

FUTURE SOCIAL MEDIA USE WITH THE EMERGENCE OF AI IN MALAYSIA AND INDONESIA

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ABSTRACT

This study explored the future uses of social media in Malaysia and Indonesia. There were 28.68 million social media users in Malaysia and 167 million in Indonesia. Most of the 10,211 users in the United States said that social media had a largely negative impact. Another survey found that 39% of the users in the United States posited that by 2035, uses of social media would not significantly serve the public good, and 18% said social media was evolving to a worse future for society. The objectives were to explore the potential, emerging trends, and future social media uses in Malaysia and Indonesia through content analysis, the Delphi survey, and triangulation. The content analysis analyzed 40 websites using QDA Miner and WordStat 9 for theme and case identification. The Delphi survey was constructed from existing studies and distributed to 12 experts. The findings revealed that potential social media uses comprised artificial intelligence-enhanced social commerce, socio-political attempts, and the need for control mechanisms enforced by the authorities. The emerging trends included the creation of non-traditional families and social chatbots. The preferable futures of social media use comprised augmented and virtual reality, audience analytics, conversational commerce, AI-powered chatbots, digital citizenship, and virtual campaigns against online scammers. The values of social media use included narrative control, compliance with Maqasid al-Shariah, regulated technological designs, and safety in the virtual environment. The study recommended an expanded ethical guideline for social media use and an action plan for regulating social media use in the future.

Keywords: *Future study; Social media use; Emerging trends; Potential uses; Values.*

1.0 INTRODUCTION

As of January–February 2022 [1], there were 30.25 million social media users in Malaysia, equivalent to 91.7% of 32.98 million (total population), increased by 2.3 million (+8.0%) between 2021 and 2022. Facebook had 21.70 million users, equivalent to 82.4% of the “eligible” audience (aged 13 and above), with its ad reaching 65.8% and its Messenger reaching 36.8% of the total population or 46.2% of the “eligible” audience. YouTube had 23.60 million users, with its ads reaching 71.6% of the total population. Instagram had 15.55 million users, equivalent to 47.2% of the total population and 59.1% of the “eligible” audience (aged 13 and above), with its ad reaching 52.6% of the local internet user base. TikTok had 14.59 million users (aged 18 and above), with its ad reaching 61.2 percent of all adults, equivalent to 49.4% of the local internet user base. These statistics indicated that 91.7% of the total population in Malaysia are social media users who are within the reach of social media platforms that have already begun to embrace artificial intelligence (AI).

As of January–February 2022 [2], there were 191.4 million social media users in Indonesia, equivalent to 68.9% of 277.7 million (total population), increased by 21 million (+12.6%) between 2021 and 2022. Facebook had 129.9 million users, equivalent to 60% of the “eligible” audience (aged 13 and above), with its ad reaching 46.8% of the total population equivalent to 63.4% of the local internet user base, and its Messenger reaching 28.40 million users. YouTube had 139.0 million users, with its ads reaching 50.0% of the total population and 67.9% of the total internet user base. Instagram had 99.15 million users, equivalent to 45.8% of the “eligible” audience (aged 13 and above), with its ad reaching 35.7% of the total population and 48.4% of the local internet user base. TikTok had 92.07 million users (aged 18 and above), with its ad reaching 47.6% of all adults, equivalent to 45.0% of the local internet user base. LinkedIn had 20.00 million registered members, with its ad reaching 7.2% of the total population, equivalent to 9.8 percent of the local internet user base. Snapchat had 3.30 million users, equivalent to 1.5% of the “eligible” audience

(aged 13 and above), with its ad reaching 1.2% of the total population, equivalent to 1.6% of the local internet user base. Twitter had 18.45 million users, equivalent to 8.5% of the “eligible” audience (aged 13 and above), with its ad reaching 6.6% of the total population. These statistics show that 191.4 million social media users in Indonesia are exposed to the impacts of their integration of AI.

Social media users in Malaysia carried out these activities between 2021 and 2023: checking for updates on the COVID-19 pandemic, disseminating fake news, viewing pornography, and making online purchases, among others. The activities in Indonesia within the same years were, among others, hate speech, online learning [8], tourism [9], and online shopping [10].

In Malaysia, among the 8,375 respondents surveyed in [3], 7,871 respondents (94%) used social media such as Facebook, Instagram, and Twitter to gather information and the latest updates on the COVID-19 pandemic to reduce their anxiety. In this case, social media has acted as an information dissemination channel during the crisis. In another survey [4], a total of 623 respondents (71.7% of 869 surveyed) relied on social media for information, with 430 respondents (49.5%) unsure about their skill in identifying fake news, 567 respondents (65.2%) did not authenticate suspicious looking news/content, and 505 respondents (58.1%) were unaware of the existence of a local fact-checking website. In [5], a total of 735 respondents (74.5% of 986 surveyed) had lifetime exposure to pornography, and 605 respondents (61.4%) watched pornography. In [6], based on the data from 195 social media users, there are significant associations between social media use and purchase behavior.

In Indonesia, Twitter was the most used social media for hate speech, followed by YouTube videos [7]. In [8], 127 respondents out of the 202 students from three different courses at an Indonesian private university surveyed accepted social media use to support their learning and felt connected to the learning. The drivers that promoted the high level of acceptance and connectedness to learning were students' perceived usefulness, availability of learning support, motivation, and connectedness with their friends. Tourism information-sharing activities occurred among social media users [9], where credibility was positively related to community commitment and communication quality and a significant relationship existed between community commitment and communication quality on the acceptance of recommendations from social media. Instagram, Facebook, YouTube, Twitter, and TikTok are prominent platforms for Y and Z generations to shop online. They rely on product reviews, mostly from customers, and infrequently on influencer advertisements [10].

Among the 10,211 adults in the US in July 2020, 64% of the users said that social media has a mostly negative effect [11]. Only 11% of the users believed that social media has a positive impact, and 25% believed it has neither positive nor adverse effects. In 2021, its survey found that 39% of these users in the US posited that by 2035, uses of social media would not change in ways that significantly serve the public good, and 18% said social media was evolving in a mostly negative way, leading to a worse future for society. Most felt that social media contributed to their state of happiness and thought that it was difficult for them to quit using social media [12].

AI technology evolves in social media features; hence, it would change social media use behavior. The enthusiasm for AI included social media. Social bots, which are computer algorithms that automatically produce content and interact with social media users [13], have inhabited social media platforms for the past decade. Experts estimated that up to 15% of active Twitter accounts were bots [14]. In the vast majority of cases, users failed to realize that at one point they were interacting with bots and not with other human users on social media [15].

AI in social media allows for real-time synthesis of user data, facilitating real-time analytics for efficient decision-making [16]. In the same way, this benefit aids end-user businesses in combining technical data and business processes from several sources and transforming them into useful business information for analytical purposes [16]. As a result, the businesses are anticipated to grow during the forecast period. Based on the negativity in social media and the development of AI, it is essential to consider the direction of social media in terms of users' activities and events. For users, social media have become an integral communicative instrument for organizations, groups, and institutions of all kinds. Additionally, social media would continue to evolve, potentially altering how users interact with it [17].

1.1 Problem Statement

The emergence of AI technology in social media applications raised several scenarios for future social media use. The proliferation of mobile devices with internet accessibility has a significant impact on social media use. Many people engaged in virtual activities and digital marketing on social media platforms. The social media is ubiquitous, widespread, and culturally relevant; and hence, it would effectively become everything that is interconnected electronically, such as content, information, behaviors, people, organizations, and institutions, in a digital environment

where interactivity is feasible [18]. Social media encourages users to be up to date with the latest socio-technical trends to take advantage of every opportunity that can bring them into the future. Users utilize social media to access, generate, and distribute information, as well as influence and encourage organic discussions, either by sharing with people they know or people with no relations [18].

Social media use has changed dramatically alongside other users' behavioral characteristics. As of April 2021, 2.38 billion social media users have spent 2.37 hours on average per day on social media as a result of COVID-19, which was a 10% increase from year 2020 [19]. Social media affects its users decision-making, where it promotes colleges, restaurants, goods, businesses, among other things, in reviews and forums [20]. In the absence of ethical guidelines, control mechanisms, and legal actions, and in the presence of sophisticated technologies, specifically AI, there is a need to explore the potential, emerging trends, and future social media use.

In Malaysia and Indonesia, the social media use was inclined towards negativity, and with the emergence of AI, what kind of probable and possible scenarios for future social media use? Existing studies revealed the positivity and negativity in social media use, and none has explored the scenarios for future social media use with the emergence of AI, particularly in Malaysia and Indonesia.

In order to sustain the positivity and monitor the negativity, there is a need to develop a sense of direction for future social media use, an awareness of the probable and possible futures, and an understanding of the potential consequences. This study aimed to highlight the scenarios that can impact future generations in the year 2025 to year 2050.

1.2 Research Objectives and Questions

This study contributed in three ways: explored the potential social media use, discovered the emerging trends related to social media use, and explored the future social media use in Malaysia and Indonesia. This study posed the following questions: What were the scenarios of social media use in the future? Which emerging trends might affect social media use in the future? What were the preferable futures of social media uses in Malaysia and Indonesia? What were the values of social media use in the preferred futures for Malaysia and Indonesia?

2.0 SOCIAL MEDIA USE

Social media represents technology and models that support numerous information ecosystems. These technologies and models show how different individuals and organizations behave and for what purpose [21]. Advancements in technology and adapted models changed the landscape of social media, and that includes user behavior and online activity. Social media platforms have marked growth where they provide photos and videos in addition to text and offer services and economic benefits to users [22]. Presumably, social media use would evolve with the adoption of AR and VR technologies.

Social media promises users income generation and other societal benefits. YouTube, Facebook, and Instagram offer a platform for users to monetize their own-generated content. Businesses increasingly use social media and have started using digital marketing models, particularly for product adverts, to reach potential customers. Social media has a beneficial influence on significant needs such as demand for new customers and opinions in terms of open thought discussion [23]. The influence is often crafted with friends or following features and discussion spaces. Contrary to other media, like radio and television, social media influenced a new product's acceptance by being an effective information dissemination channel [24].

The growing number of social media platforms raised concerns about what users do on these platforms. People utilized social media for news feeds on Facebook and Twitter, private messaging on WhatsApp and Telegram, photo and video sharing on Instagram and TikTok, and discussion forums on Zoom, Skype, and Google Meet for several reasons. These social media uses can be classified as digital communication and socialization with other known people, including family and friends and others who do the same and share common interests and who access digital content such as user-generated product reviews [25]. These social media platforms, based on the design developed by their information technology experts, influenced the kind of interactions between people [26]. The conceptual design for information dissemination would always remain significant, particularly for online marketing of products and services.

2.1 Potential Social Media Use

One of the new features available in social media is live streaming, or real-time stories, which includes Facebook Live, TikTok Live and Instagram Live. These live streaming features attract many viewers. Users create a live stream to share their live activities, such as live tutorials and behind-the-scenes content, real-time events, and live advertising broadcasts for their followers. Digital marketers also practiced live streams as one of their business strategies to promote products by offering special discounts, presenting new product relaunches and other announcements that appeal to the audience [27]. Even though real-time stories are not new, social media users have popularized real-time stories as posting in feeds. Facebook and Instagram have online shop features for businesses and individual sellers to put up their items in the product catalogue to enable users to buy and browse the items in the same application without searching on the business websites.

Viewer demand for social videos is increasing [28]. Every month, 56% of internet users view videos on Facebook, Twitter, Snapchat, or Instagram. Every month, 81% of people aged 55 to 64 view videos online. Every month, every three social media users watch brand videos. Video is a simpler medium than text for learning and communicating online in nations with low literacy rates. Individuals are typing less and relying more on audio snippets, live video communications, and augmented reality filters. This indicates that social video is rapidly transitioning from an algorithmic advantage to a high-stakes strategy. While most companies employ social videos to increase traffic and regain some organic reach, the influence of social video will be far-reaching.

Chatbots are increasingly used by people to reach out to brands through social media. Chatbots enable businesses to respond to users' queries much quicker than before. Chatbots powered by AI are available in Facebook Messenger for businesses to promote their products and resolve customers' issues. Such chatbots enable businesses to schedule meetings, collect chats, and collect leads with ease.

Augmented reality (AR) and virtual reality (VR) are available in social media. Facebook introduced Horizon, its social virtual reality world, where people can connect, play games, and explore. This next level of social connection could very well be the future of social media. Augmented reality filters were introduced in major platforms like Snapchat and Instagram to enhance the visual content shared on social media. Augmented reality enhances our reality by adding digital elements to it and changing the way things actually look. Social media platforms have found interesting use cases for this technology and have started leveraging it in recent years. Instagram uses augmented reality for its numerous photo filters. This trend was heavily popularized by Instagram and Snapchat and, most likely, would be adopted by other social media platforms in the coming years. Facebook launched AR, experimenting with the functionalities for more applications in the future. Sephora used AR filters to allow customers to try on makeup before buying through mobile apps and Facebook Messenger and hence helps people make better purchase decisions while having a unique shopping experience.

A future scenario of social media use is a hypothetical sequence or evolution of social media usage that is expected to occur in the years ahead. According to the report on the adoption of the Internet and social media across 239 countries, social media was expected to rise, with up to 1 million new users using social media daily. In addition, 97 million new users coming online for the first time during 2023 [29]. The potential future social media use included user-generated content [30] and product discovery [31]. It created a data-obsessed world. Video editing, fake news, and conspiracy theories have flooded this information stream [32].

The algorithms might both feed what people have liked before and combined users with similar ideas and aspirations into groups. The adoption of AI has offered features that enable these potential social media uses in the future. As the user base expands, there would be an increase in user-generated materials. Negative uses of social media are the result of the exploitation of these AI features.

As social media matures, broader social implications emerge. The future scenarios of social media use can be classified into three categories: (1) social commerce [33], e.g., marketing, stock markets, and personal finance; (2) education [34], e.g., pedagogical scaffolding and collaborative learning [35]; and (3) socio-political attempts for prediction [36], e.g., elections, diseases, natural phenomena, etc. In order to explain the future social media use, this study explored how users could use future social media and provide a broader view of what social media is (and will become) in research areas and practices.

2.2 Emerging Trends for Future Social Media Use

Technology use can decrease essential aspects of social life in the coming years. Among the leading concerns about today's social media platforms are the ways in which they are exploited by bad actors who spread misinformation and the privacy issues arising out of the business model behind the systems. However, they also provide considerable social innovation and civic innovation in order to deal with emerging issues between now and the future. Technology professionals have shared a significant concern for democracy and assessed various ideas regarding possible changes and reform in the years ahead [12].

The impact of social innovation and civic innovation on the new digital age has been reacted to by 697 technology developers, business and policymakers, researchers, and activists. The explosion of data produced by people, devices, and the environment would have an impact on the development of social innovation and civic innovation. The presence of the enormous data and human knowledge issued privacy concerns and might have an impact on human values and behavior. In addition, the way data are analyzed would require a more effective evaluation of algorithms in AI.

Negative reactions towards the emergence of AI in social media would increase in the future. People are more cynical while engaging in various forms of political participation. There is an increasing recognition of the need for citizens to be savvy consumers of online information and increased efforts by educators to enable their students to separate truth from fact. There is an increasing pressure on social media companies to flag or remove unreliable or inappropriate information. In this way, people are able to critically analyze online information. More tools are becoming available for helping everyone reject disinformation [37].

New rules been enacted to make working places safer and protect children. Standards for product safety and efficiency have been created. New types of organisations, such as labor unions, have been established to support workers and make urban life more meaningful. New educational institutions have been established, particularly business schools. Social innovation and civic innovation would be important until the year 2030 [12], while there were those who felt that social innovation and civic innovation would not be important in that time frame. It was expected that social media would contribute significantly to mitigate the impact and predicted that social media was effective in preventing significant problems. There were also those who felt that social media use would have no effect on social innovation and civic innovation.

The emerging trends of future social media use included social media literacy through fact-checking for truth manipulation [38], creation of non-traditional families [39], social chatbots [40], and intelligent heritage management for measuring the cultural significance of built heritage [41]. AI facilitated the emergence of new trends.

The fact-checking verification would continue to develop as more sophisticated features are made available through AI. The non-traditional families emerged on the social media platforms, giving ways to users seeking donors or people to co-parent a child, which is a risky and unethical practice to create a family. The social chatbots are appealing to individuals with autism, who chose these chatbots as an alternative to human interaction. With the use of AI for data analysis, the shared short sentences can reveal the cultural significance of built heritage.

Misinformation, discrimination driven by AI, and privacy concerns are some of the negative aspects of the new trends. Misinformation, disinformation, malinformation, and false news are the impacts of data overload. Social media users faced challenges concerning the inaccuracy and misleading information in their social media feeds and public discourse and how to sort through fact and fiction in the coming decade. The steps that ought to be taken to address these concerns are educating the public about digital and technology literacy and keeping digital tools as the mainstay of a campaign against weaponized information [12].

A social media bot is an automated program that uses AI to steer discussions and promote specific ideas or products on social media. It is often recognized as AI virtual assistants that behave in an either partially or fully autonomous fashion and are designed to mimic human users. While benevolent social media bots exist, many social media bots are used in dishonest and nefarious ways. Even while there are good social media bots, many of them are employed in dubious and illegal methods.

AI-powered virtual assistants and the offspring of today's chatbots use user information to predict and enhance people's information demands. This use implies that access, equity, and preventing algorithmic discrimination may become civil rights and civil liberties matters while delivering information or services. The growing economic inequality and partisan polarization may be lessened by significant legislative changes. However, the rising automation and environmental degradation brought on by climate change may provide a greater issue in terms of job loss and

displacement. Corporate influence on national governments continues to present significant challenges. By methodically creating more reliable, verified sources, the sophisticated disinformation that contaminates civic information ecosystems may be lessened. However, there would be political movements that create difficult conditions for censorship of independent media and press freedoms.

Technology must not evolve in ways that increase the concerns of negativity. Social and civic innovation must not be used to negatively impact end users in issues like privacy and personal data use. Users must be protected and not exposed to cybercrime and data breaches that so often occur now. There is an increasing demand for social media privacy to be addressed [12]. Social policy discussions are still dominated by privacy issues, which make it seem as though privacy would disappear in the future. The central concern is the autonomy of the individual. The users should own their digital identity, online expression of themselves, not the corporations and governments that collect their interactions in order to channel their behavior. Ownership of digital identity can only happen when autonomy, instead of privacy, is the central question. The technology must progress with accountability tools and platforms for social media users to raise voices to counter societal ills caused by social and civic innovation, be it in leadership, business, and others.

2.3 Future Social Media Use

The preferable futures of social media use in Malaysia include digital content creation [42], video content dominance with virtual and augmented reality [43], TikTok’s features for entertainment and creativity [44], LinkedIn’s audience analytics added to creator analytics [45], and online purchases and shopping [46]. The digital content creation uses artificial intelligence to repurpose and redesign the content. Virtual and augmented reality blur the lines between physical and digital realities, create interactive videos, and produce short videos.

The preferable futures of social media use in Indonesia include social commerce [47], conversational commerce and conversational AI [48], and flexing content [49]. The use of influencer marketing has encouraged the increasing adoption of social commerce. TikTok has been the primary social commerce channel in Indonesia. Customers can utilize chatbots to interact with businesses and receive responses with the help of conversational AI-assisted commerce. Conversational AI-assisted commerce enables companies to connect with millions of consumers on a personal basis and to understand their personalized experience.

The preferred future social media in Malaysia offers values that include narrative control [50] and content creation for advertising [51]. The values in Indonesia include electronic word-of-mouth and influencer attributes [52] and a personalized dimension to gain consumer loyalty [53]. The narrative control strategy enables political parties to update supporters on the latest information and opinions and, with algorithmic influence, suppress opponents’ viewpoints. Artificial intelligence-assisted social media marketing increases consumers’ confidence in staying with a branded product.

Social media has impacted the ecosystem in which users interact with digital content or information through numerous online social media platforms. Facebook, Instagram, and Twitter were important platforms for individuals to communicate with one another, while also being good platforms for various areas as a digital tool to simply facilitate humankind having a better life [23]. The social media technology in a wider context is more than just media sharing and specialized digital services; it is also about digital places where individuals conduct significant portions of their lives. Social media has changed over time, becoming less about particular platforms or technologies and more about what people do there.

2.4 Research Gaps

Similar existing research works have examined social media use and its emerging trends. These works have strengths and weaknesses (Table 1) and their research gaps supported the need for another study.

Table 1. Strengths and weaknesses of existing works, research gaps, and focus of this study.

Study	Strengths* and Weaknesses**	Research Gaps	Focus of this Study
[16]	*identified the future direction in the use of AI and social media multimodal content for disaster response and management **literature review of the challenges	Issues in detecting crisis event shared in social media	Technology for future social media use based on content analysis

[18]	*social media prediction for finance, marketing, and sociopolitical categories **literature review of social media prediction models	Prediction by algorithm with ambiguous results and quantitative	Prediction by experts and systematic qualitative and quantitative
[21]	*identified nine themes from academic research, discussions with industry leaders, and popular discourse for immediate, near, and far futures through three lenses: consumer, industry, and public policy **the identified nine themes are influenced by marketing domain	Relied heavily on North American examples to illustrate the emergent themes	Malaysian and Indonesian examples to illustrate the near and far futures
[22]	*social media is seen as enabler and driver of innovation **literature review of social media paradigms	a-theoretical papers and theoretical papers	a-theoretical study with qualitative and quantitative methods
[39]	*examined the emerging informal avenues of family creation through social media that circumvent the use of regulated fertility clinics *legal implications **literature review of regulations	Recommendations for future legislations in informal avenues of family creation through social media	Recommendations for values in future social media use

3.0 METHODOLOGY

This study adopted content analysis and a Delphi survey. The keywords applied as a Google search to identify the documents for content analysis were mostly those mentioned in the existing relevant research works:

- i. future AND “social media use”
- ii. (emerging OR trend OR scenario) AND “social media use”
- iii. (value OR impact) AND “social media use”

The content analysis involved 40 websites (Table 2a – 2b) yielded from the keyword search and was analyzed using QDA Miner and WordStat 9. QDA Miner [54] is qualitative data analysis tool for organizing, coding, annotating, retrieving, and analyzing collections of documents. WordStat [55] is a text analysis software for extracting themes and trends. The websites offer a readily accessible pool of information, allowing for a review of trends. The search results were browsed up to the first page of no result on future use, emerging trends, and values.

Table 2a. Content analysis in near future (2025-2030)

Study	Topic	Near Future Media Social Use
[56]	5 Predictions On The Future Of Social Media	Content aggregation; Virtual worlds
[57]	Looking Forward: Imagining Social Media In 2025	Evolving way of communication
[58]	5 Predictions Of What Social Media Will Look Like In 2025	Use of video; Enhanced role for influencers; Augmented reality
[59]	8 Social Media Marketing Trends And Predictions For 2025 And Beyond	Emerges as a shopping platform; Proliferation of short-form video content; Augmented reality; User-generated content
[60]	16 Social Media Trends For 2025 And Beyond	Artificial intelligence; Augmented reality; Social commerce; Online communities; Influencer marketing; Effective customer support
[61]	2021 Predictions: The Future Digital Media Technology Amidst The Pandemic	Social commerce and influencer marketing
[62]	Future Of Digital Marketing By 2025	Artificial intelligence; Chatbots; Virtual reality
[63]	Future Trends In Social Media	Social commerce
[64]	Social Media Global Market Report 2021: COVID 19 Impact And Recovery To 2030	Social media advertising

[65]	Marketing In 2025: Six Key Trends That Will Drive The Future	Artificial intelligence; Virtual reality
[66]	32 Social Media Video Marketing Stats You Need To Know In 2022	Video content
[67]	Social Media Trends For 2025 Future Of Digital Marketing 2025	Virtual reality; Artificial intelligence
[68]	Social Media Trends In 2025 You Can't Miss	Video content
[69]	Survey Report: Deep Shift Technology Tipping Points And Societal Impact	Artificial intelligence and decision-making
[70]	The Future Of Digital Marketing By 2025	Video content
[71]	The Future Of Social Media At The Turn Of The Decade	Use of content
[72]	25 Predictions For Social Media Marketing In 2021	Augmented reality; Virtual reality
[73]	The Future Of Social Media Marketing: 11 Trends You Need To Know In 2021	Influencer marketing; AI Chatbots
[74]	The Future Of Social Video: A Brief Look Into What's Next [Expert Predictions + Data]	Social video
[75]	Top 20 Social Media Future Trends & Beyond	Video content; Augmented reality; Fake news; Artificial intelligence
[76]	Top Social Media Changes In 2025 Are You Ready?	Social listening; Artificial intelligence
[77]	What's The Future Of Social Media? 18 Social Media Predictions	Augmented reality; Primary customer service tool; Video content; Influencer marketing
[78]	What Will Social Media Look Like In The Future?	Video content; Augmented reality; Virtual reality

Table 2b. Content analysis in far future (2030-2050)

No.	Topic	Far Future Media Social Use
[79]	5 Ways Social Media Will Change Employees By 2030	Connected; Valued
[80]	11 Predictions On The Future Of Social Media	Political platform; Virtual experiences
[81]	5 Ai Predictions For The Year 2030	Artificial intelligence
[82]	10 Expert Predictions On The Future Of Social Media	Video content; Influencers; Augmented reality; Artificial intelligence
[83]	21 Technology Tipping Points We Will Reach By 2030	Connected devices; Digital citizens
[84]	AI In Social Media Market Size, Share, And Growth Analysis	Artificial intelligence; Machine learning
[85]	Do You Think Facebook Is The Social Network People Will Still Cling To In 2026, 2036 Or 2046?	Virtual friends
[86]	How Social Media Will Change Friendship In 2030	Connected; Fake news

[87]	Experts Predict More Digital Innovation By 2030 Aimed At Enhancing Democracy	Connected people; connected devices
[88]	Social Media In 2030 (And How It Will Affect YOU)	Product discovery; Social commerce; Fake news
[89]	Social Media In 2050	Fake news; Connected people
[90]	What Will Be The Future Of Social Media In 2030 – 17 Predictions	Augmented reality; Virtual reality; Artificial intelligence; Machine learning; Conversational AI
[91]	The Future Of Media: Concepts And Trends For Communication Professionals	Virtual reality; Augmented reality; Influencer
[92]	What Comes After Social Media? 2030 And Beyond	Digital marketing
[93]	What Social Networks Will We Be Using In 2030?	Connected; User's experiences
[94]	What Will The Internet Be Like In 2050?	Internet of people; Artificial intelligence
[95]	Which Major Social Networks Will Survive Until 2050?	Video content; Facebook

This study conducted a two-round Delphi iterative consultation process [96] with experts to develop possible, probable, preferable futures, and their views. The Delphi survey enabled the researcher to capture as much information as possible to determine the likelihood of future events and trends.

A review of literature produced the questionnaire items for round 1 of the Delphi survey. The responses were consolidated and presented as statements with a Likert scale for round 2 of the Delphi survey [97]. The Likert scale has these items: definitely, probably, possibly, probably not, and definitely not.

This study used purposive sampling for identifying the experts. The survey involved experts comprising lecturers who specialize in social media, authors who published at least one journal article on social media, and invited speakers who delivered keynotes on social media in Malaysia or Indonesia (Table 3). A total of 12 experts, authors, and keynote speakers participated in round 1. Of these 12 people, 6 participated in round 2. Expert opinions were deemed to be in agreement when they exceeded 67%. The consensus was considered stable if the replies varied by 50%. The experts maintained their views in the second round. There was no extreme responses. Disagreements were resolved through 5-points Likert scales.

Table 3. Experts for Delphi Survey

No.	Criteria	Area of expertise	Institution	Article
1.	Authored a journal article on <i>social media use</i> indexed in Scopus	IT	UUM, MY	Proposed e-government 2.0 engagement model based on social media use in government agencies
2.		Sociology	UTHM, MY	Social media usage and awareness of cyber security issues among youths
3.		Journalism, Media Studies	UKM, MY	The use of social media among B40 adolescents in Klang Valley
4.		IT	UKM, MY	Revenue prediction based on purchase intention mining using YouTube Trailer Reviews
5.		IT	ITS, ID	The role of risk-benefit and privacy analysis to understand different uses of social media by Generations X, Y, and Z in Indonesia
6.		English Education	UIB, ID	The social media use for digital natives: Parenting model of muslim cleric families

7.		Library & Information Science	UIN Jakarta, ID	Information in the age of misinformation: Counteracting the problems of online radicalisation with digital literacy
8.	Invited as a keynote speaker on social media use	IT	IUM, MY	Social media from Islamic perspective
9.		Digital Society and Economy	UGM, ID	The institutionalisation of social media in politics: Dynamics, applications, critiques, and challenges
10.	Studied future social media use	Journalism	USIM, MY	Future Studies
11.		IT	Airlangga Univ, ID	The role of risk-benefit and privacy analysis to understand different uses of social media by Generations X, Y, and Z in Indonesia
12.		Library & Information Science	UIN Jakarta, ID	Information in the age of misinformation: Counteracting the problems of online radicalization with digital literacy

A triangulation was conducted subsequent to the Delphi survey. The purpose of the content analysis, Delphi survey, and triangulation was to enrich the understanding of the potential, emerging trends, and future social media use in Malaysia and Indonesia.

For inclusion, the criteria set in this study was that all identified content must be published in 2018 onwards. This is because the study wants to ensure the latest and up-to-date information, which would depict the most relevant prediction by taking into account and identifying the existing features of social media in present usage. Content by expertise or general public opinion in a social media study that mainly discussed predictions and features that could be potentially used by people around the world, especially in Malaysia and Indonesia. The level of analysis included word, word sense, phrase, sentence, themes.

Additionally, the future's parameters have been established within a timeframe that represents both the near and far future. The criteria of the near future in this study refer to the years of 2022 until 2025, while the far future in this study refers to the year 2030 and beyond.

The content analysis was labor intensive since each website must be assessed for relevance, their content be converted into .txt files for analysis in QDA Miner and WordStat 9, and each file screened for tagging. The Delphi survey involved follow-ups and validation on the consolidation by an expert teaching mixed method for a PhD program. Even though none of the experts have experiences in applying advanced prediction models, they have acquired data on the emerging and trends in social media in Malaysia or Indonesia in their publications and papers.

4.0 FINDINGS AND DISCUSSIONS

4.1 Future Scenarios for Social Media Use

Table 4 shows the scenarios of social media use for the years 2025–2030, known as the near future, and Table 5 shows the scenarios of social media use for 2030–2050, the far future. The scenarios were drawn from the themes and cases extracted using content analysis and gathered from the responses to the Delphi survey. Results of the triangulation are highlighted in grey cells.

Table 4. Scenarios of Social Media Use in the Near Future.

No.	Themes & Cases from Content Analysis			No.	Scenarios from Delphi Survey	
	Scenarios	Frequency	No. of Cases		Round 1	Round 2
1.	Video content creation	510	61	1.	Social media uses in the near future would be uncontrollable.	Probably – 67%
2.	Influencer marketing	255	36	2.	Social networks would have a growing role in the near future.	Definitely – 83%
3.	Virtual reality personal experiences	148	22	3.	Social media would dominate people's communications in the near future.	Definitely – 67%

4.	Augmented reality	139	20	4.	All daily activities would connect to social media in the near future.	Definitely – 67%
5.	Customer satisfaction powered chatbots	133	20	5.	Social media would be reachable in terms of price, duration, and distance in the near future.	Probably – 67%
6.	Voice personalization	119	15			

Table 5. Scenarios of Social Media Use in the Far Future.

No.	Themes & Cases from Content Analysis			No.	Scenarios from Delphi Survey	
	Scenarios	Frequency	No. of Cases		Round 1	Round 2
1.	Fake news	383	27	1.	Social media would have new features such as targeted geo-social services.	Probably – 50%
2.	Virtual friends	313	21	2.	The direction on how to wisely use and take full advantage of social media would be strengthened.	Possibly – 50%
3.	Machine learning	297	14	3.	The direction on social media use and digital literacy would be more visible.	Definitely – 50%
4.	Artificial intelligence	250	13	4.	The direction on social media use must not be separated from the roles and policies of the government.	Definitely – 50%
5.	Augmented reality	139	8	5.	Government policy on the social media use shall be vital to control the development of digital technology.	Definitely – 67%
6.	Connected devices	93	5	6.	Government must guide on how digital technology must play a role in the advancement of education and of the public mindset.	Definitely – 100%

Video content creation with the highest frequency and cases can probably be mapped with the experts concerns that social media use in the near future would be uncontrollable. The experts' predictions that social networks will play an increasingly important role in the near future were being supported by influencer marketing, which is the second most common type of marketing. The scenarios of fake news and virtual friends can be mapped to strengthening the direction on how to wisely use and take full advantage of social media. Users ought to be trained to apply the checklist approach, cognitive approach, motivation-centered approach, and social and heuristic approach in assessing the credibility of news [98].

The triangulation revealed that government policy is vital to controlling digital technology development and its role in advancing education and public mindset. The scenarios also have social media assisted by artificial intelligence. Recently, the Malaysian government announced that “social media companies would be required to obtain licences under the Communications and Multimedia Act (CMA) 1998. The new regulatory framework comes into force on 1 January 2025” [99]. The Malaysian Communications and Multimedia Commission (MCMC) introduced a new regulatory framework for internet messaging and social media service providers with the following key provisions: user safety and protection (particularly children) against online harm, online scams and sexual grooming; and content moderation with strict content moderation policies for misleading advertisements and harmful content to minors [100].

The content analysis revealed that finding people through social media has the highest frequency (118), followed by seeking knowledge (79) and confirming information (62). Finding people can be mapped with the experts’ opinions that the world is getting smaller, people’s presence is more on social media than in the real world, and the establishment of learning communities. Seeking knowledge will be a culture among children and students. Confirming information will reduce the sharing of information bias. The triangulation revealed that the negative effects depend on the social media features.

4.2 Future, Emerging Trends, Values of Social Media Use

Table 6. Future, Emerging Trends, and Values of Social Media Use from the Delphi Survey

No.	Potential Future Social Media Uses from the Delphi Survey	
	Round 1	Round 2
1.	With the easy access towards information and services, social media would probably make the world getting smaller.	Definitely – 67%
2.	People would be present in social media more than the real world.	Probably – 67%
3.	Social media has become a familiar item among a community. People especially student would be able to learn with unlimited space and time. Whenever they learn, they would be able to use the sophistication of social media technology at their disposal.	Definitely – 83%
4.	All groups of people from kindergarten to university students would use social media in interacting with and exploring sources of knowledge related to their tasks in learning.	Possibly – 67%
5.	Increasing use of social media would create other problems mostly for people who never had knowledge of what information bias shared on the social media. Many people shared something which would be provocative.	Probably – 67%
6.	Advances in social media technology would cause social problems and privacy issues.	Definitely – 50%
7.	Social media use would bring negative effects in the future depending on the features of social media that we would be having in the future.	Probably – 50%
8.	People would spend more time on social media.	Definitely – 67%
9.	Information/news and knowledge would be easy to share.	Definitely – 50%
10.	Lack of face-to-face communication skills.	Definitely – 50%
11.	Our organization should campaign on the wise social media use and at the same times provide tools for their people to learn using it.	Definitely – 50%
12.	The harmful impact of using social media at educational institutions was that the learning process carried out by teachers via face-to-face (directly) would gradually disappear.	Probably – 50%
No.	Emerging Trends from the Delphi survey	
	Round 1	Round 2
1.	Voice-activated would be commonly used.	Probably – 67%
2.	Closer interaction virtually.	Definitely – 50%
3.	Cheaper interaction virtually.	Definitely – 50%
4.	Borderless towards bad effects.	Probably – 50%
5.	Artificial Intelligence would be the commonly applied technology to enhance social media use.	Definitely – 83%
6.	There would also be technological products that are simpler and very light to carry everywhere. The learning process or meeting can be done anywhere.	Probably – 67%
7.	Privacy issue would not a barrier to the young generation who would tend to interact through live videos uploaded onto social media platforms.	Probably – 67%
No.	Preferable Futures from the Delphi Survey	
	Round 1	Round 2
1.	Easy to use and popular.	Definitely – 67%
2.	Best friends, friends, and topic-based community.	Definitely – 67%
3.	Allows many friends and variety types of content.	Definitely – 50%
4.	Catchy and attractive information (Instagram Worthy).	Definitely – 67%
5.	User friendly social communication platform.	Definitely – 67%
6.	Platform that continuously adapt to the sophistication of other social media. The existence of innovation in adjustment certainly makes people prefer Facebook in interacting with the broader community.	Definitely – 50%
7.	Social media use would change significantly.	Definitely – 67%
8.	Social media use in the future would be more flexible.	Probably – 50%
9.	Visual social networks would take place in the future.	Probably – 67%
10.	Social media would be more adaptable to the needs of society at that time.	Probably – 50%

11.	Use of Artificial Intelligence would make a big difference to the future.	Probably – 67%
12.	Social media would be more used as a political platform.	Definitely – 50%
13.	Social media use would potentially change social culture	Definitely – 67%
14.	Social media use would lead to digital citizenship.	Definitely – 100%
No.	Values from the Delphi Survey	
	Round 1	Round 2
1.	Social media use would be a larger discourse in education.	Probably – 67%
2.	Social media would become a platform to keep citizens informed during crisis.	Probably – 67%
3.	Social media would be a leading platform to keep citizens aware about the policy and issues that matter most to them.	Definitely – 83%
4.	Social media has the potential to be a major platform for young generation and the elderly to do their daily affairs in future.	Probably – 67%
5.	Social media has the potential to become an important platform in many sectors since the use of social media has been increasing throughout the decades and has not shown any declining.	Probably – 67%
6.	Social media has the potential to become a major platform for many sectors, but the government must educate her citizens about misinformation and privacy issues.	Definitely – 67%
7.	YouTube and Twitter have the potential to be a major platform for social media.	Probably – 67%
8.	To use social media ethically.	Definitely – 100%
9.	Social media users know the limit in sharing news or knowledge.	Definitely – 67%
10.	Social media rapidly grows with misinformation and privacy issues.	Definitely – 50%
11.	Social media would have more countries to wisely take full advantage of social media. to the needs of society at that time.	Probably – 67%
12.	Social media as a unifying tool for the nation and the advancement of civilized education.	Probably – 50%
13.	Educational collaboration program through social media.	Probably – 67%
14.	Social media built upon Maqasid Shariah and al-Farabi's framework for civil society.	Probably – 83%

The emerging trends of social media use included augmented reality, virtual reality, user-generated content, smart social commerce, influencer marketing, social listening, machine learning, live videos, live streaming, AI-powered chatbots, augmented reality glasses, wearables, virtual traveling, privacy issues, and security. All these emerging trends extracted from the content analysis can be mapped to the experts' predictions, such as voice-activated, artificial intelligence-enhanced use, and virtual interactions. The triangulation revealed that artificial intelligence will be the commonly applied technology for simpler products.

The preferable futures of social media use in Malaysia and Indonesia included augmented reality, virtual reality, user-generated content, social commerce, influencer marketing, machine learning, live streaming, AI-powered chatbots, privacy protection, digital citizenship, and virtual campaigns against online scammers. These preferable futures can be mapped with the experts' views that such artificial intelligence-enabled technologies will enhance the community of friends, social networks, political platforms, and content sharing.

The triangulation revealed that social media platforms assisted by artificial intelligence will be easy to use by friends and community, improve political platforms, and facilitate the becoming of digital citizens.

The content analysis highlighted that these values included ethical use of social media, artificial intelligence in compliance with *Maqasid al-Shariah*, regulated technological designs, safety in the virtual environment, and creativity. These values matched social media as the leading platform for informed citizens on policies and the limits set in sharing information. The triangulation highlighted that social media use plays a much bigger role in education and in keeping citizens informed during crises. However, misinformation would still be an issue.

The limitations of this study included the possibility of missing interpretations of the content analysis and difficulty of generalising the results to a wider population in Malaysia and Indonesia. To overcome the limitations, triangulation was applied.

Table 7 shows the comparison of these findings with those from the existing research works. The findings of this study can be consolidated with the earlier findings. Thus, this indicated that the findings of this study supported the existing works, and vice versa.

Table 7. The comparisons of findings.

Study	Findings of Existing Studies	Findings of this Study	Consolidated Findings
[9]	Tourism information sharing	Topic-based community	Tourism information as a topic
[17]	Users way of interaction	Dominate users communications	Influenced by social media
[18]	Digital environment Organic discussions	Digital citizenship Al-Farabi's framework	Living in a digital world Discussions within an ethical framework
[25]	User-generated product reviews	Customer satisfaction powered chatbots	Assisted users reviews of products
[27]	Digital marketers who practiced live stream as business strategies	Influencer marketing	Marketing done by digital marketers and influencers
[30]	User-generated content	Video content creation	User-generated video content
[31]	Product discovery	Customer satisfaction powered chatbots	Customers product reviews as potential customers product discovery
[32]	Video editing Fake news	Video content creation Fake news	Video content creation and editing for disseminating fake news
[36]	Social-political prediction	Political platform	Political strategies for election campaigns
[37]	Tools to reject disinformation	Unifying tool for a nation	A tool to reject disinformation for establishing unity
[38]	Social media literacy	Direction for social media use Digital literacy	Designing social media and digital literacy
[39]	Informal avenues of family creation	Virtual friends	Virtual friends can possibly lead to informal avenues of family creation
[40]	Social chatbots	Customer satisfaction powered chatbots	Social chatbots for product reviews toward social good
[41]	Cultural significance of built heritage	Geo-social services	Services for societal information and local wisdom
[43]	Virtual reality Augmented reality	Virtual reality personal experiences Augmented reality	Personal experiences as training data for virtual and augmented reality
[48]	Conversational AI	Voice personalization	Conversational AI enables voice personalization
[50]	Narrative control	Uncontrollable Government policy for social media use	Social media would be uncontrollable and thus, it requires government policy for use and narrative control

5.0 CONCLUSION

The future of social media use is exciting but also uncertain. It is very much still in a state of flux. If nothing else, it is vitally important to understand the practice of users on social media since it has become highly culturally relevant, a dominant form of communication and expression, and a major media type used by users.

The scenarios of social media use in the future comprise artificial intelligence-enhanced social commerce and socio-political attempts covering video content and influencer marketing, among others. However, there were concerns that would trigger the need for control mechanisms enforced by the authorities. Facilitated by artificial intelligence, the potential social media uses in the future will be user-generated content and product discovery that might encourage people to find friends, knowledge, and products. The concerns included information bias, and thus, artificial intelligence must support verification of information shared on social media.

The emerging trends of future social media use included the application of artificial intelligence technologies such as augmented and virtual reality, user-generated content, social listening, machine learning, and live videos for the

creation of non-traditional families and social chatbots. There were concerns related to regulations for the risky practice of creating non-traditional families. The preferable futures of social media use in Malaysia and Indonesia comprised augmented and virtual reality, audience analytics, conversational commerce, AI-powered chatbots, digital citizenship, and virtual campaigns against online scammers. The artificial intelligence-enabled technologies must enhance the community of friends and political platforms.

The values of social media use in the preferred futures for Malaysia and Indonesia included narrative control that requires an ethical use of social media, artificial intelligence in compliance with *Maqasid al-Shariah*, regulated technological designs, and safety in the virtual environment. The presence of non-humans has changed the nature of content creation and conversation on social media. This study recommended that plans for action and guidelines must consider the appropriate and advanced artificial intelligence technologies for regulating social media use in the future.

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