent Dirichlet Allocation (LDA) was employed to identify the latent thematic structure of the discussions for topic modelling. The results show that three critical and important themes were discussed: (1) emotional and mental health experiences, (2) seeking advice, and (3) sharing information resources. The findings have implications for mental health professionals, public health campaigns and social media platforms seeking better support and engagement with individuals in need, as well as harnessing the real-world usefulness of online platforms to promote mental well-being.

Keywords: ***Social media analytics, topic modelling, mental health discourse, online peer support, health informatics***

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INTRODUCTION

The global burden of mental health disorders has risen steadily over the past decade. According to the World Health Organization (WHO), an estimated one in four people in developed countries is affected by a mental health disorder (World Health Organization [WHO], 2022). Despite being treatable and preventable, mental health issues are severely hampered by systemic problems, including stigma, which leads to delays in seeking help, low adherence to treatment, inadequate policy support, and inequitable provision of care (Graham et al., 2019; Pavlova & Berkers, 2020).

It is widely acknowledged that creating positive awareness about stigmatized topics such as mental health is not easy (Abu Seman et al., 2020). The increasing reliance on social media as an information source presents both opportunities and threats to this discourse. The internet can foster a safe, anonymous, and supportive space that enables marginalized individuals to express frustration, voice opinions and share knowledge, potentially driving positive cultural change and awareness (Mansoor & Ansari, 2024). However, these online environments also carry a dark side, often intensifying stigma through cyberbullying and hate speech (Bansal et al., 2024).

The widespread adoption of social media platforms, including Facebook, Instagram, and X (formerly Twitter), has fundamentally reshaped how people communicate and consume information (Garg, 2023; Olawade et al., 2023). Online peer-to-peer support groups have emerged in digital communication space, especially around mental health (Pavlova & Berkers, 2020). For example, individuals often use these groups to share personal narratives of their struggles with anxiety or depression and to seek immediate feedback on coping strategies. Consequently, these platforms are now central hubs for community building, information exchange and proactive discussion among those facing mental health challenges (Arias et al., 2022). These spaces often compensate for the limitations of institutional services, including long waiting times, high costs and the stigma associated with mental illness by offering accessible, community-driven avenues for sharing experiences and receiving support.

Among the various social media platforms, Facebook remains one of the most widely used globally and especially in Malaysia, providing numerous public and private mental health support groups where individuals voluntarily share lived experiences, seek emotional support and exchange coping strategies (Kim & Kim, 2026). Facebook enables longer, community-oriented discussions that foster sustained peer support and collective knowledge-sharing compared with platforms such as X, which primarily facilitate brief interactions (Rokicki et al., 2026). Therefore, Facebook support groups provide a rich source of naturally occurring communication data for understanding public discourse surrounding mental health.

However, despite their growing relevance, researchers' attention to these communities remains fragmented and technologically biased. Existing studies predominantly employ machine learning and natural language processing techniques to detect depression, anxiety, suicide risk and other mental health conditions through users' public social media activities, such as tweets, status updates and interaction patterns (Abdul Rahman et al., 2024; Chandrasekaran et al., 2024; Domingo-Espiñeira et al., 2025). While these studies have demonstrated the capability of computational methods to identify psychological risks, they primarily focus on prediction and classification,

rather than on understanding the communication occurring within online mental health communities.

Thus, little attention has been dedicated to examining the naturally occurring discussions in Facebook support groups, where individuals exchange emotional support, negotiate stigma, share coping strategies and construct collective meanings of mental health experiences (Grub, 2025). While studies such as Grub (2025), which examined themes of depression and anxiety on Reddit, and Domingo-Espiñeira et al. (2025), which investigated psychiatric disorder discourse on X, highlight the supportive role of these platforms, the discussion within the mental health support groups themselves is still underexplored. These studies, while methodologically advanced, often reduce complex human expressions of distress and care to quantifiable signals, overlooking the social, emotional, and cultural meanings embedded within community interactions. Consequently, they provide little insight into how individuals collectively construct mental health discourses, negotiate stigma and mobilize support within dedicated online environments (Virani et al., 2024).

This research gap has resulted in a significant lack of systematic understanding of the critical topics and functional themes that define public discourse within these mental health support communities (Garg, 2023; Pruksachatkun et al., 2019). Without systematically identifying the dominant discussion topics, healthcare providers, policymakers and mental health organizations lack empirical evidence regarding the concerns, information needs and support expectations of individuals seeking help through online communities. As a result, communication strategies and digital mental health interventions may not adequately address users' actual experiences and priorities.

To address this limitation, topic modelling offers a powerful unsupervised text mining approach for exploring large volumes of unstructured online discussions. Unlike sentiment analysis and predictive machine learning models that classify users based on predefined categories, topic modelling identifies latent semantic themes that naturally emerge from users' conversations. This enables researchers to gain a comprehensive understanding of the issues, concerns and communication needs expressed within online mental health communities (Couto et al., 2026).

This study therefore aims to identify the main themes and concerns expressed within Malaysian Facebook mental health support groups through topic modelling. Through this analysis, it seeks to uncover the underlying discursive structures that shape collective experiences of mental health in digital spaces, thereby contributing to a more nuanced, and human-centred understanding of online mental health discourse. Such insights are essential for informing public health campaigns, enhancing practitioner engagement with digital communities, and designing responsive support mechanisms that align with the authentic voices and needs of those participating in these online networks.

Understanding the common subjects and functional needs expressed on social media platforms is crucial for effectively leveraging their potential. This study addresses the existing research gap by focusing specifically on the Malaysian context, a setting characterized by unique cultural and societal nuances surrounding mental health. This study makes three important contributions. First, it extends digital mental health communication research by examining naturally occurring discussions within Malaysian Facebook support groups. Second, it applies topic modelling to identify latent discussion

themes beyond conventional predictive analysis. Third, the findings provide practical insights for policymakers, healthcare practitioners, and mental health organizations in designing evidence-based digital communication strategies and community support initiatives.

LITERATURE REVIEW

Social media and mental health

Social media platforms such as Facebook, Instagram, YouTube and X/Twitter have fundamentally transformed human communication and the consumption of information (Roslan et al., 2025). These platforms have reshaped communication practices, enabling individuals to engage in discussions ranging from everyday experiences to sensitive health-related matters (Arias et al., 2022). Numerous studies highlight both the benefits and risks of this shift in mental health contexts (Garg, 2023). Benefits include increased access to peer support, opportunities for self-expression, and reduced feelings of isolation. Conversely, risks include exposure to misinformation, negative social comparison, and cyberbullying (Bansal et al., 2024).

Therefore, social media serves as a powerful, yet complex, mental health resource, particularly by establishing accessible peer-to-peer networks outside traditional clinical settings (Weingott & Parkinson, 2025). More recent studies show that social media has evolved beyond a platform for information sharing into a participatory environment where users actively co-create mental health knowledge, exchange lived experiences and develop peer support networks (Sharma & Sharma, 2026). At the same time, researchers caution that algorithm-driven content exposure and the rapid dissemination of misinformation may amplify psychological distress and reinforce mental health stigma if discussions are not appropriately moderated (Virani et al., 2024).

Online peer-to-peer support groups

The internet's ability to facilitate rapid and widespread social contact has made online communities valuable research environments. These platforms, especially social media, offer rich, longitudinal data with minimal self-reporting bias, enabling researchers to study larger, more diverse populations and observe social behaviour over time (Rueger et al., 2023; Virani et al., 2024). Many online communities focus on specific interests, such as health and wellness, becoming key sources of online peer-to-peer support. A significant development within the social media landscape is the rise of online peer-to-peer mental health support groups (Grub, 2025; Pavlova & Berkers, 2020). These communities provide accessible and often anonymous digital spaces for individuals experiencing challenges to connect, share personal experiences, and offer mutual support.

This function is particularly important in areas with limited access to formal mental health services or where high cultural stigma acts as a barrier to traditional care (Garg, 2023). Recent studies demonstrate that online peer support communities contribute to emotional reassurance, information exchange and empowerment by enabling users to learn from others with similar lived experiences. Unlike formal healthcare services, these communities facilitate common communication, allowing members to both seek and provide support, thereby strengthening collective coping mechanisms and reducing feelings of social isolation (Yuan et al., 2026).

Topic modelling in health communication

Topic modelling has proven valuable for capturing emergent themes during acute events and within specific populations (Ramamoorthy et al., 2024; Yin et al., 2022). As a standard Natural Language Processing (NLP) technique, topic modelling, primarily using Latent Dirichlet Allocation (LDA) or BERTopic is extensively applied in health communication research to automatically uncover latent thematic clusters in large text corpora. Several studies use topic modelling to analyse conversational content within specific mental health contexts, often aiming to understand themes of lived experience or treatment within online forums such as Reddit (Pruksachatkun et al., 2019; Sik et al., 2023). These analyses have successfully identified themes ranging from medical attributions (medication, diagnosis) to social challenges (coping strategies) (Mansoor & Ansari, 2024; Virani et al., 2024).

Recent advances in NLP have expanded the application of topic modelling in health communication research. While LDA remains one of the most widely used probabilistic topic modelling techniques, newer approaches such as BERTopic integrate transformer-based language models to generate more semantically coherent topics (Ramamoorthy et al., 2024). Despite these methodological developments, LDA continues to be widely adopted because its interpretability, computational efficiency and suitability for exploratory analyses of large textual datasets. Compared with sentiment analysis, which primarily measures emotional polarity, topic modelling provides a deeper understanding of large collections of unstructured text (Hankar et al., 2025). Therefore, topic modelling is appropriate for exploring online mental health support groups where discussions are diverse, evolving and not constrained by predefined categories.

Although previous studies have applied topic modelling to examine mental health discussions on platforms such as Reddit, X/Twitter, and YouTube, relatively limited attention has been paid to Facebook-based peer support communities, particularly within the Malaysian context. Existing studies have primarily focused on detecting mental health conditions, analysing public sentiment and examining platform-wide discussions, while the naturally occurring discourse within dedicated peer support groups remains underexplored. Consequently, little is known about the dominant communication themes, community support needs and lived experiences expressed by Malaysian users within Facebook mental health communities.

Therefore, this study extends the existing literature by applying topic modelling to examine naturally occurring discussions within a Malaysian Facebook peer-to-peer mental health support group. The study contributes to digital mental health communication research by identifying latent discussion themes and communication needs, as well as providing evidence to support the design of more responsive community-based mental health interventions.

METHODS

This study adopted a quantitative, content-driven approach employing Natural Language Processing techniques (Pavlova & Berkers, 2020; Sik et al., 2023) because it aims to identify latent discussion themes from a large collection of naturally occurring online conversations rather than examining individual experiences through surveys or

interviews. Unlike traditional qualitative content analysis, topic modelling enables the automatic discovery of hidden thematic structures in unstructured textual data without requiring predefined coding strategies. This approach is suitable for analysing Facebook support group discussions, where users generate large volumes of spontaneous communication reflecting authentic experiences, concerns and support-seeking behaviours (Kim & Kim, 2026; Virani et al., 2024). Topic modelling therefore provides a systematic and objective method for uncovering dominant themes that may not be readily identifiable through manual analysis. The methodology is divided into four main stages: (1) Data Source and Collection, (2) Data Pre-processing, (3) Topic Modelling Implementation using Latent Dirichlet Allocation (LDA), and (4) Topic Modelling Interpretation as illustrated in Figure 1.

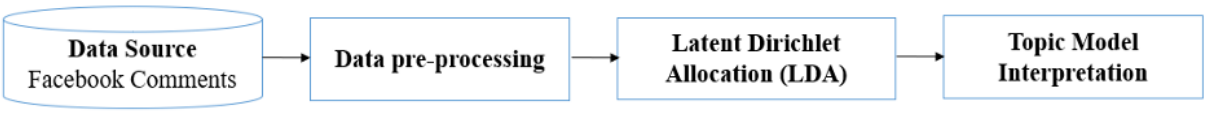

Figure 1. Topic modeling analysis on mental health discourse

Data source and collection

A preliminary dataset was collected from a Malaysian Facebook mental health support group, namely the Malaysia Depression & Anxiety Support Group (MDA). Facebook was selected because it facilitates longer, community-oriented discussions compared with platforms characterised by short textual interactions, such as X (Ramamoorthy et al., 2024). The platform also hosts peer support communities where members voluntarily share lived experiences, as well as emotional concerns and coping strategies, making it an appropriate environment for examining naturally occurring mental health discourse. Facebook was also selected because it remains the most widely used social media platform in Malaysia, making it a central hub for community-based support (Howe, 2024).

The specific group was chosen because it is a large mental health support group for members of the Malaysian public seeking mental health information. Although this Facebook page is private, it has a large and active community that supports the public in discussions about mental health, especially depression and anxiety. Data were collected manually over a specific period, from January 2022 to January 2024, as the Facebook page is private. A total of 573 comments were extracted from the available posts, ensuring compliance with ethical standards for online data research, including anonymization of user identities.

Data preprocessing

Data preprocessing was necessary to reduce linguistic noise and improve the semantic quality of the dataset. Data preprocessing was completed to train the topic model. Several steps were performed on the Facebook comments: (1) language handling, in which the text was translated into English for standardization; (2) tokenization, breaking down the cleaned text individual into words (tokens); (3) stop-word removal, removing common and uninformative words such as “the”, “a”, and “is”; and (4) lemmatization, converting tokens to their base or root form, such as “coping” to “cope” to aggregate word frequencies and improve topic coherence. Standardising the textual data

through translation, tokenisation, stop-word removal and lemmatisation enhances the interpretability of the extracted topics and improves the coherence of the topic modelling results.

Topic modelling technique

This study employed Latent Dirichlet Allocation (LDA) to automatically identify the latent thematic structures in the dataset. LDA is one of the most widely adopted unsupervised topic modelling algorithms for analysing large collections of textual data. This unsupervised learning method assumes that individual posts are mixtures of topics, and that topics are mixtures of words. Compared with manual thematic analysis, LDA provides a systematic, scalable and reproducible approach to identifying hidden semantic structures within large datasets (Domingo-Espiñeira et al., 2025; Grub, 2025). Its ability to automatically uncover discussion themes makes it well suited to exploring online mental health discourse, where conversations are diverse and continuously evolving. Hyperparameter tuning was performed to determine the optimal number of topics (k). The LDA model was trained iteratively across a predefined range of values (k=1 to k=20). The best number of topics was determined by calculating the coherence score for each model, which measures the semantic quality of the clusters. Based on optimal hyperparameter tuning, the number of topics was set at three, corresponding to a coherence score of 0.60.

Topic model interpretation

The final step involved assigning the statistical outputs of the topic model to meaningful and actionable themes. Thematic categorization was performed based on the common function and content of the representative posts and keywords; each topic was assigned a descriptive and meaningful thematic label. Each theme was interpreted by examining its top keywords and reviewing the most representative posts to capture the critical concerns and functional themes within the mental health support group. Human interpretation remains an important step in topic modelling because statistical algorithms generate clusters of words rather than meaningful thematic labels. Therefore, representative keywords and associated posts were carefully reviewed to ensure that each topic accurately reflected the underlying communication context and users expressed concerns.

The methodological approach adopted in this study provides a systematic means of analysing naturally occurring discussions within an online health community. The study moves beyond manual content analysis to reveal latent communication patterns from large volumes of user-generated data by combining Natural Language Processing with topic modelling. This approach contributes to digital health communication research by providing evidence-based insights into the concerns, support needs and communication behaviours of individuals participating in Malaysian online mental health support communities.

FINDINGS AND DISCUSSION

The topic modelling analysis using LDA identified three distinct and coherent topics within the Malaysian Facebook mental health group. These themes collectively map

the landscape of peer-to-peer mental health support, revealing both universal and culturally specific concerns. The LDA model identified three important themes in the dataset: (1) emotional and mental health experiences, (2) seeking advice, and (3) sharing information resources. These themes were defined by their top keywords, and their prevalence was quantified by counting the number of comments assigned to each. The three themes were classified based on the top keywords generated by the model, as shown in Table 1.

Table 1. Themes and top keywords from the LDA model

Topic	Top Keywords (from LDA)	Label Themes
1	Anxiety, stress, alone, tired, sad, feel, difficult	Emotional and mental health experiences
2	Advice, help, doctor, therapy, manage, cope	Seeking advice
3	Share, link, hotline, info, article, resource	Sharing information resources

Table 1 presents the top keywords and themes. The classification indicates that discussions in the Facebook support group were largely focused on three types of engagement: (1) personal experiences of stress, anxiety, and other mental health struggles; (2) requests for advice related to coping strategies, treatment, or professional services; and (3) sharing informational resources, such as hotline numbers, mental health programs and medication information. The distribution of comments for each theme is shown in Figure 2.



Figure 2. Classification of themes in Facebook mental health support group discourse

The analysis of 573 comments identified three primary themes: emotional and mental health experiences, seeking advice and sharing information resources. Figure 2 shows that most conversation within the analysed comments centers on emotional expression and seeking advice. The most prevalent theme is "emotional and mental health experiences", which accounts for the highest number of comments at 224 (36.9%). This suggests the primary function of the online space is peer-to-peer sharing and expression of personal struggles. The second most frequent theme is "seeking advice", with 219 comments (36.08%). This indicates a high level of interactive engagement,

where users actively seek guidance and coping strategies from the community. The least frequent, though still significant, theme is "sharing information resources", with 164 comments (27.02%). This suggests that while providing medical information and external resources is a function of the group, it is secondary to the immediate need for emotional sharing and direct advice-seeking.



Figure 3. Word cloud of frequently occurring keywords

To further illustrate the results, a word cloud was generated to visualize the most frequently occurring keywords across all comments in Figure 3. Larger words represent higher frequency of occurrence. The word cloud reinforces the thematic findings. Based on Figure 3, words such as *anxiety*, *doctor*, *depression*, *family*, *help*, and *stress* appear prominently, highlighting the central role of emotional disclosure and advice-seeking. The presence of terms like *link*, *hotline*, *contact*, and *resource* also reflects the role of information-sharing, though with less frequency compared to emotional and advice-related expressions.

The findings of this study highlight the multifunctional role of online peer-to-peer mental health support groups in Malaysia. The three themes identified reflect the ways in which individuals use social media platforms not only for personal expression, but also for seeking and offering support. The predominance of emotional and mental health experiences suggests that the group primarily functions as a safe outlet for members to disclose personal struggles. This aligns with previous studies which emphasize the therapeutic role of emotional expression in online environments, where anonymity and perceived community support reduce stigma and encourage openness (Garg, 2023; Pavlova & Berkers, 2020). The group provides a non-judgmental space for individuals who may feel embarrassed in offline settings due to cultural or societal stigma surrounding mental health in Malaysia. This suggests that that online mental health discourse should be understood as a dynamic communication process, rather than merely a source of predictive behavioural data.

The strong presence of advice-seeking discussions further highlights the role of social media as a practical support mechanism. Members' active engagement in

seeking guidance on coping strategies, treatment options and access to professional care points to a gap in formal mental health services. This behavioural pattern reflects not only the growing trust in digital communities but also signals persistent gaps in formal mental health service delivery. Structural barriers such as accessibility, affordability, and awareness may limit individuals' willingness or ability to pursue professional help, leading them to rely on peer communities for immediate responses (Domingo-Espiñeira et al., 2025; Sik et al., 2023). This finding reflects the growing importance of digital peer networks as complementary, though not substitutive, resources for mental health support.

The theme of sharing information resources, while less frequent, remains significant. This phenomenon exposes a deeper tension between institutional authority and community-based knowledge production. The migration of advice-seeking behaviour from clinical to social media spaces suggests a reconfiguration of where and how mental health knowledge is legitimized (Arias et al., 2022). The exchange of hotline numbers, medication links, and program announcements indicates that the group also functions as an informal knowledge hub. This finding aligns with existing studies suggesting that the emotional and social dimensions of peer-to-peer support are often prioritized over informational ones (Grub, 2025; Rueger et al., 2023).

In the Malaysian context, where mental health stigma and limited access to care remain challenges, such online peer-to-peer groups provide a valuable alternative space for engagement. Thus, online peer communities do not merely replicate formal support systems, but they create alternative spaces of legitimacy where emotional vulnerability can be expressed without fear of judgment. These digital spaces, though informal, play an increasingly strategic role in expanding the ecosystem of mental health support, serving as both bridges to professional care and buffers against social isolation. Recognizing this dual role is essential for policymakers and practitioners aiming to design integrative mental health strategies that acknowledge and collaborate with these organically formed digital communities, rather than dismissing them as peripheral or unregulated.

Beyond these empirical findings, this study contributes to the field of communication from a theoretical perspective by demonstrating that online peer-to-peer mental health support groups operate as dynamic communication ecosystems, rather than merely information-sharing platforms. The findings show that users engage in emotional disclosure, advice-seeking and collaborative knowledge sharing, illustrating how communication facilitates social support, collective meaning-making, and community resilience within digital environments. Unlike previous computational studies that have primarily focused on detecting mental health conditions or predicting psychological risks (Liu et al., 2025; Nordin et al., 2022), this study shifts the emphasis towards understanding the communicative functions of online interactions. In doing so, it extends the digital health communication literature by highlighting how naturally occurring online discourse reflects users' communication needs, support-seeking behaviours and the co-construction of mental health experiences.

In addition, the findings offer valuable practical insights for mental health practitioners, communication professionals and policymakers. The predominance of emotional disclosure and advice-seeking indicates that digital mental health communication strategies should prioritize empathetic engagement, timely information sharing and community-based support (Weingott & Parkinson, 2025). Government

agencies and healthcare organizations may collaborate with trusted online communities to disseminate reliable mental health information, reduce stigma and encourage appropriate help-seeking behaviours.

Methodologically, this study demonstrates the value of topic modelling as a communication research approach for analysing online discourse. By identifying latent discussion themes in user-generated content, topic modelling complements conventional qualitative content analysis and provides a scalable method for examining large volumes of digital communication, underscoring the increasing importance of computational communication research in understanding complex online interactions.

While this study offers valuable insights into the thematic structure of online discussion in a Malaysian mental health support group, several limitations should be acknowledged. First, the dataset was limited to 573 comments collected manually from a single Facebook group. Although sufficient for preliminary topic modelling, the findings may not fully represent the diversity of mental health conversations across different platforms or demographic segments in Malaysia. Future research should include a larger and more diverse dataset, incorporating multiple online communities to enhance generalizability.

Second, the study focused primarily on textual content and did not consider other modalities such as images, emojis and reaction metrics, which may provide additional layers of meaning in online support groups. Future work could adopt a multimodal approach to capture a more holistic understanding of engagement. Third, the dataset involved manual translation for analysis. Manual translation is prone to interpretation bias and may result in the loss of subtle cultural and emotional nuances expressed in users' comments. Future research should consider employing computational linguistic tools, bilingual NLP models, or professional translation validation to ensure greater accuracy and consistency.

CONCLUSION

This study examined discussions within a Malaysian mental health support group on Facebook and identified three primary themes through topic modelling analysis: emotional and mental health experiences, seeking advice, and sharing information resources. The results highlight that such groups primarily serve as safe spaces for individuals to express their struggles and emotions, while also providing opportunities for advice-seeking and resource sharing. These findings confirm the crucial role of online peer-to-peer platforms in supplementing traditional mental health services, especially in contexts where limited access to professional care and stigma remain significant barriers.

Practical implications are equally significant for mental health practitioners, social media platforms and policymakers. For mental health practitioners and medical experts, insights from online discussions can guide the design of tailored awareness campaigns, resource dissemination and community-based interventions. For social media platforms, the findings emphasize the importance of developing supportive algorithms and moderation strategies that encourage constructive engagement while

reducing harmful discourse. For policymakers, the evidence highlights the value of integrating online peer-support networks into national mental health strategies, ensuring this space is safe, accessible and aligned with public health goals. Finally, online peer-to-peer support groups demonstrate the potential to bridge gaps in care, normalize conversations about mental health and foster community-driven resilience in the digital era.

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The role of environmental NGOs in communicating e-waste awareness to rural communities in Malaysia

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ABSTRACT

Globally, electronic waste (e-waste) is causing a significant environmental concern and Malaysia is no different. Although the government has implemented policies and regulations to manage waste, public awareness and participation in proper e-waste disposal is still limited, especially in rural areas. The existence of this gap makes it important for environmental non-governmental organizations (ENGOs) to play a crucial part in spreading awareness about environmental issues and encouraging behavioural change at the grassroots level. Thus, this study aims to identify the roles played by ENGOs in educating rural communities in northern Malaysia about e-waste. Using a qualitative research method, seven volunteers from two ENGOs participated in semi-structured interviews. The findings indicate that ENGOs play multiple roles in raising e-waste awareness. They specifically educate and raise awareness about the improper disposal of e-waste, advocate for sustainable practices and bridge the gap between policy and community, while empowering rural communities to take part in e-waste collection and management efforts. These communication strategies promote both environmental literacy and collective responsibility, as well as long-term behavioural change. The study highlights how ENGOs can influence public perceptions of e-waste issues through community-based communication strategies that utilize both traditional and digital media platforms. This research expands the understanding of the role of ENGOs in environmental governance and sustainable development. Ultimately, it exhibits how communication can be a powerful tool for ENGOs to influence attitudes, encourage participation and promote sustainable e-waste management practices in rural Malaysia.

Keywords: ***E-waste, environmental communication, environmental NGOs, rural communities***

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INTRODUCTION

The rapid expansion of digital technology and consumer electronics has contributed to a significant increase in electronic waste (e-waste) worldwide, posing serious environmental and public health concerns (Acuti et al., 2023). In Malaysia, improper disposal of e-waste, including household appliances and obsolete mobile devices containing hazardous substances such as lead, cadmium and mercury continues to threaten soil and water systems. Despite the implementation of national policies and waste management regulations, public awareness and community participation in proper e-waste disposal remain relatively low (Mohamad Saleh et al., 2017; Tukiman et al., 2025).

In response to these challenges, environmental non-governmental organizations (ENGOs) have emerged as key actors in environmental governance. Unlike government agencies, ENGOs work closely with grassroots communities and serve as intermediaries between policy, public awareness and behavioural change (Haris et al., 2022). As long-standing advocates of environmental protection, ENGOs play a crucial role in promoting sustainability and environmental stewardship through communication efforts that complement and reinforce those of governments and other stakeholders (Willoughby & Smith, 2016). Recent studies also indicate growing public trust in ENGOs as credible environmental communicators (Mira et al., 2025). However, their effectiveness depends largely on their ability to communicate environmental messages that raise awareness, influence environmental attitudes and behaviours as well as foster public support for sustainability initiatives (Mira et al., 2025).

Environmental communication refers to the strategic dissemination of environmental messages to influence public attitudes, values and behaviours towards environmental protection (Sultan Mohideen et al., 2022). Although previous studies on e-waste have primarily focused on technical, regulatory and policy dimensions, little attention has been given to the communication strategies employed by ENGOs and their role in encouraging public engagement with e-waste issues (Mohamad Nasir & Ahmad, 2013; Tukiman et al., 2025). The gap is particularly evident in Malaysia, where public awareness of e-waste has improved, yet participation in proper e-waste management and disposal practices remain limited.

The problem is especially prevalent in rural communities, where limited waste management infrastructure, inadequate environmental information and scarce resources heighten vulnerability to the environmental and health impacts of improper e-waste disposal. (Haris et al., 2022; Mohamad Saleh et al., 2017). These challenges are further compounded by ineffective communication between rural communities and relevant stakeholders, underscoring the critical role of ENGOs in facilitating environmental awareness, community engagement and sustainable e-waste management practices.

Accordingly, this study aims to identify the roles of ENGOs in communicating e-waste awareness among rural communities in Malaysia. Specifically, the study examines the communication approaches adopted by ENGOs, their engagement with rural communities and their capacity to influence environmental awareness and behavioural change. By focusing on environmental communication, this study contributes to a deeper understanding of how ENGOs can promote sustainable e-waste management and strengthen community participation in environmental conservation.

LITERATURE REVIEW

Environmental awareness

Environmental awareness refers to an individual's understanding of environmental issues, concern for environmental quality and a commitment to integrate environmentally conscious practices into daily life (Ahmad et al., 2019). It reflects the relationship between humans and the environment and encompasses three interrelated dimensions, environmental knowledge, environmental attitudes and environmental behaviour (Widmer et al., 2005). As a fundamental component of environmental sustainability, environmental awareness enables individuals to recognise environmental problems and supports sustainable development through informed decision-making (Mohd Jalil & Ahmad, 2021).

However, increased environmental awareness doesn't automatically lead to pro-environmental actions. Despite possessing knowledge on environmental issues, individuals might not implement environmentally responsible practices (Rödder, 2020). This awareness–behaviour gap has been widely recognised in environmental research, with evidence indicating that environmental understanding and awareness have a moderate impact on waste management practices (Rödder, 2020). Consequently, inappropriate waste disposal practices continue to persist despite increasing public awareness of environmental issues.

Addressing this gap requires continuous environmental education and effective communication strategies that not only increase awareness but also encourage behavioural change. Burksiene and Dvorak (2022) argue that educational and awareness programmes alone are insufficient to cultivate positive environmental attitudes and to encourage sustainable waste management practices. In this regard, ENGOs play a crucial role by implementing awareness campaigns, community outreach programmes and educational initiatives that translate environmental knowledge into meaningful public engagement. Through strategic environmental communication, ENGOs help strengthen environmental awareness and encourage individuals to adopt responsible e-waste management practices. Therefore, environmental awareness serves as an important foundation for this study in examining how ENGO communication initiatives influence public understanding and engagement in e-waste management within rural communities.

E-waste

Electrical and electronic waste (e-waste) refers to electrical and electronic equipment that has reached the end of its useful life or is discarded because it is no longer functional or considered valuable (Mahat et al., 2019). In Malaysia, e-waste is classified as scheduled waste under the Environmental Quality (Scheduled Wastes) Regulations 2005 due to the presence of hazardous components, including batteries, mercury switches, cathode ray tube (CRT) glass and heavy metals such as cadmium, lead and mercury (Ministry of Environment and Water, 2024). If not properly managed, these hazardous substances may contaminate soil and water resources posing significant risks to environmental quality and human health.

According to The Global E-waste Monitor 2020, approximately 53.6 million metric tonnes of e-waste were generated globally in 2019, yet less than 20% was formally collected and recycled (Forti et al., 2020). This growing disparity between

e-waste generation and proper disposal highlights the need for more effective waste management systems and greater public participation in recycling initiatives.

Previous studies suggest that these challenges are not solely the result of regulatory and enforcement limitations but also reflect inadequate environmental awareness, insufficient public education and limited community participation in sustainable e-waste management (Smith, 2019; Vishwakarma et al., 2022). Although the government has provided a framework for managing scheduled waste, its effectiveness still depends on public understanding, compliance and active community participation. This underscores the need for complementary approaches that go beyond regulation alone.

In this context, ENGOs play an important complementary role by bridging the gap between environmental policy and community action. Through environmental communication, public education and grassroots engagement, ENGOs translate technical information into accessible messages, raise awareness and promote responsible recycling practices. These communication initiatives can enhance public participation and support the implementation of sustainable e-waste management, particularly in rural communities where access to environmental information and waste management services is often limited.

Environmental communication theory (ECT)

This study is grounded in the Environmental Communication Theory (ECT), which conceptualises communication as a fundamental process for promoting environmental awareness, fostering public participation and encouraging sustainable behaviour. Environmental communication is the combination of the words, "environment" and "communication." The environment is generally defined as all the elements that surround human life, such as land, flora, fauna and air (Waititu, 2021). Waititu (2021) suggested that the environment is frequently influenced by human actions towards it. On the other hand, communication is a process that involves exchanging and transmitting information between individuals (Christensen & Nilsson, 2018). Therefore, environmental communication can be defined as the pragmatic and constitutive use of communication to influence environmental understanding, decision-making and action (Cox & Pezzullo, 2021).

Environmental communication is a dynamic process through which environmental issues are framed, interpreted, negotiated and acted upon among diverse stakeholders (Milstein & Mocatta, 2022). The theory highlights that effective environmental communication fosters dialogue, participation, trust and collaboration, enabling communities to become active participants in addressing environmental challenges rather than passive recipients of information.

According to Abdul Rahman (2009), environmental communication serves two functions. First, to educate and persuade individual who receive environmental information to address environmental issues. Second, to utilize the power of environmental communication in conveying environmental issues so that the audience can understand and be aware. These two functions highlight that environmental communication is not merely the dissemination of information but also a strategic process that shapes public perceptions, attitudes and behaviours toward environmental sustainability.

Environmental communication also serves as a vital tool for promoting sustainable development by enhancing individuals' understanding of environmental concepts (Mao & Nishide, 2025). It also plays a key role in strengthening public awareness, which is essential in fostering environmental ethics, positive attitudes, skills and behaviours needed to achieve sustainability goals (Carbonell-Alcocer et al., 2025). Traditionally, media such as radio, television and newspapers have been used to inform and educate the public about environmental issues. However, the emergence of digital technology has positioned social media as a key platform for environmental communication among ENGOs. In particular, ENGOs in developed countries have effectively leveraged these platforms to raise public awareness and promote environmental action (Nguyen et al., 2021; Tran & Duong, 2024).

In this study, ENGOs are viewed as key environmental communicators who educate, advocate and engage rural communities on e-waste-related issues. Through various communication strategies, ENGOs facilitate the exchange of environmental knowledge and encourage the adoption of responsible e-waste management practices. ECT thus provides a strong conceptual foundation for examining how ENGOs communicate e-waste issues, engage with rural communities and contribute to behavioural change towards sustainable waste management.

Environmental non-governmental organizations (ENGOs) and their communicative role

Effective communication is fundamental to the success of NGOs, as it enables them to build relationships, establish trust and mobilize local communities towards collective action (Carbonell-Alcocer et al., 2025). Despite its importance, many NGOs particularly in the Malaysia, face challenges arising from inadequate strategic planning, resulting in ineffective communication approaches that limit community participation and stakeholder engagement (Haris et al., 2022). Therefore, ENGOs need to develop clear and planned communication strategies that encourage stakeholders to take an active role rather than just receive information. These strategies are important for building awareness, strengthening community ownership and supporting long-term action to achieve environmental goals (Acuti et al., 2023; Cox, & Pezzullo, 2021).

Recent research consistently highlights that effective NGO communication is central to fostering community participation, trust and sustainable development outcomes. Gallegos (2025) emphasized communication as a core mechanism for mobilization and behavioural change, particularly in development contexts. Similarly, participatory communication approaches have been widely advocated, with Dellech et al. (2024) noting that effective NGO engagement requires communication processes that are community-driven, culturally sensitive and long-term oriented. More recent empirical work in the Philippines also identifies multiple strategic dimensions of NGO communication, including digital media use, traditional channels, participatory communication and public relations activities (Gallegos, 2025).

Although communication frameworks have improved, many organisations still use top-down approaches that focus more on their own goals than on community voices (Cox & Pezzullo, 2021). In practice, there remains a gap between theory and implementation, especially in rural settings, where NGOs often struggle to adapt communication strategies to local socio-cultural conditions, low literacy levels and

limited access to digital platforms (Haris et al., 2022). Studies therefore emphasise the need to move from organisation-centred communication to more collaborative and dialogic approaches that value local knowledge and strengthen community ownership (Mohamad Saleh, 2017).

Thus, ENGOs play a key role in environmental communication by fostering dialogue, supporting environmental monitoring and advocating for sustainable policies, with their effectiveness relying on their ability to translate complex issues such as e-waste into clear and culturally appropriate messages for diverse audiences (Jain et al., 2023; Sahharon et al., 2024). In Malaysia, although ENGOs are key actors in environmental governance, existing research has largely overlooked their communication role in e-waste management, particularly in rural areas. Even with the rise of digital platforms that improve engagement, there is still limited knowledge of how Malaysian ENGOs design communication strategies to promote e-waste awareness and responsible disposal practices.

METHODOLOGY

Research design

This study adopted a qualitative approach in line with its aim of exploring the roles, experiences and involvement of ENGOs in environmental activities. Semi-structured interviews were used to gain in-depth insights into ENGOs' experiences and knowledge of environmental issues, particularly e-waste.

Informants

Informants were selected using purposive sampling, which is appropriate for qualitative studies seeking in-depth insights from individuals with relevant experience. In this study, representatives from ENGOs involved in e-waste awareness initiatives in northern Malaysia were identified as key informants. Informants were selected based on specific criteria. These included direct involvement in environmental education or outreach programmes related to e-waste, at least one year of experience in community-based environmental projects and active engagement with rural communities. These criteria ensured that all informants possessed relevant, context-specific knowledge aligned with the objectives of the study.

This study involved seven informants, comprising five males and two females aged between 32 and 43 years. They were members of two NGOs, Krayon4Society and Trash Hero Perlis, chosen due to their strong engagement with rural communities in Kedah and Perlis. Although the sample size may not represent all ENGOs, it provides meaningful insights as both organisations are among the most active in the region. The informants consisted NGO leaders, environmental officers and volunteers who shared their experiences on organisational roles, daily operations, challenges in environmental management and their involvement in environmental communication, particularly on e-waste issues. Their perspectives offer valuable understanding of how grassroots environmental organisations contribute to e-waste awareness and community participation in rural settings.

Data collection

The researcher conducted each interview face-to-face in Bahasa Malaysia, with sessions lasting between 45 and 90 minutes. Before recruiting informants, the researcher obtained informed consent from both the NGOs managing the volunteers and the volunteers themselves, in line with ethical research requirements. Since NGOs often work with vulnerable groups, the researcher also secured organisational approval to ensure proper access and institutional support for the study.

The interview questions were developed to explore the roles of ENGOs in e-waste management, with a particular focus on their environmental communication strategies. Informants were asked open-ended questions about their awareness and perceptions of ENGO initiatives, including e-waste awareness programmes, key elements of environmental communication and collaborative efforts undertaken by ENGOs.

Data collection continued until data saturation was achieved, when no new themes or insights emerged from additional interviews. Saturation was assessed alongside data collection through ongoing iterative analysis. After several coding cycles, it was observed that further interviews produced repetitive information rather than new categories, indicating that the data were sufficiently rich to meet the study's analytical objectives. The decision to stop data collection was therefore guided by information redundancy rather than a predetermined sample size (Hennink & Kaiser, 2022).

Data analysis

All interviews were transcribed verbatim and analysed using thematic analysis. The transcripts were systematically organised and managed using NVivo12 qualitative data analysis software, which supported the coding, categorisation and comparison of data across informants. The analysis followed an iterative process, beginning with repeated readings of transcripts to achieve data familiarity, followed by the generation of initial codes. These codes were then grouped into broader categories and further refined into themes that reflected recurring patterns within the dataset.

To strengthen analytical rigour, a constant comparative approach was applied throughout the coding process, enabling systematic analysis of similarities and differences across informants' data. Emerging themes were continuously reviewed, refined and validated to ensure conceptual coherence and accurate representation of informants' perspectives. This iterative process facilitated the interpretation of ENGOs' communication roles in addressing e-waste issues. Overall, the use of NVivo12 enhanced the systematic organisation of data, ensuring that the findings were transparent, traceable and firmly grounded in the empirical evidence.

Trustworthiness

To enhance the trustworthiness of this study, several strategies were applied in line with qualitative research criteria (Nowell et al., 2017). Credibility was ensured through prolonged engagement with ENGO representatives involved in e-waste awareness programmes, enabling an in-depth understanding of their communication roles and practices. Member checking was also conducted by sharing preliminary findings with selected informants to verify that interpretations accurately reflected their

experiences. Dependability was strengthened through systematic documentation of the research process, including informant selection, interview protocol development and thematic coding procedures, ensuring a clear and transparent record that enhances the consistency and reliability of the study.

FINDINGS

The roles of ENGOs in communicating e-waste awareness

Malaysia has experienced a notable increase in the involvement of ENGOs in promoting better e-waste management practices. Although e-waste management is not their primary focus, many ENGOs have actively worked to raise public awareness of e-waste and its environmental impacts. ENGOs have been identified as performing several key roles, including policy advocacy and linkage, public education, awareness-raising and community empowerment. The following section provides a detailed discussion of these roles.

Advocate and bridge policy

In Malaysia, policy efforts on e-waste are focused on improving laws and systems for proper disposal and recycling. These include better collection services, producer responsibility through programmes like Extended Producer Responsibility (EPR) and stricter rules for recycling centres. The aim is to increase recycling and reduce environmental and health problems caused by e-waste.

However, rural communities often find it hard to understand these technical rules. ENGOs are the one who step in and help by explaining the policies in simple ways at the community level. For example, when take-back programmes were introduced, ENGOs in Kedah and Perlis helped rural people understand how the programme works, its benefits, and how to dispose of old devices properly. They also communicate hurdles faced by local communities, such as lack of collection points and transport to policymakers so that these problems can be addressed. In this way, ENGOs help ensure that policies are not just on paper but are effectively implemented at the grassroots level.

Interview findings show that ENGOs play an important role in policy advocacy by collecting information, doing simple research and representing the voices of local communities to decision-makers.

> *We strive to ensure that the policies developed are more environmentally friendly and aligned with the needs of sustainable e-waste management.* (N1)

When raising awareness, ENGOs act as a bridge between the government and the public. They use different communication methods to highlight issues and make it easier for people to understand and relate to it.

> *We use several approaches such as face-to-face sessions with government agencies, awareness campaigns on social media, and community education*

programs. We also team up with universities and the private sector to explore new solutions for e-waste management. (N2)

ENGOs recognize that raising awareness about e-waste is important, but most of their efforts focus on prevention through advocacy and promotional campaigns, rather than direct intervention programmes. However, what stands out in their work is their close connection with local communities. Their activities are carried out in rural villages and local areas, where they work closely with the public to build understanding and encourage better practices.

ENGOs can now reach a wider audience, thanks to low-cost digital tools. Many of them use platforms such as Facebook, Instagram, and Twitter to share information, engage different groups and communicate quickly, following the global rise of social media. They also use short videos, infographics and hashtag campaigns to raise awareness on issues such as climate change, waste, and pollution. This approach helps them reach not only urban populations but also rural communities, where access to traditional information sources is often limited.

Besides, social media also enables ENGOs to leverage local leaders, community figures and online influencers to spread their messages more effectively. It is also used to increase public participation through online petitions, fundraising activities and calls for volunteers in clean-up campaigns and awareness programmes. The combination of online engagement and face-to-face activities in rural areas often provides a more effective way to bridge the gap between national policy ideas and the realities of rural communities.

In summary, ENGOs play a vital role in advocating for stronger policies while bridging the gap between policymakers and communities. They support policy development and implementation in ways that benefit local populations, particularly in rural areas, by simplifying complex regulations, voicing community concerns, and linking grassroots realities with national policy frameworks.

Raise awareness and educate

ENGOs play an important role in helping rural communities understand the environmental and health risks associated with e-waste. Many people in rural areas are still unaware that old phones, batteries, and broken appliances can release harmful substances when disposed of improperly.

During the interviews, informants emphasized awareness-raising at the community level as the first step toward improving e-waste management. Since 2019, the group has worked closely with local communities to promote sustainable practices such as proper waste separation, which facilitates recycling. Through workshops, educational programmes, and community-led recycling campaigns, ENGOs have become an important source of information and guidance on responsible e-waste disposal.

According to one informant, most e-waste in Malaysia is still disposed of together with household waste and ultimately ends up in landfills. This practice not only harms the environment but also contradicts national waste management policies. Recognising the urgent need to address this issue, they have focused their efforts on supporting community-based initiatives in Kedah and Perlis, particularly through e-waste collection and awareness programmes.

Informant N3 noted that Trash Hero Perlis has placed recycling bins at several key locations, encouraging residents to use them as official drop-off points.

> *Our drop points are located at PEDi Tambun Tulang, PEDi Beseri, and PEDi Padang Besar Selatan. We also have the Drive Thru Recycle Centre (DTRC) Arau, which has now been moved to the Arau Public Market area and behind the Kangar Municipal Council Arau Branch Office.* (N3)

For now, their focus is on common recyclables like aluminium cans, plastics, and glass bottles.

> *Although our initial focus was on recycling aluminium cans, plastic, and glass bottles, we aim to expand our efforts to raise awareness about proper e-waste management.* (N5)

Other than awareness, education is another key area of their work. ENGOs often partner with schools, colleges, and community centres to conduct seminars and awareness sessions aimed at fostering responsibility and promoting sustainable e-waste management practices. One key challenge highlighted by Informant N2 is that many teenagers and students are still unaware that electronic devices should be disposed of separately. They often do not know how or where to properly discard outdated items.

> *We (Trash Hero Perlis) have worked with UUM, UniMAP and a lot of schools around Kedah and Perlis to run environmental education and awareness programmes. We've done many programmes, for example Malaysia Greening Campaign, tree-planting activities with the Perlis State Forestry Department, geopark visits with the Geoguide Association, and even fun stuff like colouring competitions.* (N2)

> *Besides that, we also give talks on environmental protection to help students understand more and build a stronger sense of responsibility towards sustainability.* (N4)

As Informant N4 explained, they also organize workshops, community talks and campaigns in school and village using simple language and relatable examples. Some groups use visual aids and live demonstrations to show how toxic substances such as lead and mercury from discarded electronics can contaminate soil and water. By simplifying complex information, ENGOs make it easier for rural communities to understand the risks and the need for safer disposal methods.

Through these educational programmes, ENGOs not only help reduce electronic waste in the short term but also lay the foundation for long-term sustainable practices in e-waste management and recycling.

Empower community participation

ENGOs also place strong emphasis on empowerment by involving rural communities directly in e-waste programmes. Instead of being passive recipients of

information, residents are encouraged to actively participate in collection drives and local campaigns.

In several villages in northern Malaysia, ENGOs have organised community recycling days where residents can bring old appliances to a central drop-off point. They also identify and train local "green champions" who continue to spread awareness within their own communities. This form of grassroots participation helps build a sense of ownership and responsibility, turning e-waste management into a collective community effort rather than an externally imposed initiative. Over time, this empowerment supports rural communities in adopting sustainable practices and contributing meaningfully to broader environmental goals.

> *We took the initiative to work closely with different departments and agencies to make the program more meaningful. In partnership with other NGOs, the Perlis State Forestry Department organized a CEPA program in conjunction with the International Day for the Conservation of the Mangrove Ecosystem 2023, held at the Mangrove Interpretation Platform, KOMALAUT Complex, Kuala Perlis.* (N6)

According to the informants, the e-waste collected through these initiatives typically includes items such as laptops, tablets, cables, and larger household appliances like refrigerators and televisions.

> *We (volunteers) managed to collect around 500kg of waste, including e-waste, during the Malaysia Youth Volunteer Day 2023 at the Perlis State level. The program, jointly organized with the Perlis State Department of Youth and Sports, was held along the Sungai Padang Keria coastline from 8:30 am to 11:00am* (N6)

These programmes aim to instil green cultural values within the community while improving environmental literacy. For example, the Malaysia Youth Volunteer Day brought together around 70 participants, including representatives from Trash Hero Perlis, Universiti Malaysia Perlis (UniMAP), Politeknik Tuanku Syed Sirajuddin (PTSS), Universiti Utara Malaysia (UUM), Kolej Universiti Islam Perlis (KUIPs), and the Perlis State Forestry Department.

Beyond raising public awareness, these initiatives also help strengthen collaboration with ministerial stakeholders. They provide ministries with a platform to not only educate the public but also to gather feedback and improve services delivered by the Ministry of Natural Resources and Environmental Sustainability (NRES) and its related agencies.

In parallel, the volunteers emphasised the importance of ensuring that environmental sustainability goes hand in hand with economic development. Their views highlight that sustainable growth should balance environmental protection with social well-being, rather than prioritising one over the other.

Another key aspect of these partnerships is the involvement of technology-based organisations. NGOs recognise that the industry has the skills and resources to do more than just recycle. Through collaborations, they have been able to transform

e-waste into useful and creative products, showing rural communities that old or broken electronic items are not simply "rubbish" but can be reused in new ways. This approach not only helps reduce waste but also teaches communities that electronic components can have a second life and contribute to a more sustainable lifestyle.

Trash Hero Perlis, for instance, is part of the global Trash Hero World network, which supports e-waste management initiatives at a broader level. However, as Informant N7 pointed out, public awareness of waste separation remains low. Many people do not realise that e-waste management involves more than just sorting and disposal, it requires a more comprehensive process to minimise environmental impacts.

To address this gap, they launched an e-waste awareness campaign in February 2022 in collaboration with several local NGOs, including Perlis Nature Xplorer, Perlis Climbers, Hermission House, Persatuan Geoguide Perlis Geopark, Persatuan Sejarah Negeri Perlis and Perlis Nature & Wildlife, among others. This collective effort was strongly community-based. In addition to placing e-waste collection bins and designating recycling days, the NGOs organised awareness sessions to encourage residents and local groups to actively participate in the initiative.

> *What made this effort special was the way rural communities were actively involved, not just as spectators, but as participants. Residents joined in activities like planting mangrove seedlings, taking part in coastal clean-ups, and even sharing their knowledge about the ecosystem. This hands-on approach made them feel more connected and responsible for protecting the mangrove environment.* (N5)

The founder of Trash Hero Perlis shared that the campaign was well received by residents. Informant N6 added,

> *Over the past seven months, the organization has been contacted by private sector businesses interested in disposing of their e-waste safely. For the community, this was encouraging, as more people began to recognise how simple actions, such as separating waste at home can contribute to proper recycling and safer environmental practices.* (N6)

Overall, these roles demonstrate how ENGOs engage with communities through a continuous process of awareness, advocacy and empowerment. Their initiatives show that effective communication can bridge the gap between national policies and grassroots practices, making sustainable waste management more accessible and relevant to everyday life. At the same time, the findings indicate that their impact is still limited by low public awareness and a lack of professional expertise in the field. This makes their work in rural areas particularly important, as they bring knowledge, resources, and advocacy directly to communities most affected by poor waste management.

DISCUSSION

The diverse roles of ENGOs as educators, advocates, facilitators and community mobilisers reflect the key assumptions of the Environmental Communication Theory,

which views environmental communication as both practical and constructive in shaping understanding and action (Cox & Pezzullo, 2021). While previous studies have often highlighted ENGOs mainly as providers of environmental information through awareness campaigns, much of the literature tends to frame them as top-down communicators (Cox & Pezzullo, 2021). In contrast, this study shows that ENGOs in rural Malaysian contexts go beyond this limited role by encouraging more participatory and dialogic communication processes. This suggests a more interactive approach to environmental communication, where meaning is jointly created between ENGOs and community members rather than simply transmitted.

This finding both supports and extends earlier work on environmental communication. While Milstein and Mocatta (2022) emphasised that effective environmental communication should be based on participation and dialogue, there is still limited empirical evidence on how these principles are applied in rural e-waste contexts. This study addresses that gap by showing how ENGOs put these ideas into practice through community workshops, informal engagement and hands-on learning activities. These approaches not only increase environmental awareness but also build trust and strengthen relationships between ENGOs and rural communities, which prior studies have identified as important but underexplored factors in effective environmental communication.

Furthermore, although previous research has associated environmental communication with behavioural change, it often assumes a direct, linear link between awareness and action (Carbonell-Alcocer et al., 2025). This study challenges that assumption by showing that behavioural change in e-waste management is shaped by continuous interaction, trust-building and culturally grounded communication practices. This finding enriches the Environmental Communication Theory by highlighting the importance of contextual and relational factors in determining communication effectiveness at the grassroots level. In this way, the study extends the application of the theory beyond general environmental advocacy to the more specific and under-researched context of rural e-waste management in Malaysia.

While earlier studies have examined environmental communication in broader contexts, this study shows that e-waste poses distinct communication challenges due to limited public awareness of proper disposal methods, health and environmental risks as well as recycling opportunities. As a result, ENGOs adopt more targeted communication strategies that combine environmental education, digital engagement and stakeholder collaboration to address these knowledge gaps. This highlights the evolving role of ENGOs as communication intermediaries that link scientific knowledge, public awareness and community participation.

CONTRIBUTIONS AND IMPLICATIONS

This study contributes to the growing body of literature on environmental communication by enhancing the understanding of how ENGOs design and implement communication strategies to raise e-waste awareness, particularly in rural communities. While previous studies have mainly focused on the advocacy and policy roles of ENGOs, this research shifts attention to their communication functions, showing how environmental messages are adapted into simple, accessible and culturally relevant

forms for different audiences. By examining real practices in Malaysia, the study also adds empirical evidence on the challenges and approaches ENGOs use in addressing complex issues such as e-waste management. In doing so, it offers a more detailed understanding of the link between environmental communication, community engagement and sustainable development.

In terms of practical implications, the findings provide useful guidance for ENGOs, policymakers and community stakeholders in strengthening e-waste communication strategies. ENGOs can use these insights to design more participatory, inclusive and locally relevant communication approaches that better suit rural communities. For policymakers, the study highlights the need to support capacity-building programmes and collaborative frameworks that strengthen partnerships between NGOs and communities in environmental education. At the community level, improved communication strategies can increase awareness, encourage behavioural change and promote participation in sustainable e-waste practices. Overall, the study highlights the importance of culturally sensitive and strategic communication approaches in improving the effectiveness of environmental governance.

CONCLUSION

This study examines the roles of ENGOs in informing rural communities in Malaysia about e-waste awareness. The findings show that ENGOs are not only information providers but also act as advocates, change agents and mobilisers, playing an important role in bridging the gap between policy frameworks and local realities. In summary, the study highlights the importance of ENGOs as key partners in environmental governance and sustainable development. They contribute to building a culture of environmental responsibility in rural Malaysia through the use of local knowledge, trust-building and community engagement. Therefore, the communication roles of ENGOs should be recognised and supported in future policies and programmes, with greater inclusion of ENGOs as strategic partners in national e-waste management initiatives.

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Social media sentiment analysis on Datuk Seri Najib Tun Razak's court case: A study of public perception in Malaysia

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ABSTRACT

This study aims to examine the public perception and sentiment on social media towards the court case involving Datuk Seri Najib Tun Razak. The approach of this study was qualitative, with a focus on social media content analysis and in-depth interviews with expert informants. The study leveraged content from platforms such as Twitter, Facebook and YouTube that featured netizens' comments, tweets and reactions to the development of Najib Razak's court case from 2020 to 2023. A total of eight informants, consisting of political analysts, media practitioners, academics and lawyers, were interviewed in depth to obtain professional and critical views on this phenomenon. The analysis shows that the majority of online sentiment towards this case tends to be negative, especially related to issues of integrity, trust in leadership, and frustration over abuse of power. However, there is also a parallel narrative of sympathy and defence that elevates Najib's character as a victim of political prosecution, especially among UMNO supporters and followers of the "Bossku" campaign. Social media is seen as playing a huge role in shaping public perception, not only as an information channel, but also as a narrative battleground between proponents and critics. The study emphasizes the importance of understanding the dynamics of political communication in the digital age, particularly in a post-truth context where information and emotions interact rapidly. In conclusion, the study urges judicial institutions and governments to strengthen their digital strategic communications to more effectively address public perceptions.

Keywords: ***Najib Razak, sentiment analysis, social media, public perception, political communication***

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INTRODUCTION

Political leadership integrity in Malaysia has become a critical topic in public discourse, especially after the revelations of large-scale financial scandals involving key figures in the country. One of the most high-profile cases is the case involving former Prime Minister, Datuk Seri Najib Tun Razak in relation to the SRC International and 1MDB scandals, which attracted a lot of attention from both domestic and international media (Ibrahim & Sani, 2021).

The circulation of comments, tweets and reactions of netizens, especially through short videos on TikTok and YouTube Shorts, shapes the way people interpret the justice and validity of court decisions (Gerbaudo, 2016; Van Dijck, 2013). In Najib's case, the public reaction reflects a range of sentiments—from frustration and anger to sympathy and defence. However, there is a lack of empirical studies that systematically analysed how these sentiments are formed and function in shaping political perceptions. Existing studies focus more on news reports or general interpretations (Lim, 2020). This raises questions about the extent to which social media reflects reality, or is simply a space for collective emotional manipulation (Zuboff, 2019).

Social media also displays the phenomenon of polarisation, where there are two main camps —supporters and opponents — that influence each other's narratives and perceptions related to this court case (Pariser, 2011). The narrative of "Bossku" and "political persecution" emerged as a counter-discourse to judicial decisions carried out according to the legal process (Sani et al., 2019). Digital political communication in this context has crossed traditional boundaries, where social media users also act as narrative shapers, not just recipients of information (Castells, 2012). Therefore, it is important to examine how this narrative affects trust in the institutions of justice and democracy.

The study adopted a qualitative approach through social media content analysis as well as interviews with experts to understand the public's perception of Datuk Seri Najib Tun Razak's court case in a more comprehensive and contextual manner. To further understand the phenomena that contribute to the issue, the objectives of the study are as follows, which are crucial in providing the much-needed guidance to delve deeper into the issues with contextual discourse analysis:

1. To analyse the content and sentiment patterns expressed by social media users towards Datuk Seri Najib Tun Razak's court case.
2. To identify the main narratives formed in social media related to the trial process and judicial decisions.
3. To assess expert perceptions of the impact of digital communication on public trust in the judicial system and political leadership in Malaysia.

Public Sphere Theory

The Public Sphere Theory put forward by Jürgen Habermas (1989) is a very relevant theoretical framework in understanding how society shapes critical discourse on national issues, such as the trial case of Datuk Seri Najib Tun Razak. According to Habermas, the public sphere is a social space outside the formal structure of the state and the market, where citizens can rationally debate about any public interest.

In the contemporary context, social media such as Twitter, Facebook, TikTok and YouTube have evolved into new forms of digital public spheres (Van Dijck, 2013), where community interaction is no longer limited to traditional media channels but takes place bilaterally, openly and without hierarchical controls. This change in the structure of communication provides space for ordinary users to question political power, dispute the judicial institutions and form alternative discourses on Najib's case.

Debates on the integrity of the courts, abuse of power, and political interference are clear manifestations of the functioning of the digital public sphere. This is in line with Dahlgren's (2013) view that digital media expands the deliberative dimension of democracy when public discourse moves freely across institutional political boundaries. For example, comments by Twitter and Facebook users criticizing court decisions are no longer seen as fringe opinions, but as part of a national discourse that influences public perceptions of justice.

Post-Truth Theory

The Post-Truth theory explains how emotions, political identities and subjective beliefs override objective facts in the formation of public opinion. According to Waisbord (2018), the post-truth era is characterized by a situation in which facts are no longer the primary basis for assessing public issues. Instead, narratives that align with individual beliefs and political identities become more believable. This theory is significant in the digital perceptions of Najib's case as the discourse on social media is not centred solely on legal facts but driven by sentiment, anger, sympathy, and political polarization.

In Najib's case, netizens' debate shows how facts and court decisions are often interpreted through the lens of emotion and political identity. Narratives such as "Najib is a victim of political abuse", *"Bossku ikon rakyat"*, or "courts controlled by certain parties" show that netizens' political emotions and beliefs shape their interpretations of the legal reality. This phenomenon is in line with the premise of Waisbord (2018) that post-truth is not just a rejection of facts, but a social mechanism in which information is filtered according to the needs of the group identity. To this, Freelon et al. (2020) argued that social media accelerates the process of disseminating emotional information through virality, making it more dominant than factual information.

The combination of the Public Sphere Theory by Habermas (1989) and the Post-Truth Theory by Waisbord (2018) forms a comprehensive theoretical framework for understanding how digital sentiments and narratives regarding Datuk Seri Najib Tun Razak's case are formed and disseminated, which then impact public perceptions of justice and the country's institutions. These two theories complement each other by explaining two important dimensions: (1) the structure of communication spaces, and (2) the way in which social meaning is shaped in the digital age through emotions and political identities.

In the context of the Public Sphere Theory, social media serves as a deliberative space where citizens gather virtually to discuss important issues, including Najib's trial. This space allows critical discourse to take shape beyond the control of political institutions and the mainstream media. However, this theory does not fully explain why discussions in the digital public sphere are often irrational, emotionally charged, and divided into two extreme camps (pro- and anti-Najib). This is where the Post-Truth

Theory fills the gap. According to this theory, the digital public sphere is not just a space for discourse, but a space for clashes between "emotional truth" and "truth of fact".

The combination of these two theories allows us to understand that while social media provides a democratic space for society to debate, the discourse often turns into a sentiment-driven polarization field. This phenomenon shows how the structure of communication (the public sphere) and the epistemic state (post-truth) are interrelated. In short, these theories explain how rational discourse can be "hijacked" by emotions and political identities in a digital public space.

This theoretical framework also helps to understand the echo chamber phenomenon and polarization found in the study findings. The digital public sphere provides an open space for discussion, but in the post-truth era, this space is divided into closed groups that only reinforce existing opinions. The algorithms of social media platforms reinforce this situation by presenting content according to the user's beliefs, causing everyone to construct their own "truth". The combination of both theories provides a solid foundation for analysing political perception in Malaysian society, where the public's understanding of Najib's court decision is not only influenced by the information received but also by the social dynamics in the digital space.

LITERATURE REVIEW

The development of digital technology and the emergence of social media as the main communication channel has drastically changed the landscape of political communication. In Malaysia, social media serves as a new public space for political discussion, the channelling of public emotions and the formation of perceptions of political figures and national institutions. Recent studies from 2023 to 2024 show new trends in research related to political sentiment, social media user perceptions, and digital narratives formed in the context of political and legal crises. The study by Mohd Pouzi et al. (2024) is one of the latest studies that applies a sentiment analysis approach using machine learning algorithms such as Naïve Bayes, SVM and Logistic Regression to assess people's sentiments on current political issues.

Sahrul Afendi (2024) analysed 11,800 tweets by Twitter users to identify public perception of the General Election in Malaysia by employing Naïve Bayes to classify sentiment, and found that the majority of tweets were closely related to issues of candidate integrity, manifesto promises, and trust in electoral institutions. In their study of Facebook users' comments on major political parties, including UMNO, PAS, PKR and BERSATU between September and December 2020, Kasim and Kamarul Zaman (2024) found that the majority of user comments contained elements of sarcasm, anger, cynicism and political jokes. This shows how political discourse in Malaysia's social media carries an emotional and critical tone where the narratives formed are often influenced by historical experiences, political leanings and social identities.

Meanwhile, Mohamed's (2019) study focused on the visual narrative formed by Datuk Seri Najib Tun Razak through his personal Instagram account, where he forged a new political identity as an "ordinary citizen" after the fall of the Barisan Nasional government in 2018. An analysis of 94 Instagram posts found that a narrative was built to reduce the distance between him and the people through visual elements,

unpretentious captions, and the image of 'Bossku'. The study asserted that political leaders can reshape public perception through systematic and symbolic digital communication strategies, even when involved in legal crises. Kasmani (2022), through a study of the elements of political humour in Najib's Facebook posts, found that Najib used the strategy of jokes, memes and light-hearted sarcasm to attract attention and manipulate the emotions of his followers, particularly the younger generation. This phenomenon raises questions about the ethical limits of political communication and the effectiveness of populist strategies on digital platforms.

A study by Jalli and Jamaluddin (2024) focused on the issue of disinformation and electoral integrity in Malaysia. While the focus was on GE15 and its legal framework, the study also referred to Najib's case and looked at how the protracted litigation process had affected the public's perception of justice and truth. The study pointed out that weaknesses in addressing disinformation in the digital space can contaminate the integrity of the legal system and democracy. Interestingly, in Najib's case, the popular "Bossku" campaign on social media demonstrates how a positive narrative can be created even after a major scandal. A local study by Azizuddin (2020) found that there is a strong relationship between digital sentiment and perceptions of the legitimacy of political institutions.

The prosecution case against President Donald Trump involving election interference, financial fraud, and abuse of power shows how digital sentiment can divide society. A study by Freelon and Lokot (2020) found that social media platforms such as Twitter, Truth Social and Facebook present a significant pattern of polarization, with Trump supporters viewing the prosecution as a revenge-motivated political conspiracy, while opponents perceive it as evidence of the transparency of the legal system. This phenomenon suggests that the interpretation of legal cases is strongly influenced by the political orientation of individuals.

In Brazil, the Operation Car Wash (*Lava Jato*) mega-corruption investigation involving former President Luiz Inácio Lula da Silva became one of the country's most intensive studies on digital sentiment. Araújo and Bahiana (2018) contended that Brazilians are divided between those who see Lula as an oppressive symbol of reformation and those who regard Lula as the biggest architect of corruption in Latin America. This is evident in the millions of social media comments that form two narrative circles that do not interact rationally. Their analysis revealed that Twitter and Facebook have become spaces for "moral warfare" between Lula's supporters and opponents, where emotional rhetoric is more dominant than factual information. These findings resemble the "Bossku" phenomenon in the Malaysian context, where political figures facing legal proceedings continue to receive online support through populist narratives and identity symbols.

In Europe, the case of Silvio Berlusconi in Italy provides an additional insight into how populist leaders manipulate public sentiment to fend off legal charges. Bobba and Hubé (2021) explained that although Berlusconi faced various charges, he used social media and media to frame himself as a victim of political prosecution. This narrative shows how powerful the elements of identity and emotion are in shaping the perception of law. It highlights that sentiment towards court cases is often influenced by pre-existing beliefs. This reinforces the concept of confirmation bias, which is the

tendency of individuals to choose information that confirms existing views while rejecting conflicting information.

Meanwhile, literature from India shows a similar phenomenon in cases of corruption and abuse of power involving political figures such as Narendra Modi and Arvind Kejriwal. Jain and Sharma (2020) found that social media in India presents a hyper-partisan narrative in which each political group tries to impose its own interpretation of legal cases. Digital sentiment in India is heavily influenced by online networks of political supporters who actively repeat certain narratives through WhatsApp, Twitter and YouTube. The spread of political messages in India is particularly rapid due to the highly collective nature of its society and is prone to emotional rather than analytical messages.

The literature also shows that digital sentiment towards high-profile political cases is directly related to the country's political culture. In the Philippines, support for Rodrigo Duterte remains high despite allegations of abuse of power in the drug war. Overall, the international literature proves that sentiment towards political figures facing legal action is not a neutral or objective phenomenon. It is shaped by three main factors: (1) political identity, (2) strategically designed digital narratives, and (3) the dissemination of information through social media algorithms that reinforce polarization. All these factors affect the way people assess the authority of the judicial system.

METHODOLOGY

Study design

This study adopted a qualitative approach that is recognized as appropriate for studying complex digital phenomena. Creswell & Poth (2018) emphasized that in socio-political contexts, in-depth interviews and narrative analysis can uncover meanings that cannot be seen in quantitative data. Thus, a qualitative approach is best suited for studying complex phenomena such as public sentiment because it allows for a deepunderstanding of hidden social and narrative meanings. The main virtual locations for data collection were social media platforms such as Twitter, Facebook, and YouTube. Data collection took place between August 2022 (the date of court conviction) and February 2024, to ensure coverage of early reactions, follow-up responses, and post-decision narrative formation. The study combined two main methods of data collection: online user comments and in-depth interviews.

Data was collected from user comments on Twitter, Facebook and YouTube platforms using keywords such as "Najib Razak", "Bossku", "SRC", "Najib's court ruling" and "abuse of power". The purposive sampling technique was used to select posts and comments that were relevant and obtained a high response (≥ 100 comments or shares). Content analysis allows researchers to identify key themes in digital narratives, such as negative sentiments (anger, cynicism, frustration) and positive sentiments (sympathy, defence, nationalism) (Krippendorff, 2018). The collected social media content was thematically analysed to identify the patterns of sentiment and social meaning contained in digital expressions.

In-depth interviews

A total of eight informants were selected through purposive sampling involving academics in the fields of communication and political science, senior journalists, lawyers, and media analysts. Interviews were conducted in a semi-structured manner to allow for flexibility in discussion but were still guided by key questions about public sentiment, the role of social media, and the legitimacy of judicial institutions. This method allowed the researchers to understand expert views on the relationship between digital perceptions and the legitimacy of the justice system. As stated by Rubin and Rubin (2012), in-depth interviews provide space to understand the values, experiences and interpretations of informants on the issues being studied.

Data analysis

The collected data were analysed using thematic analysis, and later, the triangulation technique was used to verify the results of social media analysis and the results of interviews. This study adheres to the criteria of validity and reliability in qualitative research as recommended by Lincoln and Guba (1985), namely, credibility, transferability, robustness, and confirmability. The study also confirms that qualitative approaches such as narrative analysis and expert interviews are still relevant and important in the context of political communication research in Malaysia. Therefore, a triangulation approach that combines digital data with the views of expert informants can produce a more comprehensive and nuanced understanding of public perceptions of high-profile court cases in the digital age. This study meets the ethical standards of research. The identities of social media users were disguised, and information was only used from accounts that are public in nature. For interviews, written consent was obtained, and the informant's name was disguised using a code (such as IP1, IP2 and so on). The study was approved by the university's research ethics committee (reference code included in the original report).

RESULTS

Social media analytics

The sentiment analysis of 4,590 posts and comments demonstrates how Najib Razak's trial has become a clash of political narratives, justice, and institutional integrity in Malaysia. The findings show that Twitter/X posts/comments were the most dominant (40%), used for political arguments, harsh criticism, and trending hashtags. Facebook post/comments (30%) were more balanced, with a lot of long comments (pros and cons). On the other hand, TikTok (20%) content was more inclined to short videos with an emotional narrative (a lot of positive and sympathetic angles) while Instagram posts/comments (10%) were the least, tending to be neutral/visual, and lacking in-depth political debate. The main sentiment of all sources remains predominantly negative (>50%), but TikTok content highlighted more positive narratives than any other platforms.

Table 1. Sentiment analysis

	Frequency (f)	Percentage (%)
Social Media		
Twitter/X	1836	40.0
Facebook	1377	30.0
Instagram	459	10.0
Other Platforms	918	20.0
Sentiment Issues		
Politics & Power	1710	37.2
Justice & Legal System	1670	36.4
Institutional Integrity & Morals	1210	26.4
Sentiment		
Negative	2346	51.1
Positive	1226	26.7
Neutral	1018	22.2

The findings show that issues related to politics and power received 1710 mentions (37.2%) of the total. Of this, 980 mentions (21.3%) related to criticism of power abuse, Najib's political legacy, and impact on the party were negative. A positive display with 410 mentions (8.9%) was related to his support based on his political merit and the party's grassroots support. While 320 mentions (7.0%) were neutral, more of an emotionless political commentary, e.g., analysis of the position of parties and political leaders.

Issues related to justice and the legal system obtained 1670 mentions (36.4%) of the overall content. Displaying a negative tone, 820 mentions (17.9%) casted doubt on the integrity of the courts and allegations of political interference. The positive sentiment of 470 mentions (10.2%) reflected the belief that the judicial system is still functioning. Meanwhile, 380 mentions (8.3%) in the form of reports and summaries of facts of the proceedings was neutral.

Institutional integrity and moral issues received 1210 mentions, equivalent to 26.4% of the total. The negative sentiment of 546 mentions (11.9%) criticised the transparency of MACC (Malaysian Anti-Corruption Commission), the judiciary and other institutions. The positive sentiment of 346 mentions (7.5%) represented the confidence of some netizens that Malaysian institutions are still independent. While the neutral sentiment of 318 mentions (6.9%) was a general observation of the role of the institution without bias.

The findings show that negative sentiment predominated with 2,346 mentions, equivalent to 51.1% of the overall digital content analysed. Positive sentiment of 1,226 mentions equals 26.7%, while neutral sentiment of 1,018 mentions equals 22.2%. These sentiments were mostly focused on political and power issues. This implies that social media users have been vocal in their criticism of the political leadership, the power struggle among the elite, as well as the impact that Najib's case has had on the country's leadership image.

Studies have shown that positive sentiments are mostly born from platforms like Facebook and TikTok, which often enable emotional discussion spaces and

supportive narratives. In this case, the positive sentiment emphasizes the sympathy aspect towards Najib, especially in the context of his personal and family life and highlights the view that he is a victim of a larger political game. Apart from that, neutral sentiments also exist in forms such as commentary or sharing of information without any emotional attachment. The presence of this neutral group is important because it reflects the efforts of a few netizens to maintain an objective discourse and provide space for the formation of opinions based on more balanced perspectives.

Based on the breakdown of themes, the analysis showed that political and power issues was the dominant theme with 1,710 mentions or 37.3%, followed by justice and legislation with 1,670 mentions or 36.4% while institutional integrity recorded 1210 mentions or 26.3%. This pattern clearly shows that the majority of netizens judge Najib's case not only from a legal perspective, but also relate it to the political dynamics and credibility of the country's institutions. In other words, Najib Razak's trial has evolved into a symbol of a wider debate on Malaysia's political future and the people's confidence in the country's system.

Dominant issues

The following are the dominant issues from Najib Tun Razak's case that trended on social media:

1. Most dominant: Politics & power (37.3%): describes how Najib Razak's case is seen more from a political lens than just the law.
2. Second dominant: Justice & legislation (36.4%): netizens' discussion focused on whether the judicial system is truly independent.
3. Third dominant: Institutional integrity (26.3%): discourse emphasizing transparency, accountability, and trust in state institutions.
4. Key sentiment: Negative (51.1%): majority view Najib's case unfavourably.
5. Alternative sentiment: Positive (26.7%) : born out of political sympathy and confidence in the system.
6. Intermediate sentiment: Neutral (22.2%): present in the form of reports and analysis without emotion.

Overall, the pattern of discussion on social media regarding Najib Razak's case shows that the majority of netizens tend to view the case in the context of distrust in the country's politics and justice. While the narrative of sympathy and support still exists, it is limited to certain groups and specific platforms only.

These findings show that social media is not only a space for sharing information, but also an arena for public discourse that reflects the level of public trust in politics, the law, and the integrity of the country's institutions. In a broader context, the results underscore the significant impact Najib's case has left on the public perception of the credibility of Malaysia's leadership and the future of democracy.

Interview

Overall, the findings demonstrate that social media has transformed the way people interact with justice and political discourse. Public sentiment is now shaped by diverse, emotional, and influential digital narratives. The judiciary is no longer in an exclusive position as the determinant of the meaning of justice; instead, it has to compete with the voice of the people formed through algorithms and digital expressions. This study

highlights the urgent need to develop a proactive crisis communication strategy and strengthen media literacy among the people so that they can assess justice issues more critically, balanced and rationally.

Objective 1: Public sentiment on social media

Analysis of the in-depth interviews shows that social media has become a major arena for Malaysians to channel their emotions and stance on Datuk Seri Najib Tun Razak's court case. Among the dominant themes that emerged was the sentiment of anger against the political elite, who were perceived as having abused power and the legal system over the years. Informants noted that this anger is not only focused on Najib alone, but reflects a collective frustration with the system that is often seen as shielding the upper class from accountability.

> *The people are angry not because of Najib alone, but because they feel that this system has always protected the top.* (P1)

Such sentiments show that the public's perception of justice is heavily influenced by the country's history and political experience. Despite the conviction being handed down by the courts, the vast majority of social media users still show a lack of confidence in the overall integrity of the political and judicial system.

> *The sentiment on social media is very angry and cynical. People see this case not just about Najib, but a symbol of their frustration with the political elite over the years.* (P7)

In addition to anger, there is a parallel narrative of sympathy and defence for Najib Razak. Informants admitted that the narrative of "Najib as a political victim" is gaining ground among certain segments of social media users, especially those who are still loyal to the image of "Bossku". This narrative is rooted in the perception that the conviction was a result of political pressure or revenge by his political opponents.

> *Many think Najib is being persecuted because he is no longer in power.* (P4)

This case study shows how social media functions as a space for the formation and reinforcement of competing narratives against court decisions, with netizens presenting their own interpretations of legal facts and procedures. In this context, social media not only influences how information is disseminated, but also reshapes social meanings about who is considered right or wrong, fair or oppressed. At the same time, the presence of humour and political satire, especially in the form of memes and short videos on platforms like TikTok, shows that netizens not only want to express their opinions but also tap into creativity to criticize and express dissatisfaction. Elements like these reinforce the role of social media as a tool of collective emotional communication on major political issues.

However, the study also found that the digital landscape is becoming increasingly polarized: there are two main camps – supporters and opponents of

Najib – that push each other's narratives and create an "echo chamber" that reinforces each other's views.

> *Twitter has become a battlefield for two groups that don't want to hear each other's arguments.* (P5)

Finally, these findings suggest that social media functions not only as a reflection of public sentiment but as an active producer of narratives that challenge or rival formal institutional narratives, thus shaping the landscape of public perception on justice and political issues in Malaysia. Table 2 lists the main themes of public sentiment on social media, as derived from the interview analysis.

Table 2. Main themes of public sentiment on social media

Main Themes	Description
1. Sentiment of Anger Towards Political Elite	Netizens are showing dissatisfaction with the elite and the issue of injustice.
2. Sympathy and Sentiment of "Political Victims"	Some netizens see Najib as a victim of a political power game.
3. Innuendo and Political Humour	The style of sarcasm and memes is used to express disbelief or ridicule.
4. Support Polarization	There are two very active camps – supporters and opponents, challenging each other's narratives.
5. Shock of a Guilty Conviction	Most netizens did not expect the court to make such a firm decision.

Objective 2: Digital narratives and justice system

The analysis of the in-depth interviews shows that the digital narrative formed around Datuk Seri Najib Tun Razak's court case is very complex and is a mixture of belief, cynicism and hope. Most informants identified that there was a positive narrative that praised the courage of the judiciary in finally sentencing a high-profile political figure. This narrative presents the court as an entity that is free from political influence and is a symbol of institutional reform.

> *There is a narrative that this is proof that our judiciary is free from political influence.* (P3)

However, this narrative does not dominate the digital space entirely because there is also a cynical view that equates the courts as being a political puppet. In other words, the people's perception of the justice system is still unstable – some hope for the restoration of integrity, while others remain sceptical about the sincerity of the system. Some informants explained that this narrative was used by Najib's supporters to defend his image and reject the court's decision which is attributed to political pressure from opponents. The following excerpt illustrates how distrust of the legal system is manifested in the form of alternative narratives.

> *This is not a question of justice; it is a question of who was in power at the time* (P8)

At the same time, Najib's "Bossku" character continues to be a symbol of resistance to the mainstream and a symbol of the courage of the ordinary people. This narrative is actively built through images, videos and slogans on social media that presents Najib not just a political figure, but a digital icon. This shows social media can play an active role in reconstructing the image of leaders by ignoring the official narrative and replacing it with more emotionally friendly populist stories.

In addition, there is an emergence of critical awareness among social media users, especially youth, who is seen to be increasingly cognizant of political games. This segment does not fully accept any narrative, whether pro or anti-Najib, but is more likely to judge based on the principles of fairness and transparency.

> *Young people today are not quick to believe – they are concerned about both, Najib and the system.* (P2)

This signifies a change in digital political participation where people are increasingly actively challenging official discourse and shaping alternative discourses through social media. The digital narrative formed in this case, therefore, is not single and homogeneous, but multi-layered, reflecting various social interpretations of the concepts of justice, leadership responsibility, and institutional integrity in the Malaysian political system. Table 3 presents the main themes of digital narrative and the judicial system.

Table 3. Digital narrative and the judicial system

Main Themes	Description
1. The Narrative of Bold Justice	There is a new narrative that judicial institutions are beginning to show fangs and independence.
2. Political Conspiracy Narrative	Some users spread conspiracy narratives against certain leaders.
3. Legitimacy and Trust Deficit	The lack of trust causes the public to interpret the results according to emotions and biases.
4. Digital Heroism "Bossku"	Bossku's narrative is still strong among supporters, despite negative court rulings.
5. Critical Awareness Among Young People	Young people tend to criticize both sides and want systemic change.

Objective 3: The role of social media and institutional trust

Findings also clearly show that social media is now playing a role as a "digital public court", which is highly influential in shaping trust in the judiciary. According to the informants, court decisions often trigger social media users' responses, which are not solely based on legal principles but on emotional interpretations influenced by the dominant narrative on social media. This phenomenon represents a major shift in the structure of authority, where courts that were once the exclusive symbols of justice are now forced to compete with online "people's courts". As P2 put it:

> *The people make their own decisions on Twitter before the judges make an official decision.*

Such a notion reflects how the judicial process is currently evaluated in the field of public opinion that does not necessarily understand or respect the legal process formally. This discourse also shows that social media algorithms such as those on TikTok and YouTube reinforce users' tendency towards only one side of the narrative, thus creating an "echo chamber". Informants contended that many users are only exposed to views or content that confirm their existing beliefs. Consequently, it leads to a further polarization of perceptions of the judiciary – some see the decision as a symbol of reform, while others see it as a political plot. As P6 stated:

Each TikTok feed is of interest, so the more extreme our views are.

This psychological effect makes social media not only a platform for the dissemination of information, but also a powerful collective emotion formation, which sometimes drowns out logic and legal facts. In addition, informants also stressed that the lack of official communication between the judiciary and the government has worsened the situation. An official narrative that is defensive and slow-acting gives digital influencers and political YouTubers ample space to dominate public perception. As P6 stated: *"The royal narrative is incapable of countering viral perceptions on TikTok."* In this context, social media not only challenges institutional credibility but also creates a form of "alternative political reality" that the digital society strongly believes in.

Retrospectively, this has congruently illustrated that trust in judicial institutions is highly dependent on the ability of those institutions to understand, interact, and adapt their communication strategies to the current digital reality. In summary, social media has been a significant force in shaping public trust in the judicial system, and this role is becoming increasingly influential in the era of rapid communication and digital emotions.

DISCUSSION

The findings confirm that social media in Malaysia is no longer just a channel of personal expression, but has evolved into a highly influential power field in shaping public perception of national issues, including high-profile legal cases such as those involving Datuk Seri Najib Tun Razak. Social media now serves as a space where the meaning of justice, integrity and power is reinterpreted by the people collectively, beyond the formal institutional framework of the country. This reinforces the role of social media as a "power broker" that influences public belief, political behaviour and institutional credibility.

In particular, the study's findings demonstrate that social media plays a significant role in shaping people's sentiment and understanding of Datuk Seri Najib Tun Razak's court case. This is in line with Latif and Ying (2020) who contended that news media creates a sense of representation in the general view of the masses which then translates into support or rejection. For the first objective, the main theme shows that the people are no longer just observers but also communicators – expressing their emotions openly, whether through anger, sarcasm or support. The polarization of support shows increasing fragmentation of the digital society.

For the second objective, the digital narrative that is formed reflects the people's ambivalence towards the judiciary. On the one hand, there is appreciation for the courage of the judicial system, but on the other, conspiracy sentiments and distrust continue to exist. The character "Bossku" has also become a populist symbol that manages to balance bad perceptions with a more understated digital personality appearance. The third objective emphasizes the role of social media as the main field of narrative formation. Social media not only disseminates information but also forms an "emotional truth" that is believed to be stronger than the official narrative. This shows the weakness of institutional communication in dealing with the crisis of perception, as well as people's dependence on political influencers to clarify issues.

This study also highlights that digital narratives are never singular or static. Instead, it operates in a complex manner, clashing with various emotions and views such as trust in the system, cynicism towards the elite, as well as deep-seated populism. Narratives such as "Najib as a political victim" or "daring court" are among the manifestations of emotions and perception strategies that clash in the digital space. This volatile narrative exposes the gap between public perception and formal authority, thus challenging the legitimacy of judicial institutions if they fail to respond effectively to public unrest.

In this regard, the study suggests that national institutions – in particular judicial and government institutions – strengthen their crisis communication strategies with a more strategic, responsive and honest approach. In a world defined by the speed of information and emotional games, formal communication can no longer rely on traditional media statements that are reactive and defensive in nature. Instead, inclusive, transparent, and integrity-based counter-narratives need to be proactively built to rival the dominance of digital narratives that are free and sometimes manipulative. State institutions need to come forward not only as regulators and enforcement agents, but as trusted communicators, to educate and engage directly in the public discourse that is currently taking place in the borderless digital world.

CONCLUSION

This study provides a comprehensive overview of how social media shapes, reinforces and changes public perceptions of Datuk Seri Najib Tun Razak's court case through sentiment analysis, digital narratives and expert interviews. This echoes the study by Rajaratnam et al. (2020), which reveals that media framing has a significant impact on how truth is perceived when words, images, phrases and presentation styles are used to effectively relay information issues or events. The findings show that social media is no longer just a communication medium but has become a space for political discourse that has a significant influence on the formation of collective perceptions. The sentiments that emerged—positive, negative, neutral, sarcastic and emotional—reflect the highly dynamic nature of digital discussions and are influenced by political identity, social beliefs and partisan loyalties. This phenomenon shows how society interprets a legal issue not only through court documents, but through discourses shaped by communities, political influencers and social media algorithms.

This study concludes that state institutions—particularly the judiciary, government agencies and policymakers—need to understand that crisis

communication now takes place in a highly complex digital ecosystem. In such an environment, honesty, transparency and narrative consistency are crucial in countering the dominance of informal discourse on social media. Experts emphasize that narrative strategies are not simply an effort to convey information, but a process of rebuilding eroded public trust. Therefore, this study recommends that the government strengthen public information literacy, develop data-based communication strategies and create an inclusive and fact-based counter-narrative. Overall, this study proves that the future of political perception and trust in institutions in Malaysia depends greatly on the ability of the country and society to navigate digital narratives more critically, strategically and responsibly.

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