Interrogating Digital Fluency: New Critical Directions in Malaysian Ethnic Studies

Nurul Akqmie Badrul Hisham

Institute of Ethnic Studies, The National University of Malaysia

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ABSTRACT

This study investigates how Malaysian youth navigate cultural identity, algorithmic curation and intercultural communication within digital media platforms. This study addresses a central research objective: examining how Malaysian youth use digital fluency across algorithmically mediated platforms to negotiate cultural identity, resist automated homogenization, and navigate the complex socio-cultural impacts of AI and social media. Drawing on semi-structured qualitative interviews (N= 24) with ethnically diverse university students, we examine the role of digital fluency in shaping online identity negotiation. The empirical findings reveal three primary dynamics: (1) youth actively exercise digital bargaining to construct online belonging while mitigating majority assimilation pressures; (2) users exhibit critical awareness of algorithmic bias and feed curation, employing tactics such as selective engagement and platform-switching to resist automated homogenization; and (3) AI and social media function as socio-cultural agents that simultaneously facilitate cross-ethnic solidarity and trigger privacy and surveillance anxieties. By defining digital fluency as a critical socio-technical competency, this paper extends Malaysian ethnic studies beyond offline consociational paradigms to illuminate youth agency in algorithmically mediated environments

Keywords: Social Media; AI; Youth; Digital Fluency; Ethnic Studies.

INTRODUCTION

Ethnic studies hold particular significance in Malaysia, a nation characterized by its multiethnic, multicultural and multireligious composition. Understanding interethnic dynamics is essential for promoting national unity, addressing social inequalities and reducing cultural misunderstandings. Scholars and government reports alike have emphasized that ethnic studies provide a platform for citizens to engage with each other's histories, languages and cultures, fostering empathy and strengthening social cohesion (Shamsul, 2008). Importantly, ethnic studies also serve as a space to challenge stereotypes and essentialist views, encouraging critical reflection on issues of identity, media and education. As Lee (2014) observed, the field plays a vital role in deconstructing dominant narratives and cultivating inclusive forms of citizenship.

Against this backdrop, our study seeks to extend the conversation by exploring digital fluency among Malaysian youth through the lens of ethnic studies. In today's media-saturated and technologically driven environment, digital fluency has become central to how young people consume media, express their identities and engage in intercultural communication. By situating digital practices within the framework of ethnic studies, this work contributes to a deeper understanding of how AI-driven and algorithm-mediated environments shape youth experiences of culture, belonging and interethnic interaction in Malaysia.

Yet, the rapid diffusion of AI-generated and digital media content is increasingly shaping how ethnic identity is perceived, constructed and communicated among Malaysian youth. As media environments become more algorithmically mediated, cultural meaning-making is no longer a neutral process but one shaped by historically biased datasets, technical infrastructures, and the sociocultural assumptions embedded within AI technologies (Choudhary, 2024; West et al., 2019). Research has shown that AI systems often reproduce and reinforce racial and ethnic stereotypes by drawing on reductive heuristics and oversimplified classifications,

which in turn shape perceptions of authenticity, belonging and social recognition (Chu et al., 2024; Djanegara et al., 2024).

This raises urgent questions about how young people engage with these algorithmically produced narratives: do they passively absorb them, or do they actively reinterpret, resist and contest them? While quantitative approaches can map broad patterns of digital interaction, they often miss the complex, lived realities of identity formation in localized digital contexts. A qualitative lens is therefore indispensable for uncovering the nuances of youth agency, voice and resistance in online spaces. Therefore, the primary research objective of this study is to investigate how Malaysian youth exercise digital fluency on algorithmically mediated platforms to strategically negotiate cultural identity and belonging, resist automated bias and homogenization, and navigate the socio-cultural dynamics of AI-driven media.

By centering the perspectives of youth as cultural actors navigating algorithmic influence, this study seeks to bridge ethnic studies with the emerging discourse on AI. In doing so, it highlights the often-overlooked cultural implications of AI for social cohesion and intercultural communication in digitally mediated societies (West et al., 2019; Toft Djanegara et al., 2024). Without such inquiry, the role of AI in shaping interethnic understanding risks being sidelined at precisely the moment it is becoming most consequential.

Focusing our work within the Malaysian context, we draw on two key national policy frameworks that directly inform our interest: (1) the Malaysia Education Blueprint (2013–2025) and (2) the Malaysia Digital Economy Blueprint (MyDIGITAL, 2021). The Malaysia Education Blueprint positioned ICT and digital literacy as critical enablers of 21st-century learning, calling for a paradigm shift from ICT as a discrete subject to ICT as a tool embedded across disciplines. Through initiatives such as 1BestariNet and the integration of digital literacy into student outcomes, the Blueprint envisioned a generation of digitally fluent Malaysians equipped to think critically, communicate effectively, and participate in a globalized knowledge economy. While the Malaysia Digital Economy Blueprint (MyDIGITAL) further reinforced and expanded this agenda, situating digital fluency as a cornerstone of the nation's transition into a digitally driven economy. Its strategic priorities include AI adoption, workforce reskilling and equitable access to digital tools.

Despite strong policy direction, there remains a paucity of research exploring how Malaysian youth across diverse ethnic and socio-cultural backgrounds, experience and negotiate digital fluency in their daily lives. Much of the policy discourse in both the Malaysia Education Blueprint and MyDIGITAL frameworks emphasises technological infrastructure, educational integration, and economic competitiveness, but less attention is given to the cultural dimensions of digital engagement. This gap is significant, as youth are not only the most active adopters of digital technologies but also the most exposed to algorithm-driven environments that mediate identity, belonging, and interethnic interaction. Without understanding how digital fluency intersects with ethnicity and cultural identity, policies risk reinforcing existing inequalities and overlooking the nuanced ways in which digital technologies shape social cohesion. Thus, there is an urgent need for research that situates digital fluency within the lived realities of Malaysian youth, bridging the national digital transformation agenda with the broader goals of inclusivity and intercultural understanding.

By trying to understand the depth, adaptability and agency that young people exercise as they navigate, create, and critically engage within complex digital ecosystems. Specifically, this study examines how digital fluency shapes young people's media consumption, identity expression, and intercultural communication practices online. In doing so, the research contributes to ethnic studies by bridging discussions of AI and digital learning with questions of culture, identity, and belonging. It highlights how AI mediates the everyday digital practices of youth and offers a framework for understanding intercultural communication in algorithm-driven environments.

LITERATURE REVIEW

According to the UNESCO Recommendations on Education (2024), there is a renewed global commitment to positioning education as a driver of peace, human rights, global citizenship, intercultural understanding, and sustainable development. In an era of rapid change, UNESCO emphasizes the importance of critical thinking, digital literacy, and respect for diversity, framed within a set of transformative learning objectives. These

objectives are designed not only to equip learners with cognitive skills but also to nurture values, attitudes, and behaviors that enable them to act as responsible agents of change.

Central to these recommendations is the role of culture and intercultural communication. Culture and the arts are recognized as integral to education that sustains identity, heritage and mutual understanding across communities. In reaffirming this vision, UNESCO highlights that education should not be viewed solely as a pathway to economic development but also as a moral, cultural and social imperative for building peaceful, inclusive, and just societies (UNESCO, 2024).

Aligned with this vision, UNESCO (2023 & 2024) further calls for:

1. The promotion of media and intercultural literacy as essential tools for youth empowerment and social cohesion.
2. Advancing SDG 4.7 by examining how digital culture and education intersect in diverse societies.

This framing positions education and particularly digital and intercultural literacies as key to understanding how youth navigate identity, belonging and communication in increasingly digital and culturally complex contexts.

The rise of AI-driven media environments has fundamentally transformed how culture and identity are negotiated, especially among youth. In multicultural Malaysia, young people increasingly encounter and construct ethnic identity not only through face-to-face interactions but also within digital ecosystems shaped by algorithmic platforms and generative content. While media literacy remains important, this study focuses on digital fluency as a more encompassing and future-oriented concept. Unlike media literacy, which primarily emphasizes understanding and interpreting media messages, digital fluency captures the depth, adaptability and agency required by youth to navigate, create and critically engage within complex digital environments.

At its core, digital literacy is about knowing how to push the buttons by mastering the basic mechanics of software and platforms. Digital fluency, by contrast, goes a step further because it is about knowing why, when, and how to use those tools effectively, creatively, and responsibly (Bourdeau & Vieru, 2021; Chambers, 2018; Demir & Odabaşı, 2020). Rather than measuring how comfortable someone is scrolling through a platform or consuming digital content, fluency reflects a person's ability to step back, choose the right tool for the job, and adapt when technology inevitably changes (Chambers, 2018; Demir & Odabaşı, 2020).

Crucially, digital fluency shifts the user from a passive consumer to an active creator. It involves designing, authoring, and remixing digital content across dynamic online environments (Nyikes, 2018; Resnick et al., 2009). This creative process relies heavily on critical decision-making and ethical awareness, which helps ensure people use digital tools responsibly and thoughtfully (Chambers, 2018). Because technology evolves so quickly, the driving force behind digital fluency is ongoing adaptability, allowing individuals to navigate unfamiliar systems without needing step-by-step instructions (Bourdeau & Vieru, 2021; Canchola-González & Glasserman-Morales, 2020; Lang, 2021).

To make the difference clear, digital literacy and digital fluency set themselves apart in three simple ways: scope, thinking style, and how people interact with technology. Digital literacy focuses on basic operational skills and knowing how to run software, while digital fluency moves technology use into something strategic, creative, and critical. When it comes to thinking style, literacy is about picking up technical steps, whereas fluency requires people to adapt, evaluate options, and make smart choices on their own. Finally, digital literacy usually leads to passive interaction like watching or reading, while digital fluency empowers people to actively create, edit and remix content.

In educational contexts, this distinction positions digital fluency as a prerequisite for meaningful pedagogical innovation and active learning among both educators and learners (Koyuncu, 2011; Makhafola et al., 2025; Rosli et al., 2025). Furthermore, its utility extends to socio-economic equity: bridging digital divides requires moving beyond physical access toward fostering fluency, which empowers historically disadvantaged populations to leverage technology for social and economic agency (Whybrow, 2005, 2007, 2008).

Digital fluency therefore requires more than just interpreting online information, extending into active content creation, collaborative problem solving and ethical tool use. This multidimensional capability reflects how Malaysian youth engage with platforms such as TikTok, Instagram and YouTube, where they are not passive recipients of digital content but active producers and distributors (Livingstone & Sefton-Green, 2016). At the same time, digital fluency also prepares youth for real-world challenges, from academic research to online activism and future employment. As Ng (2012) argues, it better represents the competencies needed to participate fully in a digital society and going beyond functional skills to encompass critical and creative engagement. Similarly, Binkley et al. (2012) remind us that fluency involves not only knowing how to use digital tools, but also understanding when, why and in what ways to use them effectively.

This framing is also consistent with Malaysia's own education policies. The Malaysia Education Blueprint (2013 - 2025) emphasizes digital fluency as central to preparing future-ready youth, and positions its development as a key strategy for transforming Malaysia into a high-income knowledge economy (MOE Malaysia, 2013). Thus, by approaching Malaysian youth through the lens of digital fluency, this study aims to provide a more nuanced, future-facing, and action-oriented understanding of how young people live, learn and negotiate identity in digitally mediated intercultural contexts.

In Malaysia, the government has positioned digital fluency as more than just a skillset. It is framed as a national priority and a cornerstone for building a digitally skilled society. The Malaysia Digital Economy Blueprint (MyDIGITAL) explicitly sets the target of achieving 100% digital literacy among youths, linking digital fluency directly to employability, innovation and responsible digital citizenship (Economic Planning Unit, 2021). This is because fluency is seen not only as preparing young people for the job market, but also as equipping them to thrive in an economy increasingly shaped by AI, automation, and platform-driven ecosystems.

Yet, research suggests that while Malaysian youth are often portrayed as tech-savvy, their deeper digital fluency remains uneven. A study of Malaysian university students found that although many were adept at using digital tools, their competencies in critical analysis, information ethics, and digital responsibility were still limited (Azizan & Nasir, 2022). This gap highlights an important tension: being a frequent user of digital technologies does not necessarily translate into being critically fluent in navigating them.

Concurrently, the Malaysian Qualifications Agency (MQA) also recognizes this challenge. In its guidelines for higher education providers, MQA calls for embedding digital fluency as a core learning outcome, with explicit attention to how students critically use, innovate with, and reflect on technology in academic and social contexts (Malaysian Qualifications Agency, 2020). This reflects a broader understanding that digital fluency is not simply about technical skills, but about shaping responsible, creative, and future-ready citizens. Taken together, these perspectives show why digital fluency is so important in the Malaysian context. It is:

1. A national priority, central to MyDIGITAL and long-term economic transformation.
2. Crucial for employability and competitiveness, as industries demand youth who can adapt, innovate, and engage ethically online.
3. Still developing beyond basic use, especially in the areas of critical digital citizenship, intercultural dialogue, and ethical content creation.

Thus, by focusing on digital fluency in this study therefore speaks directly to Malaysia's social and educational realities. It offers a way to better understand not only how young people consume and create content online, but also how they negotiate identity, diversity and belonging in a rapidly digitalizing nation.

Building on these national priorities, digital fluency among youth is increasingly crucial as they are not only consumers but also active creators within the digital ecosystem. It extends beyond technical ability (e.g., using apps or devices) to include critical thinking, content creation, information evaluation and ethical digital behavior. While Malaysian youth are highly active on platforms like TikTok and Instagram, studies show their digital fluency is uneven, strong in usage but limited in critical awareness and responsible online engagement (Rosli & Yusof, 2021). According to the Malaysian Communications and Multimedia Commission (MCMC, 2020), youth often lack understanding of digital rights, privacy and misinformation. Educational initiatives like

Klik Dengan Bijak aim to bridge this gap through public awareness. At the same time, digital fluency is closely tied to employability. Youth who are digitally fluent are more likely to succeed in freelancing, self-branding, or digital entrepreneurship (Mustapha & Yahaya, 2022). Malaysian youth demonstrate strong engagement with digital tools, but they still need greater support in navigating digital ethics, developing critical thinking, and moving from being merely literate to becoming truly fluent. This makes digital fluency a key focus for education, policy, and youth development in Malaysia.

To wrap up, while Malaysia has made commendable strides in digital infrastructure and internet penetration, the literature consistently highlights critical limitations that shape youth digital fluency. A persistent digital divide remains, particularly across ethnic, regional and socioeconomic lines. Youth from urban and majority ethnic communities generally enjoy better access to devices, faster internet and digital education compared to those from rural, indigenous, or lower-income groups (MCMC, 2022; Rahim & Pawanteh, 2020). These structural inequalities hinder equal participation in digital spaces, limiting opportunities for youth to critically engage with online content, represent their identities and participate in interethnic dialogue. Barriers also emerge through language exclusion, the absence of culturally inclusive digital literacy education, and the dominance of majority narratives online, which marginalize minority voices.

Beyond access, another significant limitation lies in the ability of Malaysian youth to critically evaluate online information, especially AI-generated or algorithmically amplified content. Despite their high engagement on social platforms, many young users struggle to differentiate credible information from misinformation or recognize hidden biases in algorithmic recommendations (Ismail & Norizan, 2021). This becomes particularly concerning in a multiethnic context, where the circulation of misinterpreted or false information related to ethnicity, religion or culture risks fueling misunderstanding, distrust or even social tension (UNESCO, 2022). Youth who are digitally active but lack critical fluency may unintentionally reinforce stereotypes or circulate unverified content, revealing how access alone does not ensure equitable or responsible digital participation.

Together, these limitations underscore why future research and policy cannot treat digital fluency as merely technical proficiency. Instead, it must be framed as a broader sociocultural competency, one that bridges divides, develops critical awareness and prepares Malaysian youth to navigate increasingly complex and AI-driven digital environments.

METHODOLOGY

For this study, we adopt a qualitative approach, using in-depth interviews as the primary method. This is a pilot project, intended to explore key themes and provide insights that will guide more extensive future research. The pilot involved university students and youth aged 19 to 30, ranging from undergraduate to PhD levels, and representing diverse ethnic, religious and socio-cultural backgrounds. Data were collected through semi-structured, in-depth interviews with N= 24 Malaysian youth (aged 19–30; [14] Malay, [5] Chinese, [3] Indian, [2] Indigenous/Bumiputera ; [18] female, [6] male) recruited via criterion-based and snowball sampling across university contexts. Interviews averaged 50 minutes, were conducted in English or Bahasa Malaysia, audio-recorded, and transcribed verbatim. Qualitative data were analyzed using Braun and Clarke's (2021) reflexive thematic analysis in tandem with exploratory computational text analysis (N-grams and sentiment profiling via Google Colab) to cross-validate emergent themes

We engaged with n-grams, a technique from natural language processing (NLP) that examines contiguous sequences of words. For example, bigrams (N=2) identify pairs of consecutive words, while trigrams (N=3) capture sequences of three. Analyzing the frequency of N-grams, especially bigrams and trigrams, is helpful to identify phrases. While individual word frequencies tell which words are common, N-grams further elaborate by providing information of phrases or combinations of words are common. For example, the word 'social' and 'media' might be common words but seeing that 'social media' is a frequent bigram confirms that this specific phrase is important in the data. Other than identify phrases, N-grams analysis also provides more context than single words, giving a better sense of how words are being used together. These analyses provided an additional lens for interpreting the data and will be elaborated further in the findings and discussion section.

FINDINGS AND DISCUSSION

A recurring theme across the interviews is the strategic use of bargaining and negotiation by youth to navigate online spaces, suggesting active engagement rather than passive consumption.

(1) Social Media, Cultural Identity and Sense of Belonging

Figure 1: Word cloud generated from interview transcripts.

A single-word analysis, as visualized through the word cloud, highlights recurring terms such as ‘identity’, ‘feel’, ‘media’, ‘content’, ‘ethnic’, ‘culture’, ‘share’, ‘people’, ‘Instagram’, ‘online’, ‘ethnicity’, ‘social’ and ‘community’. These words capture the central themes shaping how youth articulate their experiences, ranging from expressions of self and belonging (identity, ethnicity, culture) to the platforms and practices that mediate those expressions (media, Instagram, online). Meanwhile, terms like feel, share and community point to the affective and relational dimensions of digital engagement, underscoring how emotions and social ties intersect with cultural identity in online spaces.

From the overall findings, the single-word frequencies show that informants often spoke about their ethnic identity, how they feel about it, and the role of social media and online content in shaping that experience, along with their sense of community and culture. Notably, the most common bigram is “social media,” followed by “ethnic identity.” This indicates that social media was a central topic, consistently discussed not just as separate words but as a connected idea, while ethnic identity emerged as a key theme. Looking further, the most frequent trigram is “present ethnic identity,” followed by “ethnic identity online.” This points to a strong focus on how participants choose to present and express their ethnic identity, particularly in digital spaces. Furthermore, other trigrams, such as “understand ethnic identity,” point to how participants reflect on and make sense of their own ethnic identities. Similarly, words like sense and community and phrases such as “sense of community,” strongly highlight participants’ experiences and perceptions of belonging to a community. Many participants explicitly expressed that they ‘feel’ this sense, often in connection with others and through actions that build or strengthen communal ties.

Another bigram analysis of “sense, belonging” further illustrates this theme, revealing how participants frequently spoke about having a sense of belonging. Among our sample, these terms appeared repeatedly, suggesting that youth often frame their experiences of community, whether ethnic, national or more broadly social. At times, participants used these words to refer specifically to ethnic or national communities, underscoring how digital interactions both sustain and reshape notions of identity and connectedness. This indicates that the concept of feeling a connection or belonging to a community is a prominent theme, particularly in relation to social media and the ways youth engage in online spaces. These digital environments appear to function not only as platforms for self-expression but also as sites where participants negotiate and reinforce their sense of belonging. The recurring use of terms such as “sense of community” and “belonging” suggests that online interactions are deeply tied to how young people imagine, experience, and sustain communal bonds. This can be seen more clearly in the examples below.

"Having this kind of identity makes me feel a sense of belonging to a group that shares similar characteristics." FC24

"…I believe I have the freedom (to some extent) to present myself online. For instance, content in Bahasa Melayu Sawarak, I understand and speak the language so I engage with it or tradition, part of my ethnic identity, I can relate to or evoke sense of belonging to my ethnic group." FM30

" Social media makes me feel like there are others out there who share the same struggle of assimilating into the majority culture, and it helps me realize that there's a larger Malayali community in different countries with the same heritage, creating a sense of belonging despite being geographically apart."MI25.

" …local creators like Khairul Aming, I love how he shares traditional Malay recipes in such a fun and modern way, specially during Ramadhan, his cooking videos really bring out the cultural spirit. It reminds me of how food plays a big role in our identity, I enjoy Malay humor content, like Tiktoks that show typical 'Mak-mak' behaviour or kampung life, it's funny because it's true and relatable." MM25.

"…I find everyone in my social media circle to provide me similar sense of belonging. Maybe perhaps it's due to the fact that we're all Malaysians, hence we share many similarities. For example, my Malay friend could share a meme on Mamak but me, as a Chinese would still laugh about it." MC20

(2) Youth Negotiation of Algorithm-Driven Environments and Embedded Social Biases.

Primary Platforms Used	Excerpt	Identity Negotiation Function
Xiaohongshu (Rednote), Weibo	"...because I was born as Chinese and I am proud of it. I often use Weibo, Instagram and Xiaohongshu... I think they are the best representation of my identity."	Platform selection for cultural & heritage expression
TikTok	"I'm fully aware that the recommendations and ads I see are AI-driven... I do find it interesting how AI influences content visibility"	Critical awareness of feed curation
Instagram	"I find everyone in my social media circle to provide me [a] similar sense of belonging..."	Cross-ethnic national humor & everyday connection

Table 2: Sample Excerpts on Platform Selection and Identity Representation.

The empirical excerpts presented in Table 2 illustrate the distinct socio-technical mechanisms through which young Malaysians negotiate identity, evaluate algorithmic curation, and cultivate intercultural belonging across different digital platforms. First, platform selection functions as an intentional assertion of cultural pride and heritage preservation. Youth deliberately engage with diaspora-oriented networks such as Xiaohongshu (Rednote) and Weibo, identifying these spaces as authentic representations of their ethnic heritage. Second, engagement on video-centric platforms like TikTok is accompanied by a heightened critical awareness of automated curation, where users actively reflect on how AI-driven recommendation feeds influence content visibility and shape cultural representation. Finally, mainstream platforms such as Instagram facilitate everyday cross-ethnic connection and national solidarity, offering a shared digital space where cross-cultural humor and inclusive social circles foster a common sense of Malaysian belonging. Together, these qualitative observations demonstrate that youth do not interact with social media architectures in a uniform manner; rather, they deploy platform-specific strategies to balance heritage expression, algorithmic resistance, and multiethnic cohesion.

After establishing their foundational platform choices, we explored their daily routines in more depth to understand how participants negotiated content and interacted with their most-used social media channels. Most participants reported maintaining two or three active social media accounts, though the specific platforms varied across individuals. For example, some favored Instagram and TikTok for visual and creative expression,

while others relied more heavily on platforms like Twitter (X) or Facebook for news, updates and community connections, for examples;

> " …because I was born as Chinese and I proud of it. I often use Weibo, Instagram ad Xiaohongsu. Weibo and Xiaohongshu are the social media platform that Chinese used the most, so I think they are best represent of my identity." FC23.

> "…while X and Instragram are for friends and strangers, I feel close to Facebook. X, Tiktok and Instagram are more liberal in perceiving the religion and culture, I'm proud of my ethnic identity that makes me unique and rooted." FM20

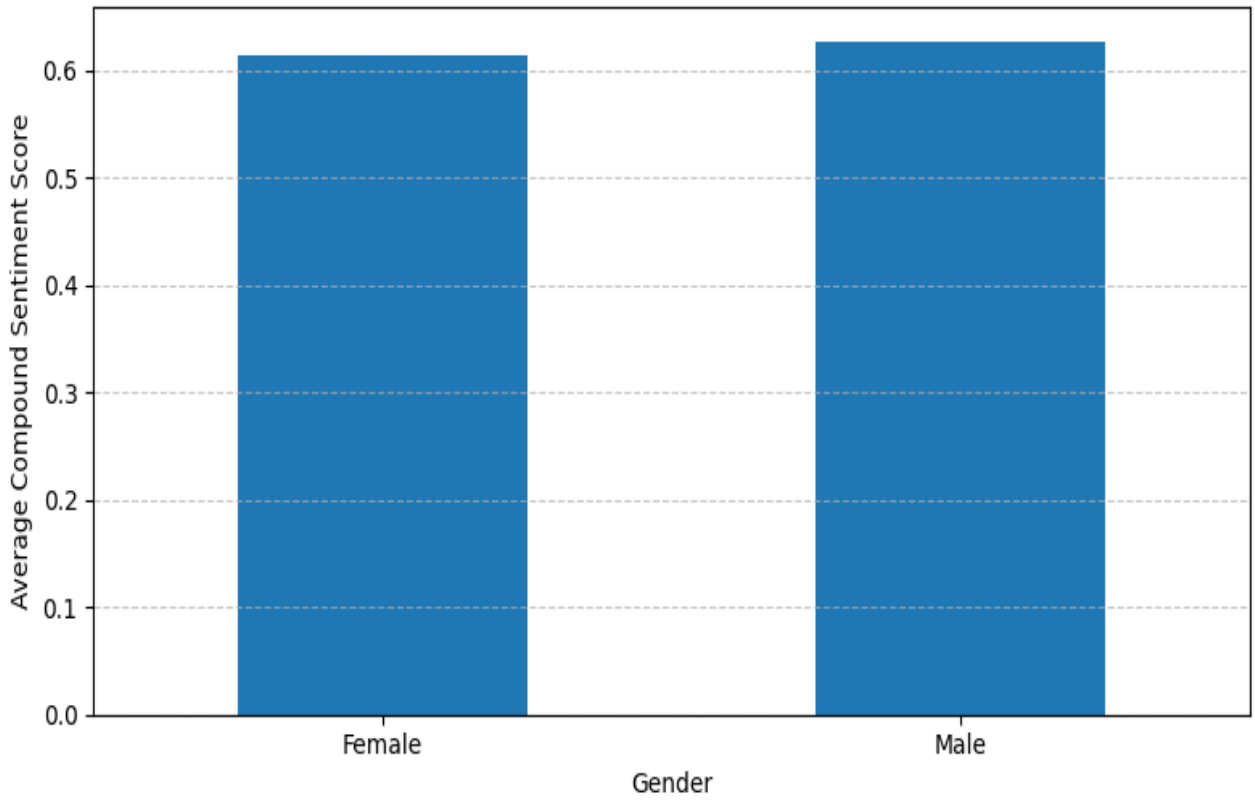

Figure 2: Sentiment analysis across gender

Then, in exploring participants' sentiment, we compared responses across gender. Both female and male respondents showed a positive average sentiment score (around 0.61 for females and 0.63 for males). The closeness of these scores suggests that both groups generally hold positive feelings towards the social media platforms they use, particularly in how these platforms allow them to represent their identities. Afterward, we examined the data coded under "engaging and consuming," we found that participants most often described actions such as following, watching, commenting or liking ethnic-related content. These practices reflect a clear level of digital engagement, particularly in terms of information consumption and social interaction around shared content. However, only a smaller number of participants explicitly mentioned creating ethnic-related content themselves. This suggests that while engagement with ethnic content is present, it is more often oriented toward consumption and interaction rather than active production. For example, FC25 explained:

> "…if people have misconceptions about my ethnicity, I might feel pressured to explain or correct them. I also want to express my cultural pride, so I try to share content that reflects my background in an authentic way, and express it like a 'identity without borders' people. Sometimes yes. I will interact with content related to my ethnicity on social media. But I will only interact with the content about how foreigner see and feel about Malaysia."

Cross-checking with our N-grams analysis, we can interpret the findings as showing that participants perceive social media as an active agent shaping their sense of self and their understanding of identity. While the mention of multiple platforms may signal digital engagement for example, being active across different sites.

Digital fluency requires more than presence or activity. It involves a deeper capacity to understand how platforms operate, critically evaluate information, create and share content effectively, and navigate online interactions safely and appropriately.

Simultaneously, informants also suggested that they are aware of their own responsibilities when navigating algorithm-driven environments, which often reflect and reinforce social biases. For example, one participant explained that they felt a sense of responsibility to ensure the continuity of their ethnicity through online practices, particularly on platforms like Instagram and TikTok. Another described Instagram as the platform that "best represents me," noting that it not only allows for self-representation but also provides access to knowledge and information about their own ethnicity. Which sometimes in ways they had never encountered before. Such reflections reveal how youth use social media not only for self-expression but also for learning about cultural traditions, including how these are practiced within and beyond Malaysia. As one participant, FI24 shared:

> "Yes, content about traditions mostly. This is because I'm curious how Hinduism or being Indian is practiced in other countries".

Others, however, expressed a more critical stance towards AI-driven recommendations, voicing concern that algorithmic suggestions may not always be accurate or trustworthy. This shows an emerging awareness among participants of the biases embedded within digital systems, even as they continue to rely on these platforms for cultural exploration and identity negotiation. Algorithmic systems are not neutral technological conduits. Rather, they are embedded with socio-technical biases that reflect commercial priorities and dominant socio-linguistic structures. While theoretical scholarship highlights how machine learning models reproduce societal inequalities through skewed training datasets, our empirical findings reveal how Malaysian youth directly experience, perceive and contest these algorithmic biases in their daily digital lives

To gain a clearer picture of participants' levels of digital fluency, we now turn to the next theme, which explores this dimension in greater depth.

(3) AI as Both Technological Tool and Sociocultural Agent in Shaping Intercultural Dynamics.

As participants interact with digital platforms and AI tools, their online experiences are continuously influenced by algorithmic recommendations and diverse cultural influences. Although AI makes finding tailored content and learning resources easier than ever, youth navigate these spaces with a healthy scepticism. They weigh the practical benefits of smart technologies against real concerns about bias, losing cultural identity, and constant online tracking.

Participant reactions to AI-driven recommendation feeds range from enthusiastic adoption to frustration regarding identity representation. For some, recommendation algorithms successfully curate content that aligns with their personal interests and cultural identity. As FC22 shared:

> "I love AI-driven recommendations. They really do recommend content that I'm interested in and in most of time reflect my identity."

However, other participants noted a distinct disconnect between automated curation and their nuanced cultural backgrounds. FM24 observed that alignment is purely transactional and behavioral, "Some ads and recommendations fit my interests, but others don't. It depends on what I've been looking at or sharing online." For others, algorithmic feeds fail to capture deeper socio-cultural nuances altogether. As FI24 explained. "It's a cool feature but these AI-driven recommendations do not accurately reflect my identity interests." Beyond personal alignment, youth expressed critical scepticism regarding the factual and cultural accuracy of AI-generated content. Participant experiences also highlight how commercial AI systems generate inaccurate or stereotyped cultural information due to a lack of documented digital archives for non-Western or non-dominant ethnic groups. FC25 observed that algorithmic tools fail to represent oral and non-written cultural histories accurately:

> "Not all information provided by AI is accurate. Sometimes background information is given and spread through discussions rather than written records. This happens because there is no extensive research on every background in the world."

Hence, youth demonstrate high critical digital literacy, recognizing that recommendation algorithms act as powerful gatekeepers regulating content visibility and cultural representation in the public sphere. FM29 articulated this reflexive awareness:

> "I am fully aware that the recommendations and ads I see are AI-driven, so I remain extra cautious about them. While I personally don't engage much with these ads I do find it interesting how AI influences content visibility. It makes me reflect on how AI algorithms shape what people see and how this impacts cultural representation in the digital space."

Rather than experiencing neutral content distribution, participants from minority and indigenous backgrounds reported that platform recommendation feeds systematically prioritize commercial trends and majority-group content while obscuring localized cultural heritage. For instance, MB25 (a Kedayan youth from Sarawak) articulated how commercial feed algorithms render smaller ethnic groups digitally invisible:

> "Honestly, I seldom see AI-driven recommendations or ads that reflect my ethnic identity or deeper cultural interests and that itself says something. Most of the ads I come across are generic related to shopping tech or popular entertainment and rarely connect to my identity as a Kedayan or even as someone from Sarawak. It makes me feel like people from smaller or indigenous communities aren't really seen in the data that drives these algorithms."

Alongside concerns of cultural misrepresentation, participants voiced pervasive anxieties regarding the surveillance-like capabilities of platform algorithms. The perceived ubiquity of automated data tracking creates unsettling experiences for users during everyday digital interactions. As MM23 described:

> "Yes, sometimes they do reflect my interests which can be helpful also. But honestly, it can also be a bit scary. There are times when I just talk about something and suddenly related ads or content start showing up on my phone. It makes me wonder how much my phone is really listening or tracking."

In response to these biased and intrusive experiences, youth do not remain passive targets of automated curation. Instead, they exercise agency by strategically withholding engagement, switching platforms, or rejecting AI-generated content altogether. Rather than passively absorbing algorithmic narratives, users assert critical digital citizenship through selective non-participation, as succinctly captured by FC24:

> "I have very negative feelings on AI generated content and prefer to not engage with them."

Taken together, these empirical reflections demonstrate that Malaysian youth do not function as passive consumers of algorithmic feeds. Instead, young people engage with AI as an influential sociocultural force rather than a neutral software program. They take advantage of its tools for learning while actively questioning its hidden biases, pushing back against online tracking, and advocating for fair representation of marginalized cultural identities.

As seen above, and drawn from our analysis, participants' experiences of navigating platforms and apps are closely tied to the intercultural dynamics they encounter online. This exposure often brings them into contact with diverse perspectives. While some participants expressed enthusiasm for AI and its potential to support self-understanding and learning, others were more skeptical or even pessimistic. Many acknowledged that these technologies shape their learning pathways and skills development over time, yet they also voiced concerns, particularly around the surveillance-like capacity of AI to detect conversations, which some described as unsettling. Alongside this, several participants indicated a preference to avoid engaging with AI-driven content altogether, citing issues of trust and discomfort. Others highlighted feelings of underrepresentation, noting that their own ethnic groups were not sufficiently visi,ble in social media spaces. These reflections point to the ambivalence with which youth approach AI: as both a tool for growth and cultural exploration and a source of anxiety, exclusion or misrepresentation.

Emergent Framework.

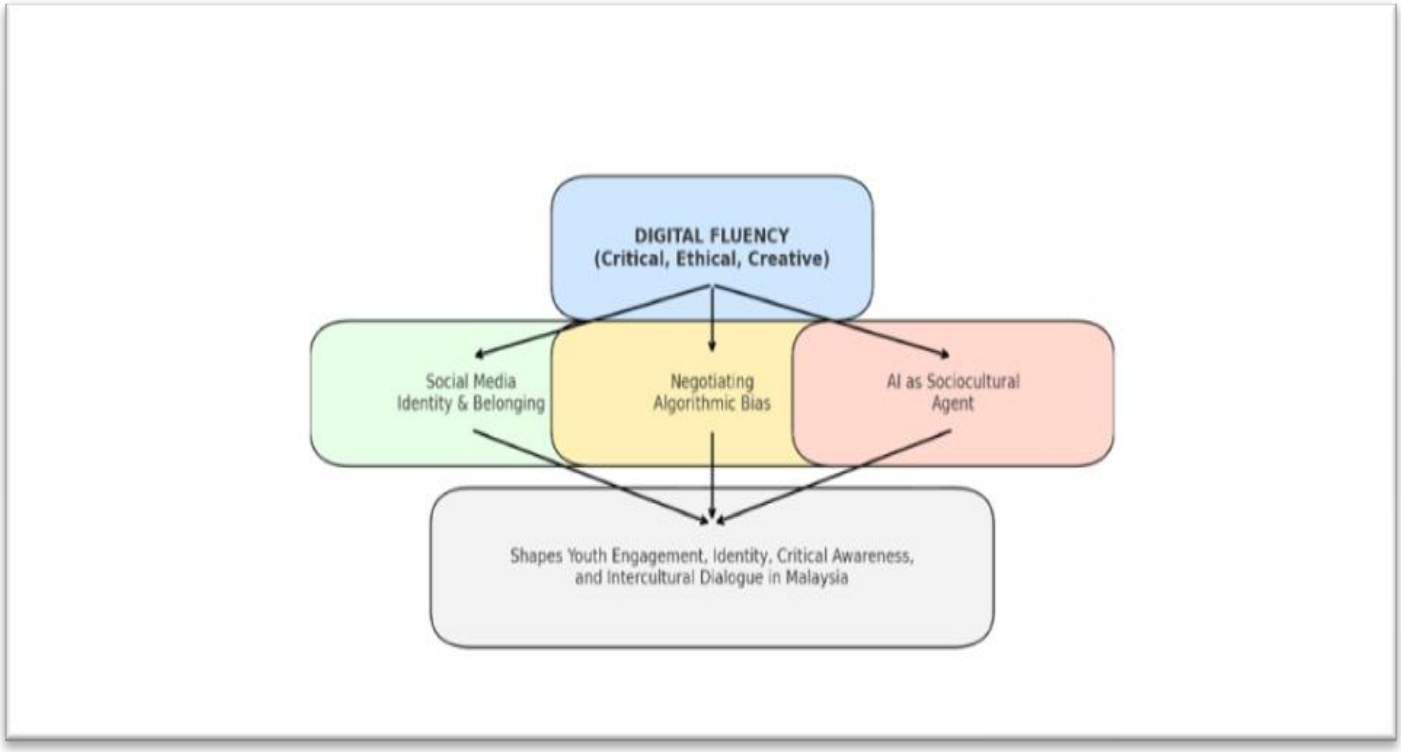

Figure 4: Framework for Understanding Digital Fluency in Ethnic Studies Among Malaysian Youth

The emergent framework positions digital fluency as the core socio-technical competency shaping the digital lives of Malaysian youth. Rather than focusing on simple technical execution or platform comfort, this study frames digital fluency as an active capacity for critical assessment, digital bargaining, and ethical decision-making. Placing digital fluency at the core of this research reveals how youth intentionally navigate and negotiate their online environments instead of remaining passive users. Placing digital fluency at the analytical center illuminates how youth dynamically navigate three interconnected domains: (1) constructing cultural belonging while preserving heritage and mitigating majority assimilation pressures; (2) negotiating algorithmic curation through feed retraining, platform-switching, and selective engagement to resist automated homogenization; and (3) evaluating AI as an influential sociocultural agent by balancing its practical benefits for self-learning against critical concerns over data tracking, algorithmic bias, and cultural erasure. Within Malaysian ethnic studies, this framework offers an integrative lens to demonstrate how youth exercise digital fluency to contest automated curation, navigate structural bias, and actively assert intercultural agency in algorithmically mediated spaces.

LIMITATIONS OF THE STUDY

This study has several limitations that should be acknowledged. First, our sample is centered on Malaysian university students, which means the findings reflect the perspectives of a relatively educated and digitally connected group of youth. Their experiences may not fully represent those of young people outside higher education, particularly those with limited schooling or less exposure to digital platforms.

Second, while participants demonstrated a clear basic awareness of algorithms, bias and misinformation, their understandings were often partial and shaped by their own online practices. This indicates both the potential and the gaps in current digital fluency among Malaysian youth.

Finally, structural inequalities continue to shape digital access. Despite Malaysia's progress in expanding digital infrastructure and increasing internet penetration, a digital divide persists along ethnic, regional and socioeconomic lines. Youth from urban areas and majority ethnic groups generally enjoy greater access to devices, faster internet and stronger digital education opportunities compared to their peers in rural, indigenou,

or lower-income communities. These inequalities restrict not only technical skill development but also the capacity to critically engage with diverse online content, represent one's identity, and participate meaningfully in interethnic dialogue.

Overall, these limitations highlight the need for more inclusive research and policy attention, ensuring that digital fluency can serve as a foundation for inclusion, intercultural understanding and social cohesion in Malaysia's digitally mediated future.

CONCLUSION

Traditional scholarship on Malaysian ethnic relations has historically focused on offline, state-managed frameworks such as consociationalism, physical spatial segregation, and official government policies. However, social media platforms now function as digital third spaces where young people actively express, combine, and negotiate their identities beyond physical boundaries. Through this shift, intercultural interactions among youth are increasingly shaped by algorithmically mediated pluralism, where socio technical algorithms actively curate what individuals encounter, engage with, or ignore. Rather than passively receiving official narratives, young Malaysians navigate these digital environments to reshape traditional concepts of citizenship and belonging in a multiethnic society.

Within these automated spaces, young adults exercise digital fluency as a critical socio-technical competency that extends far beyond basic operational skills or simple user interface familiarity. Through digital negotiating and bargaining, youth strategically draw on regional languages, connect with transnational heritage networks, and share cross-cultural humor to foster genuine cross ethnic solidarity. This active agency allows young users to decode algorithmic biases, resist automated homogenization and critically evaluate content recommendations. In doing so, youth navigate artificial intelligence as both a practical resource for learning and a potential source of surveillance anxiety, transforming them into active citizens who challenge digital distortion.

This critical understanding of digital fluency aligns directly with Malaysia's evolving educational policy landscape. The Malaysia Education Blueprint from 2013 to 2025 originally positioned information and communication technology as a transformative enabler across disciplines, establishing foundational initiatives such as 1BestariNet and digital literacy assessments. As global education transitions from foundational technology toward artificial intelligence, this early policy foundation serves as a direct precursor to contemporary efforts surrounding AI literacy, data privacy, and ethical technology use in schools. Fostering digital fluency thus builds upon existing national frameworks to prepare students for an increasingly platformized world.

Nevertheless, realizing the full promise of digital agency requires addressing systemic inequalities that affect technology access and participation. Persistent urban rural divides, socioeconomic disparities, and the digital underrepresentation of indigenous and minority communities shape how different groups experience automated environments. Addressing these gaps requires expanded research beyond university settings to include rural, lower-income, and marginalized youth, ensuring that national AI policies prioritize equity and inclusion. Grounding digital fluency in these lived socio-cultural realities ensures that technology serves human needs, empowering all young Malaysians to build a cohesive and socially just future

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