INDONESIAN JOURNAL OF COMMUNITY SERVICES
Homepage: https://ojs.literacyinstitute.org/index.php/ijcs
ISSN: 2829-7733 (Online)

Volume 4	Issue 2	November (2025)	DOI: 10.47540/ijcs.v4i2.2256	Page: 96 – 103

Ethical and Civilizational Perspectives on Digital Technology and Social Value: A Conceptual Review

Siti Sarawati Johar[1], Nazatul Amira Husaini[1], Nazirah Aliah Mohd Kamil[1], Fong Li Heng[1], Nur Diana Ilyana Muhammad Zaidi[1], Lee Poh Hoong[1], Lim Wei Li[1], Lin Wei Jian[1], Lue Zhen Luo[1]

[1]Universiti Tun Hussein Onn Malaysia, Malaysia

Corresponding Author: Siti Sarawati Johar; Email: sarawati@uthm.edu.my

ARTICLE INFO

Keywords: Civilizational Lens, Digital Technology, Ethics, Social Value.

Received : 12 September 2025
Revised : 21 October 2025
Accepted : 27 November 2025

ABSTRACT

The rapid evolution of digital technology has profoundly transformed how humans interact, construct values, and interpret civilization. This article explores the ethical and civilizational challenges posed by digital media through a conceptual literature review. It focuses on critical issues such as privacy, misinformation, algorithmic bias, and the impact of artificial intelligence (AI) on human values and cultural heritage. The discussion is framed using three ethical approaches: consequentialism, deontology, and virtue ethics. Strategic responses are proposed, including early digital ethics education, cultural preservation via modern platforms, and the enforcement of ethical technology policies. The article also addresses challenges such as social media addiction, cyberbullying, and uncontrolled technology use, which contribute to the erosion of social values and cultural identity. Ultimately, the article calls for a collective effort involving government, educational institutions, content creators, and society to cultivate a digital ecosystem that is not only advanced but also civilized and deeply human.

INTRODUCTION

Digital technology in the current era is defined as an integrated system used to solve technical problems through the application of information and communication technology (ICT), including the acquisition, processing, storage, and dissemination of information in digital form (Jabatan Digital Negara, 2023). According to Harian Teknologi (2023), as a result of scientific advancement and the Second Industrial Revolution, technology has evolved from merely an academic discipline into a practical tool systematically applied in daily life. Digital media refers to forms of communication transmitted through digital channels such as computers, smartphones, and the internet.

In the context of globalization, various digital platforms such as WhatsApp, Facebook, Instagram, TikTok, Twitter, YouTube, and blogs have become the primary mediums for interaction, information sharing, and building social networks. These platforms are known as social media or "new media", characterized by their interactivity and independence from the constraints of time and space (Ruzian et al., 2019). Social media has also become a flexible and effective educational tool, enabling people to communicate virtually without the need for face-to-face interaction.

In Malaysia, the use of social media is widespread. According to DataReportal (2025), there are 25.1 million active social media users, equivalent to 70.2% of the total population. The most popular platforms include WhatsApp, Facebook, and Instagram. These statistics indicate that social media has become an integral part of daily life for Malaysians across various religious and ethnic backgrounds. This usage is expected to continue growing, expanding the original functions of social media into new roles such as digital education and information dissemination (Yuni, 2021).

However, despite its benefits, digital technology also brings complex ethical challenges.

These include the spread of false information, exploitation of personal data, and the influence of algorithms on social perception. A study by Zainudin and Ali (2025) found that 50% of Malaysians had received false information they believed to be true, while more than 40,000 pieces of false content were removed by authorities in the first quarter of 2025. This phenomenon raises profound moral questions, especially when social media algorithms reinforce biases and create "filter bubbles" among users.

More concerning is the advancement of artificial intelligence (AI), which has the potential to reinforce social inequalities and erode human values if not ethically regulated. A study by Nur Amelina et al. (2024) found that AI can influence civilizational values, and if developed without strong ethical principles, it may disrupt the balance between technological progress and human values.

In this regard, this article aims to conceptually explore the ethical challenges in the use of modern technology, particularly in the Malaysian context. The discussion is examined using three main ethical frameworks: consequentialism, deontology, and virtue ethics. These perspectives are used to propose strategic approaches for developing a digital ecosystem that is not only advanced but also civilized and deeply human. Social media has become a primary medium that facilitates various daily human activities, including accessing local and international news, conducting business, education, learning, banking, money transfers, and weather updates.

Access to information is now at our fingertips, making social media a highly influential communication tool in modern life. According to the Digital 2023 report, Malaysians spend an average of two hours and 47 minutes per day on social media, exceeding the global average of two hours and 31 minutes (Meltwater & We Are Social, 2023). Other studies show that social media usage can reach up to six hours a day among active users (Kosmo, 2023). Malaysia is now among the countries with the highest social media usage time, on par with the Philippines (Sinar Harian, 2023).

The presence of social media as part of the new media landscape has brought profound effects on individuals, communities, and nations. While its benefits are wide-ranging, social media also has the potential to cause negative impacts when misused. Among the issues commonly associated with the misuse of social media are cybercrime, unrestrained freedom of expression, the spread of false information, defamation, provocation, and religious conflict. People often use these platforms to express dissatisfaction, sometimes in unethical language, which can disrupt social harmony (Syed Mohammad Hilmi et al., 2022).

Furthermore, the influence of social media is expanding so rapidly that it has become difficult for authorities to fully regulate. According to Berita Harian (2016), the spread of inaccurate information through social media has become a threat to national unity in a multicultural society. This phenomenon is increasingly worrying, especially when fake news and provocative content are widely circulated during election periods and in discussions involving sensitive racial and religious matters (Dzulpadzli et al., 2025).

Statistics from the Malaysian Communications and Multimedia Commission (MCMC) show that more than three thousand complaints related to fake news were received between the years 2020 and 2022, with the majority involving content that could potentially affect national security and social harmony (MCMC, 2023).

In this context, the role of the government is crucial in ensuring that social media is used responsibly. Measures such as the enforcement of laws, media literacy education, and public awareness campaigns must be strengthened. This article critically discusses the factors that drive social media usage among the public, identifies its impact on social well-being, and proposes strategic approaches to effectively curb its misuse.

METHODS

This article uses the literature review method by reviewing and analyzing various relevant scientific sources. The analysis was conducted systematically to identify key concepts, important findings, and research gaps related to the topic of study. This section provides a comprehensive discussion on the concepts of technology and ethics, including both their positive and negative implications within the context of a digital society. The central focus is to introduce the theme of technological ethics through several key dimensions: ethical challenges in digital media, the impact of artificial intelligence (AI) on human

values, and issues surrounding privacy and data security.

Definition of Ethics

Ethics refers to the philosophical study of human behavior that evaluates what is considered good or bad and what is morally right. In modern philosophy, ethics is not merely a set of social norms but a discipline that systematically and reflectively examines moral principles. It serves as a guide in decision-making processes that involve value judgments and social responsibility, especially in the use of technology (Pradana & Amol, 2024).

Definition of Technology

The term technology originates from the Greek words techne (meaning skill or art) and logos (meaning systematic study), referring to the knowledge of tools and processes used to solve practical problems (Abdullah et al., 2022). Technology encompasses not only physical devices such as machines and computers but also systems and methods that shape how humans interact with the world. Over time, it has become a central instrument in shaping civilization and modern lifestyles.

From the perspective of Islamic philosophy, technology is not regarded as a neutral or value-free tool. Rather, it is understood as a trust (amanah) that must be used ethically and with the right intentions. Technology is seen as part of the divine order, and its application must align with the principles of justice, balance, and the common good (maslahah). Islamic philosopher Seyyed Hossein Nasr argues that the misuse of technology reflects a deeper spiritual crisis, in which the harmony between human beings, nature, and the Creator is disrupted. He emphasizes that technology must be guided by moral responsibility and a sense of accountability to both God and society (Islam, 2020)

Definition of Technological Ethics

Technological ethics refers to the moral principles that govern the development and use of technology to ensure alignment with human values and social well-being (Abdullahi, 2025). In the digital age, ethics in technology is increasingly crucial, as technology is no longer a neutral tool but an entity that shapes social realities and moral choices (Hansson, 2017). Studies show that the design of technology often reflects the values and moral decisions of its developers (Latour, 2025). Therefore, ethical reflection must be embedded in the development process to prevent unintended negative consequences.

Key areas within technological ethics include:

Bioethics

Bioethics addresses moral issues in biology and medicine, such as cloning, euthanasia, and patient rights. Research highlights the importance of bioethics in ensuring that health technologies are used responsibly and do not compromise human dignity (Kusmaryanto, 2021).

Cyber Ethics

Cyber ethics encompasses ethical principles in the digital realm, including data privacy, cybersecurity, and interactions on social media. In the digital age, users must understand their responsibilities in sharing information and safeguarding personal data.

Engineering Ethics

Engineering ethics emphasizes the moral responsibility of engineers to produce safe, fair, and ethical technologies. Engineers must adhere to professional standards and consider the social impact of their creations (Pradana & Amol, 2024).

RESULTS AND DISCUSSION

Artificial Intelligence (AI) Ethics

AI ethics refers to the moral principles guiding the development of intelligent systems, including issues of algorithmic transparency, accountability, and user privacy. While AI can accelerate innovation, it also raises ethical dilemmas such as algorithmic bias and threats to academic integrity. A multidisciplinary approach is needed to ensure AI is used fairly and humanely. Digital platforms such as e-commerce and social media often collect user data through methods like location tracking, website cookies, and access to photo galleries to build targeted content or advertising systems (Zainudin & Ali, 2025). For instance, apps like Lazada, Shopee, Instagram, and Facebook use algorithms to analyse user behaviour for commercial gain. Although this enhances marketing efficiency, it raises ethical concerns about privacy rights and user consent.

Cybersecurity threats such as malware, identity theft, and hacking also contribute to growing concerns among digital users. According to MyCERT (2024), computer security incidents in Malaysia increased by 5% compared to the previous

year, highlighting the urgent need to strengthen data protection and cybersecurity systems. A key question arises: to what extent should technology companies and governments be responsible for protecting users' fundamental rights in the digital space?

In addition, the ethics of artificial intelligence also raises complex moral dilemmas. One of the key issues is the question of accountability when errors occur in decisions made by AI systems. For example, AI systems used in media monitoring or academic evaluation may infringe on individual rights if algorithmic bias is present (Nur Amelina et al., 2024). In the field of bioethics, technologies such as CRISPR, which enable the editing of human genes, offer significant potential in treating genetic diseases. However, they also provoke moral questions related to the creation of so-called genetic babies and the ethical boundaries of manipulating life (Kusmaryanto, 2021).

The issues of euthanasia and assisted suicide continue to be subjects of debate in modern bioethics. Although these practices aim to reduce the suffering of patients with terminal illnesses, the question of whether individuals have the right to end their own lives remains a deeply contested topic among society and moral philosophers.

Ethical Challenges in Digital Media Usage

One of the most pressing challenges in digital media usage is the issue of privacy and the handling of personal data. Zuboff (2019) introduced the concept of surveillance capitalism, referring to the practice of technology companies collecting and exploiting user data for commercial purposes without clear and sufficient consent. This phenomenon raises deep ethical concerns regarding users' rights over their personal data and the level of control individuals should have in digital spaces.

Another critical challenge is the spread of misinformation. Tandoc et al. (2018) define fake news as a blend of false reports, misinterpretations, and parody content that can shape public perception inaccurately. This issue is exacerbated by social media algorithms that reinforce echo chambers and filter bubbles (Pariser, 2011), where users are only exposed to content that aligns with their existing views, reducing openness to diverse perspectives.

Weak enforcement of laws, inadequate data protection policies, and insufficient cybersecurity regulations further contribute to the rise of ethical issues in cyberspace. According to Daud (2025), although Malaysia has implemented over 30 cybercrime-related acts, digital security threats continue to rise. Challenges include identifying cybercriminals' locations, rapid technological development, evolving definitions of cybercrime, and difficulties in cross-border investigations. MyCERT (2025) reported an increase in computer security incidents from 5,917 cases in 2023 to 6,209 in 2024, reinforcing the urgent need to strengthen cybersecurity policies and enhance digital literacy among the public.

The Impact of Artificial Intelligence (AI) on Human Values

Since the launch of ChatGPT by OpenAI on 30 November 2022, the development of artificial intelligence (AI) has accelerated rapidly, driven by commercial competition and market demand. Tech giants such as Google, Meta, and Microsoft have introduced their own AI models, each tailored for various sectors (Nur Amelina et al., 2024). By April 2025, the AI landscape had transformed significantly, with intelligent systems capable of performing complex tasks autonomously and adaptively.

Kaplan and Haenlein (2019) define AI as the ability of systems to accurately interpret external data, learn from it, and use that learning to achieve specific goals through flexible adaptation. In essence, AI mimics intelligent human behaviour and makes decisions based on historical data and behavioral patterns. However, this approach carries significant ethical risks. Because AI relies on data collected from society, it can reinforce existing social biases. The concept of algorithmic oppression explains how AI systems and algorithms can replicate and amplify stereotypes and social inequalities (Noble, 2018).

For example, search results for terms like "black girls" or "Latinas" on certain platforms are often linked to sexualized content, illustrating how biased data can produce unethical and damaging outcomes. This raises a crucial question: is it possible to develop AI that is truly fair and free from bias? If AI is built on human principles of justice, can it uphold moral and human values, or will it become a tool that erodes those values for the benefit of a few?

AI systems operating under consequentialist ethics evaluate actions based on outcomes and

impacts. While this can enhance efficiency, it risks overlooking moral values if decisions prioritize profitable results. In this context, AI could become a threat to ethics and humanity if not governed by clear moral principles (Nur Amelina et al., 2024).

Privacy and Data Security Issues

Before exploring concerns related to privacy and data security, it is important to understand the concept of big data. This term refers to extremely large and complex datasets, which may be structured or unstructured. Structured data is arranged in formats such as tables or categories, making it easier to analyse using computer systems. In contrast, unstructured data such as free text, images, or videos requires additional processing to be analysed systematically (Gruschka et al., 2018).

During the processing of big data, personal information is often exposed to the risk of reidentification, especially when anonymized data is combined with other datasets. For example, in analysing online spending patterns, details such as location, age, name, and identification number can be reidentified even after being masked. A notable case is the breach of the Shanghai National Police database, which involved twenty-four terabytes of personal data, including names, gender, phone numbers, and criminal records. This incident highlights the seriousness of threats to digital identity security (Zhou, 2023).

Users of digital media are also vulnerable to privacy issues through targeted advertising. Technology companies such as Google, Meta, and Microsoft practice surveillance capitalism, an economic model that tracks and predicts user behaviour such as screen time, interests, and spending habits for commercial gain (Zuboff, 2019). Although this data is used to improve services, excessive and exclusive data collection raises ethical concerns, especially when it is used to build predictive algorithms that manipulate users.

Strategic Recommendations

To address the challenges of strengthening social values in the digital age, a variety of proactive and integrated strategies must be implemented. One important approach is the widespread promotion of media literacy and fact-checking campaigns, particularly among students and active users of social media. These efforts are essential to reduce the spread of misinformation and to encourage responsible behaviour in sharing digital content (Tandoc et al., 2018).

Educational institutions are encouraged to provide psychosocial support, such as digital counselling and stress management programs related to cyberbullying and media addiction. In addition, physical social activities such as community service, personal development camps, and face-to-face communication sessions should be promoted to restore social relationships that have been weakened by excessive virtual interaction (Siti Aisyah, 2024).

Introducing digital ethics education from the early stages of schooling can enhance students' awareness of social and cultural responsibilities. To close the digital gap, the government is advised to expand access to technology in rural areas by providing free internet services and information and communication technology training workshops (Siraj, 2024). Ethical monitoring of device usage by parents, educators, and authorities using responsible monitoring applications can also help create a healthier and safer digital environment.

Consequentialist Approach: Evaluating Technology Based on Its Outcomes

The consequentialist approach assesses actions based on their outcomes or impacts on human well-being. In the context of digital technology, the use of social media and artificial intelligence is often evaluated in terms of benefits such as communication efficiency, information access, and work productivity.

However, this approach also exposes risks such as the spread of misinformation, digital addiction, and the reinforcement of algorithmic bias (Tandoc et al., 2018; Noble, 2018). For instance, targeted advertising systems built on user data may increase corporate profits but simultaneously compromise individual privacy (Zuboff, 2019). Therefore, this approach demands a balance between technological benefits and their negative effects on social values.

Deontological Approach: Moral Responsibility Without Compromise

The deontological approach emphasizes moral principles and ethical duties regardless of the outcomes. In the digital world, this means that technology companies and users must uphold values such as honesty, privacy, and human rights, even if

such actions are not economically advantageous (Fadillah, 2024).

For example, collecting data without user consent is morally wrong, even if it produces useful analytics (Gruschka et al., 2018). This approach supports the development of technology policies that are grounded in rights and justice rather than focused solely on efficiency.

Virtue Ethics Approach: Cultivating Ethical Character and Intentions

Virtue ethics focuses on the intentions, character, and internal values of individuals or organizations. Within the digital ecosystem, this approach encourages content creators, technology developers, and users to act with integrity, empathy, and social responsibility.

For example, algorithm designers should ask not only what can be done but also what ought to be done (Kaplan and Haenlein, 2019). This ethical framework is especially relevant in digital education, where students should be nurtured as humane and responsible technology users, rather than passive consumers.

Strategic Approach Toward a Civilized Digital Ecosystem

Based on the analysis through consequentialist, deontological, and virtue ethics lenses, building a civilized digital ecosystem requires strategies that are not only technical but also rooted in human values. The following proactive measures are proposed to ensure that technological advancement aligns with ethics and societal spirit.

Early Digital Ethics Education

Digital ethics education should begin at the early stages of schooling so that younger generations become not only technologically literate but also conscious of values. A curriculum that integrates digital literacy with moral principles such as responsibility, empathy, and integrity can help shape ethical technology users (Siraj, 2024). Learning modules may include realistic digital simulations, ethical case discussions, and exercises in making moral decisions online.

Robust Data Protection Policies Based on Human Rights

In the age of surveillance capitalism, personal data is often collected and manipulated without clear consent. Therefore, governments must strengthen data protection policies that are grounded in human rights rather than driven by economic interests. Laws such as the Personal Data Protection Act should be updated to address current challenges, including data reidentification, identity breaches, and algorithmic exploitation (Gruschka et al., 2018; Zuboff, 2019). Monitoring and enforcement mechanisms must also be improved to ensure comprehensive protection for users.

Community and Institutional Engagement in Shaping Digital Culture

A civilized digital ecosystem cannot be built through policy alone. It requires active participation from all segments of society. Non-governmental organizations, educational institutions, mass media, and content creators must work together to cultivate a digital culture that is inclusive, responsible, and ethical. Awareness campaigns, media literacy workshops, and fact-checking programs should be conducted regularly to strengthen public resilience against misinformation and digital manipulation (Tandoc et al., 2018). This approach aligns with virtue ethics, which emphasizes the development of character and good intentions in the use of technology.

Digital Preservation of Local Culture

Technology should not be a tool that erodes cultural identity; instead, it must be harnessed to empower and preserve local heritage. Digital content rooted in local arts, customs, languages, and history should be actively promoted to prevent it from being overshadowed by globalized content (Mahathir, 2019).

Efforts such as digitizing ancient manuscripts, producing cultural videos, and developing interactive heritage-based applications can foster a sense of pride in one's identity. These initiatives not only safeguard civilizational values but also help shape a digital ecosystem that is soulful and grounded in the local context.

CONCLUSIONS

In summary, the sustainability of ethics and civilization is a vital element that must be preserved in the digital era, as it plays a central role in shaping identity, moral values, and cultural integrity within a society. The absence of such sustainability may lead to the erosion of local cultural values and weaken existing social structures (Zuboff, 2019). In the digital context, challenges such as the spread of misinformation have undermined public trust and created confusion within communities (Tandoc et

al., 2018). Cyberbullying has negatively impacted emotional well-being, especially among youth, while social media addiction disrupts the balance of social life and mental health (Siti Aisyah, 2024).

Moreover, the lack of education on digital ethics has led many technology users to act without a sense of responsibility. For example, parents who fail to provide early exposure to digital ethics contribute to unethical behavior among children in digital spaces (Azmawaty, 2025). Uncontrolled use of technology also leads to the neglect of social values, particularly when children have unlimited access to digital devices without parental supervision (Siraj, 2024).

If these challenges are not addressed, they may lead to the decline of cultural heritage. Dependence on technology has caused traditional cultural practices to gradually disappear, and the widespread use of foreign languages in digital communication, especially among younger generations, poses a threat to the continuity of Bahasa Melayu as a language of national identity (Mahathir, 2019).

Therefore, all parties must work together to uphold the sustainability of ethics and civilization (Nur Shuhada, 2024). The government can play a role through comprehensive awareness campaigns, while society must practice noble values in daily life. Individuals, in turn, are responsible for cultivating ethical and culturally rich character. This study has identified key challenges in strengthening social values, proposed strategic measures to enhance ethical and civilizational sustainability, and examined the impact of technology on cultural heritage. If all stakeholders play their roles collectively and consistently, we can build a digital ecosystem that is harmonious, civilized, and deeply human.

REFERENCES

Abdullah, M. F., Rahman, N. A., & Ismail, S. (2022). Philosophy of technology in the context of islamic thought. *International Journal of Islamic Studies*, 14(2), 45–58.

Bashiir, A.A. (2025). Ethical considerations in emerging technologies: balancing innovation and morality. *Research Invention Journal of Engineering and Physical Sciences*, 4(1), 50-55

Nor, A.M. (2025). *Kewajaran zon tanpa gajet.* Harian Metro.

Berita Harian (2016,25 Disember). *Pengaruh media sosial ancaman baharu perpaduan*. From: https://www.bharian.com.my/berita/nasional/2016/12/227021/pengaruh-media-sosial-ancaman-baharu-perpaduan-musa

Datereportal Digital Global Insight (2023). *Digital 2023: Malaysia*. From: https://datareportal.com/reports/digital-2023-malaysia?rq=%20Malaysia

DataReportal. (2025). Digital 2025: Malaysia. https://datareportal.com/reports/digital-2025-malaysia

Daud, M. (2025). Isu dan cabaran dalam usaha menghadapi jenayah siber di malaysia. *Kanun: Jurnal Undang-undang Malaysia,* 37(1), 1-28.

Fadillah Yusof (29 Mei 2024). Pengamal media perlu pelihara etika, berintegriti sampaikan maklumat. Astro Awani. https://www.astroawani.com/berita-malaysia/pengamal-media-perlu-pelihara-etika-berintegriti-sampaikan-maklumat-tpm-fadillah-472592

Gruschka, V. Mavroeidis, K. Vishi and M. Jensen (2018). Privacy issues and data protection in big data: a case study analysis under GDPR, *IEEE International Conference on Big Data* (Big Data), Seattle, WA, USA, 5027-5033.

Hansson, Sven Ove, ed. (2017). *The ethics of technology: methods and approaches*. Lanham, MD: Rowman & Littlefield.

Harian Metro (2023, 13 Februari). 197 Kandungan media sosial langgar etika diturunkan.https://www.hmetro.com.my/mutakhir/2023/02/935851/197-kandungan-media-sosial-langgar-etika diturunkan-metrotv

Harian Teknologi (2023, Oktober 3). Apa itu teknologi?. From: https://hteknologi.com/blog/apa-itu-teknologi/

Islam, M. S. (2020). An Islamic approach to environmentalism. *JSTOR Daily*. Retrieved fromhttps://daily.jstor.org/an-islamic-approach-to-environmentalism/

Jabatan Digital Negara. (2023). Pelan strategik pendigitalan sektor awam 2021–2025. https://www.jdn.gov.my/pelan-strategik-pendigitalan/

Kaplan, A., & Haenlein, M. (2019). Siri, Siri, in my

hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, 62(1), 15–25.

Kusmaryanto, S. (2021). *Bioetika: edisi kedua*. Jakarta: Penerbit Buku Kompas.

Latour, B. (2025). *Technology and morality: a new framework for ethical design*. MIT Press.

Mahathir Mohamad (2019, 20 September). Adat, budaya tidak harus dipinggirkan di era moden. *BERNAMA*.

MCMC (2023). Laporan tahunan aduan kandungan tidak sahih 2020–2022. Suruhanjaya Komunikasi dan Multimedia Malaysia.

MyCERT (2024). Cyber Incident Quarterly Summary Report – Q4 2024. *Malaysia Computer Emergency Response Team (MyCERT)*, (27 Feb. 2025).

Noble, S. U. (2018). *Algorithms of oppression: how search engines reinforce racism.* United States: NYU Press.

Nur Shuhada Ya'acob *(*4 September 2024). Keperluan mengimbangi teknologi dan adab oleh generasi digital. Bernama, Tinta Minda.https://bernama.com/bm/tintaminda/news.php?id=2336241

Nur Amelina, N., Nusairah, N., Wafa, W., & Alya Sorfina, A. (2024). *Kemanusiaan di era AI: jalinan teknologi dengan nilai-nilai peradaban masyarakat.* Universiti Sains Islam Malaysia.

Pariser, Eli. (2011). *The filter bubble: what the internet is hiding from you*. New York: Penguin Press.

Ruzian, M., Zainatul Ashiqin, Z., & Nurhidayah, A. F. (2019). Literasi perundangan media baharu dalam kalangan belia. *Jurnal Komunikasi: Malaysian Journal of Communication 35*(3), 372-389.

Siraj Jalil (22 April 2024). Kanak-kanak perlu diberi pendedahan awal digital. Berita Harian.https://www.bharian.com.my/berita/nasional/2024/04/1237847/kanak-kanak-perlu-diberi-pendedahan-awal-pendidikan-digital-mcca

Siti Aisyah Panatik (2024). *Buli Siber: Media sosial buat empati, jiwa manusia semakin hilang*. Astro Awani.

Syed Mohammad Hilmi, S. A. R., Mohd Anuar, R., Che Zarrina, S., Azah Anir, N., Mohd Anuar, M., & Muhammad Hazim, M. A. (2022). Penggunaan media sosial baharu: Isu-isu dan panduan perspektif Islam. *Jurnal Usuluddin*, *50*(1), 73-96.

Tandoc, Edson C., Zheng Wei Lim, and Richard Ling (2018). Defining fake news. *Digital Journalism* 6(2), 137–153.

Yuni, F. (2021). Pemanfaatan media sosial sebagai media penyajian konten edukasi atau pembelajaran digital. *Journal of Information System, Applied, Management, Accounting, and Research, 5*(4), 1006-1013.

Zainudin, A. J., & Ali, N. M. (2025). Sains di sebalik tingkah laku perkongsian maklumat. Jendela DBP.

Zhou, Y. (2023). Shanghai police database leak: a wake-up call for global data security. *Journal of Cybersecurity and Privacy*, 5(2), 112–130.

Zuboff, Shoshana (2019). *The age of surveillance capitalism: the fight for a human future at the new frontier of power*. New York: PublicAffairs.