Assessing information literacy levels among underprivileged communities

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ABSTRACT

This study examines the levels of Media and Information Literacy (MIL) among underprivileged communities, shedding light on their digital literacy and online behaviour. Rooted in the UNESCO Media and Information Literacy framework, focusing on specific dimensions of MIL, with an emphasis on assessing the ability to retrieve, critically evaluate, and manage information. 366 participants among the targeted community were involved, where survey instruments aligned with MIL principles were adopted in identifying the strength and areas for improvement for the targeted underprivileged community. Participants’ awareness of data privacy was also assessed. The findings emphasize the critical role of targeted interventions and the need to enhance MIL among the community. Privacy awareness, cultivation of critical thinking skills, and effective online communication strategies were identified as the key factors. These observations offer insights into MIL within underprivileged communities, providing a guidance for policymakers, educators, and community organizations working towards narrowing the digital divide. Grounded in the context of Pahang, Malaysia, this research serves as a foundational resource for addressing information literacy challenges faced by underprivileged communities globally.

Keywords: information literacy, underprivileged communities, digital literacy, digital privacy awareness, digital communication strategies, digital divide.
INTRODUCTION

In today’s digitally connected world, MIL is a critical skill that empowers individuals to navigate the vast landscape of digital information effectively. For underprivileged communities, access to information, and proficiency in using and analysing digital resources and media for information can be a transformative factor in improving their quality of life. Understanding the MIL levels among these communities is essential for developing targeted strategies and interventions to bridge the digital divide and promote equitable access to the benefits of the digital age. This work focuses on assessing the information literacy levels within the underprivileged community. The focal point of this exploration is underprivileged communities in Pahang, Malaysia, presenting a unique socio-economic context that encapsulates both urban and rural dynamics.

Limited access to information and the lack of proficiency in digital media within underprivileged communities can negatively affect existing socio-economic inequalities, hindering opportunities for education, employment, and civic engagement. Without adequate MIL, individuals in these communities may face challenges in critically assessing information credibility, creating and monitoring content, and maintaining awareness of digital privacy.

The objective of this study is to assess the information literacy levels within underprivileged communities. It is centred around the broader impacts of MIL and provides insights into how the literacy level influences and shapes the digital environment, particularly for underprivileged segments of society. To guide our inquiry, the following research questions were derived:

1. What are the information retrieval skills and practices within underprivileged communities, and how do they correlate with demographic factors like age and gender?
2. How do participants in these communities understand, assess, and generate information and media content, and what is their awareness level of digital privacy, tracking, and data collection?
3. Is there a correlation between age and gender with digital literacy aspects, including the evaluation of online information credibility, creation and monitoring of information, and digital privacy awareness within underprivileged communities?

The following hypotheses are proposed in this study:

- There is no significant variance in MIL levels within underprivileged communities in Pahang, Malaysia.
- Age and gender have a significant influence on specific aspects of MIL levels among participants.

LITERATURE REVIEW

MIL encompasses the ability to identify, locate, evaluate, and effectively use information from various sources (UNESCO, 2013). It forms the core focus of this investigation, aimed at assessing MIL levels within underprivileged communities. The selection of underprivileged communities in Pahang, situated in the eastern coast of Peninsular Malaysia, is driven by its geographical and socioeconomic factors, rendering it particularly susceptible to challenges in MIL.

Pahang’s unique landscape, spanning urban and remote rural areas, unveils a spectrum of obstacles resonating with issues faced by underprivileged communities worldwide. These insights are relevant for devising inclusive global interventions. The challenges and opportunities identified in Pahang provide transferable insights for analogous underprivileged communities globally, contributing to a broader understanding of strategies to address digital divides across diverse socio-economic landscapes.

Challenges faced by underprivileged communities in media and information literacy

Underprivileged communities often struggle with limited access to digital resources and information, encountering significant disparities in digital infrastructure availability across various areas. This disparity places underprivileged communities in rural regions at a distinct disadvantage. Investigating MIL levels within these communities helps gauge the extent of the digital divide and informs strategies to address these disparities. The impact of information access and MIL on socioeconomic development is substantial. Limited access to digital resources and lower information literacy levels often act as barriers for underprivileged communities, hindering their access to educational and employment opportunities.

Aligned with the UNESCO Information for All program (UNESCO, 2013), which emphasizes empowering individuals with skills for effective navigation of the digital information landscape, this study in Pahang contributes to the global effort to promote MIL. The research provides valuable insights...
into the information literacy landscape of underprivileged communities in Pahang, contributing to initiatives aimed at bridging the digital divide and ensuring equitable access to the benefits of the digital age.

**Media and Information Literacy (MIL)**

In this study, MIL plays a central role as the guiding framework for evaluating information literacy levels within underprivileged communities. MIL is defined by UNESCO as empowering individuals with the skills and knowledge necessary to understand the functions of media and information, critically engage with content, and participate actively in the digital age (UNESCO, 2013). MIL enhances access to information and knowledge, promotes freedom of expression, and contributes to quality education (Inayatillah, 2018).

Competencies in MIL are essential in the modern knowledge society. MIL enhances access to information and knowledge and contributes to quality education (Inayatillah, 2018). An example in the context of journalism, MIL helps the society to perceive news reports accurately, avoid hoaxes, and report news credibly (Singh & Ramaiah, 2021). In the digital era, MIL education is crucial in combating the spread of misinformation and fake news, and it requires the development of critical, reflective, and positive thinking skills (Lee, 2022). MIL is also relevant in the context of digital media, as it raises important issues regarding privacy, surveillance, and the transformation of communication in the digital age (Carlsson, 2019; Mhiripiri & Chari, 2017; Roy & Gupta, 2018).

Underprivileged communities often are more susceptible to the negative effects of misinformation and fake news due to limited access to reliable resources and education. Within underprivileged communities, assessing MIL levels becomes especially vital as it directly impacts individuals’ abilities to engage with various forms of media and information. MIL’s relevance within society ensures that community members can accurately interpret news reports, navigate potential hoaxes, which is crucial for informed decision-making. MIL education becomes a powerful instrument for combating these challenges by fostering critical thinking skills. It equips individuals within underprivileged communities with the necessary tools to discern reliable information from misinformation, promoting a more informed and resilient community.

**Connection of MIL to digital literacy and digital divides**

MIL deals with the understanding of how media messages are constructed and engaging with them critically (UNESCO, 2013). On the other hand, digital literacy encompasses skills to navigate, use, and communicate in the digital world, going beyond basic computer skills (Buckingham, 2015; Pascal, Fama & Bilias, 2022; Spante, Hashemi, Lundin & Algers, 2018). The concept of digital literacy involves skills, and understanding of digital technologies, evaluating digital information, and engaging with digital content for various purposes. It includes a broader understanding of digital communication and information technologies (Lythreatis, Singh & El-Kassar, 2022). MIL is related to digital literacy, which involves broader digital skills and comprehension of various digital technologies.

The digital divide refers to the gap between those with access to modern information and communication technologies (ICTs) and those without (Ferro, Gil-Garcia, & Helbig, 2007; Van Deursen; Van Dijk, 2017; Warschauer, 2012). It exists on various levels, including technology access, digital skills, and effective use of digital resources (Anzera & Comunello, 2014; Van Deursen, 2017). This divide often leads to disparities in opportunities, education, and participation in the digital society, particularly impacting underprivileged groups. This divide encompasses various dimensions, including social, economic, and political factors. It highlights differences in access to and usage of digital technologies at global, social, and democratic levels (Srinuan & Bohlin, 2011).

There is a strong relationship between media literacy (MIL), digital literacy, and digital divides. Rapid advancements in information and communication technologies (ICTs) have intensified the global digital divide, disproportionately impacting underprivileged groups and creating unequal access to information (Lau, 2013; Vartanova & Gladkova, 2019). MIL emerges as a pivotal factor in addressing these digital divides (Wang, Liu & Lan, 2023). It empowers individuals to engage critically with information, navigate digital landscapes, and actively participate in the digital age. Strengthening media literacy skills, especially within underprivileged communities, equips individuals with the tools to bridge digital divides effectively by enhancing their ability to access, analyse, and utilize digital information.

Varying levels of media literacy appropriation has a significant impact on participation across multiple societal domains such as economic, social, institutional,
Studies on information literacy in Malaysia

Previous related study with the indigenous ‘Orang Asli’ Semai in a rural area of Perak, Malaysia highlighted the importance of computer literacy and its implications for information and digital inclusion (Hashim, Idris, Ustadi, Merican & Fuzi, 2012). While the research specifically targeted the Semai community, it serves a broader challenge of digital inclusion among minority groups in Malaysia. Limited access to quality education poses a significant challenge for underprivileged community in Malaysia, which emphasizes on the crucial role of information literacy (Jones-Jang & Mortensen, 2019; Rahim, Shuhidan & Husaini, 2022). MIL plays an important role in cultivating informed and engaged citizens in the contemporary digital landscape.

The Khazanah Research Institute report highlights the huge influence of internet access on information literacy among underprivileged communities (Gong, 2020). Internet connectivity offers improved access to educational resources, enabling individuals to bridge educational gaps. It also enhances research capabilities, allowing individuals to access vast information repositories and develop effective research skills. Moreover, internet access exposes individuals to diverse perspectives, fostering critical thinking and informed decision-making. Additionally, internet access expands job opportunities in the digital economy and promotes civic engagement, contributing to more inclusive and democratic societies. These insights are particularly pertinent to our study, which assesses information literacy levels among underprivileged communities in Pahang, Malaysia, with a focus on the impact of digital access on their socio-economic well-being.

Previous studies have explored information literacy levels in various contexts, highlighting the importance of MIL skills in today’s information-driven society. However, limited research has focused on assessing the level of MIL in underprivileged communities in Malaysia, particularly in the state of Pahang. This study aims to fill this gap by examining the information literacy levels of underprivileged communities in the region. Understanding the MIL challenges faced by underprivileged communities in Pahang, Malaysia. Identifying these challenges is essential for creating targeted interventions by policymakers, educators, and community organizations.

Through the assessment of prevailing MIL and the identification of factors contributing to restricted information access, tailored programs and initiatives, such as educational interventions like workshops, training sessions, or digital literacy programs, can be developed for the specific needs of the region.

**METHODOLOGY**

This study involved volunteers among a group facing economic challenges, allowing for a more in-depth analysis of the factors affecting this underprivileged community in Pahang, Malaysia. The data collected were analysed is IBM SPSS Statistics version 28.0, in which description and correlation analysis was adopted.

**Survey instrument.** The data collection process was executed through a structured survey instrument carefully designed to capture a comprehensive spectrum of information and media literacy skills, reflecting the multifaceted nature of individuals’ interactions with digital information in contemporary society. This survey instrument was developed in alignment with the UNESCO Global MIL Assessment Framework: Country Readiness and Competencies (UNESCO, 2013).

**Participants.** 366 individuals from the targeted underprivileged community volunteered to participate in the study. Although the insights gained may not fully encapsulate the characteristics of the overall state, they still hold relevance and significance for the report.

**Data collection procedure.** The data collection process was executed by a team of trained enumerators who underwent comprehensive training. This training aimed to establish a standardized understanding of the survey tool, its objectives, and the ethical guidelines governing participant interactions. This approach was adopted to assure the reliability and consistency of the data collection process, particularly in scenarios involving in-person surveys. It minimizes potential biases and variations in participants’ interpretations of survey questions, ensuring that responses accurately reflected their perceptions and behaviours related to digital literacy and information retrieval.
The survey consisted of 19 questions, each corresponding to an item in e platforms. Enumerators explained each question, including the scenarios and meanings of the Likert scale ranging from 1 to 5, to participants in the local language and dialect. Participants were asked to provide responses on this scale, indicating their level of agreement, with “1” representing “Strongly Disagree” and “5” representing “Strongly Agree.” This approach ensured that participants had a clear understanding of the survey questions and could accurately express their perspectives, taking into account linguistic and cultural nuances.

Table 1. Survey instruments

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>ITEMS</th>
</tr>
</thead>
</table>
| A. Able to search, access, and retrieve information. | A1 Find information that are important in daily activities  
A2 Find the information that is required on the internet  
A3 Use the internet in my daily activities (search engines, email, social media)  
A4 Aware that the internet has both reliable and unreliable information  
A5 Aware that websites are mainly funded by organizations  
A6 Use various online resources to get information |
| B. Understands, assess, and evaluates information and media. | B1 Come across views that I disagree with when I use social media  
B2 Aware that personal data are vulnerable online  
B3 Able to evaluate the information found online  
B4 Able to recognise advertisements postings online  
B5 Able to decide if the information found online is honest, relevant and useful  
B6 Believe that all the information published online is truthful |
| C. Creates, utilizes, and monitors information and media content. | C1 Able to manage the information (organize, save, & store) for reuse  
C2 Able to use the information and create new expression  
C3 Able to communicate with others (exchanging and sharing knowledge)  
C4 Able to communicate knowledge digitally (email, WhatsApp, blog) |
| D. Awareness on digital privacy, tracking, data collection | D1 Confident in using the settings on my social media account (photo & video)  
D2 Accept the terms and conditions on websites  
D3 Aware that websites use ‘cookies’ to collect information |

Data analysis. The data collected from the survey were subjected to a rigorous analysis process. Descriptive statistics, including means, standard deviations, ranges, modes, and medians, were computed to provide an overview of participants’ perceptions and behaviours within each dimension of digital literacy and information retrieval.

To test the hypotheses formulated in this study, inferential statistical analyses were conducted. Specifically, Pearson’s correlation coefficients were employed to examine the relationships between demographic variables (age, gender, district of residence) and various dimensions of digital literacy and online behaviour. The significance levels (p-values) were used to determine the strength and direction of these relationships.

Additionally, correlation analyses were conducted among digital literacy variables to uncover potential interdependencies and correlations within the multifaceted skill set. These analyses aimed to elucidate how proficiency in one dimension might relate to competencies in others, shedding light on the interconnectedness of digital literacy skills.

Ethical considerations. This study adhered to strict ethical guidelines and was approved by the International Islamic University Malaysia Research Ethics committee (IREC 2023-127). Participants were treated with respect, and their rights and privacy were safeguarded throughout the research process. Any identifying information was anonymized, and the data collected were used solely for research purposes.

RESULTS

In this study, data were collected based on a comprehensive set of dimensions that encompass a broad spectrum of information and media literacy skills, reflecting the multifaceted nature of individuals’ interactions with digital information in contemporary
society. The survey instrument, as mentioned in e platforms, included questions that assessed respondents’ abilities to seek, access, and acquire information critical for their daily activities, as well as their awareness of the credibility and sources of online information. The assessment is based on UNESCO Global MIL Assessment Framework: Country Readiness and Competencies (UNESCO, 2013).

The survey delved into respondents’ capacities to evaluate and critically assess online content, distinguishing between advertising and authentic information. It explored respondents’ proficiency in creating, utilizing, and managing information and media content, as well as their grasp of privacy and data protection issues within the realm of social media and online platforms.

**Descriptive analysis**

In this section, the MIL within underprivileged communities in Pahang, Malaysia are analysed. Focusing on key dimensions which are information retrieval, assessment, content generation, and awareness of digital privacy, the analysis aims to evaluate the overall literacy landscape. This exploration directly relates to our first hypothesis, investigating significant variances in MIL levels. The subsequent sub-sections unravel these dimensions, offering insights into the aspects shaping literacy within the targeted communities.

**Demographic profile.** This section presents an overview of the demographic characteristics of the study’s 366 respondents, with 30.1% (110) female and 69.9% (256) male from the underprivileged community across 10 districts in the state of Pahang Malaysia, with the average age of the participants is 47 years old as show in Figure 1.

Ability to search, access, and retrieve information. The survey findings, outlined in Error. L’origine riferimento non è stata trovata., reveal that respondents value information (M = 3.56), expressing moderate confidence in internet information retrieval (M = 3.34) and a similar agreement in internet integration into daily routines (M = 3.27). Participants moderately recognize the coexistence of reliable and unreliable online information (M = 3.34) and are moderately aware of websites being funded by organizations (M = 3.14). Acknowledging the use of various online resources (M = 3.17), the community actively engages with information digitally. However, variations in confidence, awareness, and online information-seeking behaviour suggest the influence of diverse factors. Further exploration through additional analysis or qualitative research is recommended for deeper insights.

**Table 2. Ability to search, access, and retrieve information**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
<th>A6</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>3.56</td>
<td>3.34</td>
<td>3.27</td>
<td>3.34</td>
<td>3.14</td>
<td>3.17</td>
</tr>
<tr>
<td>SD</td>
<td>0.75</td>
<td>0.96</td>
<td>1.00</td>
<td>0.92</td>
<td>0.91</td>
<td>0.99</td>
</tr>
<tr>
<td>Mode</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Median</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

They demonstrate moderate confidence in internet information retrieval (M = 3.34) and a similar agreement in internet integration into daily routines (M = 3.27). Participants moderately recognize the coexistence of reliable and unreliable online information (M = 3.34) and are moderately aware of websites being funded by organizations (M = 3.14). Acknowledging the use of various online resources (M = 3.17), the community actively engages with information digitally. However, variations in confidence, awareness, and online information-seeking behaviour suggest the influence of diverse factors. Further exploration through additional analysis or qualitative research is recommended for deeper insights.

**Ability to understands, assess, and evaluates information and media.**

Table 3 shows respondents’ ability to understand, assess, and evaluate information and media. Mean values range from 2.71 to 3.19, indicating an overall agreement above the neutral point. The highest mean (M = 3.19) is for item B4, reflecting agreement in recognizing advertising content. The lowest mean (M = 2.71) is for item B6, suggesting less inclination to
believe all online information is truthful. Standard deviations around 0.90 indicate a moderate level of response variability. Mode and median responses are neutral, indicating that, on average, underprivileged communities in Pahang hold neutral opinions on understanding, assessing, and evaluating information and media. The relatively low mean values suggest room for improvement in this aspect of information literacy.

**Table 3. Understands, assess, and evaluates information and media**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>B4</th>
<th>B5</th>
<th>B6</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>2.77</td>
<td>3.07</td>
<td>3.12</td>
<td>3.19</td>
<td>3.07</td>
<td>2.71</td>
</tr>
<tr>
<td>SD</td>
<td>0.90</td>
<td>0.92</td>
<td>0.90</td>
<td>0.90</td>
<td>0.90</td>
<td>0.85</td>
</tr>
<tr>
<td>Mode</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Median</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**Ability to generating, employing, and overseeing information and media content.** Table 4 outlines respondents’ capacity for generating, employing, and overseeing information and media content. Mean values range from 2.89 to 3.45, indicating mixed opinions. The highest mean ($M = 3.45$) is for item C4, suggesting agreement in the ability to communicate and share knowledge digitally. The lowest mean ($M = 2.89$) is for item C2, indicating less inclination to believe they can use online information to create new expressions. Standard deviations around 0.85 to 0.90 indicate a moderate level of variability. On average, respondents tend to have mixed opinions about their ability to create, utilize, and monitor information and media content. While they generally agree with digital communication skills, they show more neutral responses in using information for creative expression.

**Table 4. Creates, utilizes and monitors information and media content**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>2.92</td>
<td>2.89</td>
<td>3.37</td>
<td>3.45</td>
</tr>
<tr>
<td>SD</td>
<td>0.90</td>
<td>0.86</td>
<td>0.85</td>
<td>0.89</td>
</tr>
<tr>
<td>Mode</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Median</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Further exploration and potential interventions are suggested to enhance these aspects of information literacy among underprivileged communities in Pahang, Malaysia.

**Awareness on digital privacy, tracking, data collection.**

Table 5 shows respondents’ awareness of digital privacy, tracking, and data collection. Mean values range from 2.72 to 2.98, with the highest mean (D2) indicating agreement in accepting terms without reading. The lowest mean (D3) suggests less awareness of websites using ‘cookies.’ Moderate standard deviations show variability. In summary, surveyed individuals generally hold slightly neutral views on digital privacy awareness. This highlights the potential for enhancing awareness within underprivileged communities in Pahang, Malaysia, through educational initiatives and awareness campaigns.

**Table 5. Awareness on digital privacy, tracking, data collection**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>2.93</td>
<td>2.98</td>
<td>2.72</td>
</tr>
<tr>
<td>SD</td>
<td>0.85</td>
<td>0.94</td>
<td>0.94</td>
</tr>
<tr>
<td>Mode</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Median</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**Correlation analysis**

A correlation analysis is conducted to investigate the relationship between age and various dimensions of MIL in underprivileged communities in Pahang, Malaysia. This analysis aligns with our second hypothesis, exploring whether age and gender significantly influence specific aspects of MIL.

**Ability to search, access, and retrieve information retrieval skills.** This section investigates the information retrieval abilities of participants from marginalized communities in Pahang, Malaysia, with a specific focus on the correlation between these abilities and age. The data presented in Table 6 was analysed using Pearson Correlation coefficients, a statistical method that measures the strength and direction of linear relationships between variables. The analysis showed no significant correlation between gender (G) and information retrieval skills. Both males and females exhibited similar abilities in accessing and utilizing online information, as indicated by a correlation coefficient of -0.075 ($p = 0.153$). This indicates that gender does not play a substantial role in determining the ability within this community.
Strong positive correlations were observed between the ability to find desired information on the internet and the use of the internet in daily activities \((r = 0.678, p < 0.01)\), awareness of website funding sources \((r = 0.624, p < 0.01)\), awareness of content provider reliability \((r = 0.616, p < 0.01)\), and the use of various online resources for information gathering \((r = 0.578\) to 0.763, all \(p < 0.01)\). These results indicate that participants who were proficient in one aspect of information retrieval abilities tended to excel in others as well, highlighting the interconnectedness of these skills.

**Ability to understanding, assessing, and evaluating information.** Table 7 explores the correlation between age, gender, and participants’ digital literacy and critical thinking abilities in understanding, assessing, and evaluating information and media in the digital landscape. Notably, age shows a slight positive correlation \((r = 0.104, p = 0.047)\) with the ability to evaluate the credibility and relevance of online information, signifying that older participants in this marginalized community tend to possess a slightly better evaluation skill.

Participants’ awareness of personal data vulnerability online correlates significantly with their ability to evaluate online information \((r = 0.650, p < 0.01)\), indicating that those conscious of online privacy tend to be more discerning in assessing digital information sources. Moreover, exposure to differing views on social media demonstrates a strong positive correlation with the ability to evaluate online information \((r = 0.657, p < 0.01)\), suggesting that encountering diverse perspectives enhances critical evaluation skills. Conversely, the belief that all online information is truthful does not significantly correlate with the ability to evaluate information \((r = 0.113, p = 0.03)\), indicating that this belief may not necessarily reflect better skills in critically assessing digital information.

In conclusion, while age plays a minor role, factors such as awareness of personal data vulnerability and exposure to diverse views on social media significantly influence individuals’ capabilities to assess and evaluate online information. These findings underscore the importance of tailored interventions to enhance critical thinking skills, particularly within marginalized communities in Pahang.

**Table 6. Correlation analysis between age, gender, and the ability to retrieve information**

<table>
<thead>
<tr>
<th>MIL Dimensions</th>
<th>Age</th>
<th>G</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
<th>A6</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>0.008</td>
<td>-0.075</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A2</td>
<td>-0.015</td>
<td>-0.042</td>
<td>0.678***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A3</td>
<td>-0.009</td>
<td>-0.033</td>
<td>0.624***</td>
<td>0.859***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A4</td>
<td>-0.016</td>
<td>0.015</td>
<td>0.616***</td>
<td>0.751***</td>
<td>0.775***</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A5</td>
<td>0.039</td>
<td>0.013</td>
<td>0.578***</td>
<td>0.716***</td>
<td>0.750***</td>
<td>0.821***</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A6</td>
<td>0.042</td>
<td>-0.032</td>
<td>0.553***</td>
<td>0.763***</td>
<td>0.826***</td>
<td>0.714***</td>
<td>0.817***</td>
<td>-</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.05 level (2-tailed).**  
**. Correlation is significant at the 0.01 level (2-tailed).**

**Table 7. Correlation analysis between age, gender, and the ability to understanding, assessing, and evaluating information**

<table>
<thead>
<tr>
<th>MIL Dimensions</th>
<th>Age</th>
<th>G</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>B4</th>
<th>B5</th>
<th>B6</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>.104*</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B2</td>
<td>.139**</td>
<td>-0.019</td>
<td>0.657**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B3</td>
<td>0.101</td>
<td>-0.056</td>
<td>0.413**</td>
<td>0.650**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B4</td>
<td>0.063</td>
<td>-0.074</td>
<td>0.343**</td>
<td>0.626**</td>
<td>0.796**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B5</td>
<td>0.031</td>
<td>-0.076</td>
<td>0.244**</td>
<td>0.449**</td>
<td>0.763**</td>
<td>0.752**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B6</td>
<td>.113*</td>
<td>-0.067</td>
<td>0.359**</td>
<td>0.328**</td>
<td>0.462**</td>
<td>0.323**</td>
<td>0.460**</td>
<td>-</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).**  
*Correlation is significant at the 0.05 level (2-tailed).
Ability to create and monitor information.

Table 8 presents the correlation analysis between age, gender, and participants’ ability to create and monitor information across various dimensions (C1, C2, C3, C4). Gender (G) and age show weak correlations (gender: \( r = -0.064, p = 0.223 \); age: \( r = -0.064, p = 0.223 \)) with the ability to manage information for reuse and do not significantly correlate with other dimensions. The ability to manage information for reuse strongly correlates with creative and expressive use (\( r = 0.780, p < 0.01 \)). Additionally, the capacity to communicate digitally exhibits strong correlations with information management (\( r = 0.541, p < 0.01 \), creative use (\( r = 0.542, p < 0.01 \)), and knowledge sharing (\( r = 0.738, p < 0.01 \)), highlighting the interconnected nature of these digital literacy dimensions.

### Table 8. Correlation analysis between age, gender and the ability to create and monitor information

<table>
<thead>
<tr>
<th>MIL Dimensions</th>
<th>Age</th>
<th>G</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>0.043</td>
<td>0.013</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>0.006</td>
<td>0.06</td>
<td>.780**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>-0.011</td>
<td>-0.024</td>
<td>.541**</td>
<td>.542**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>-0.099</td>
<td>-0.027</td>
<td>.501**</td>
<td>.475**</td>
<td>.738**</td>
<td>-</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

### Table 9. Correlation analysis between age, gender and the digital privacy awareness and online behaviours

<table>
<thead>
<tr>
<th>MIL Dimensions</th>
<th>Age</th>
<th>G</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>0.01</td>
<td>-0.066</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>0.002</td>
<td>0.025</td>
<td>.391**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>D3</td>
<td>0.078</td>
<td>-0.053</td>
<td>.680**</td>
<td>.543**</td>
<td>-</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Strong interconnections among various aspects of MIL highlights the importance of comprehensive interventions customized to address the unique requirements of the underprivileged communities.

Digital privacy awareness and online behaviours.

This section explores participants’ digital privacy awareness and online behaviours, summarized in Table 9. It includes aspects such as awareness of digital privacy, the tendency to accept terms and conditions without reading, and knowledge about website cookies and data collection practices. The analysis indicates weak correlations between age, gender, and the tendency to accept terms without reading. While age weakly correlates with awareness of website cookies, gender does not significantly correlate with any of these factors.

A strong positive correlation exists between digital privacy awareness and knowledge about website cookies (\( r = 0.391, p < 0.01 \)), implying that those who directly accept terms also tend to have some awareness of website cookies. Despite weak influences from age and gender, significant associations between different aspects of digital privacy awareness and online behaviours highlights the importance of tailored information literacy and privacy education for the underprivileged communities.

Hypothesis assessment

The findings of the study align with Hypothesis 1, suggesting no significant variance in Media and Information Literacy (MIL) levels within underprivileged communities in Pahang, Malaysia. The analysis of key MIL dimensions, including information retrieval, assessment, content generation, and digital privacy awareness, reveals stable patterns and responses across different facets of MIL. The limited variability, as indicated by moderate standard deviations and mean values generally aligning with the neutral point, supports the shared proficiency in media and information literacy within these communities.
Specifically, in information retrieval analysis, respondents value information, but variations hint at the influence of diverse factors, suggesting a complex nature without significant variance in MIL levels.

In the understanding, assessment, and evaluation of information and media, the overall agreement above the neutral point, despite room for improvement, reinforces the idea that MIL levels do not significantly vary within the underprivileged communities. The mixed opinions in generating, employing, and overseeing information and media content contribute to the notion that there is no substantial variance in MIL levels. Respondents’ varying views on their ability to create, utilize, and monitor information and media content align with the consistent trend of shared proficiency. In the awareness of digital privacy, tracking, and data collection, the slightly neutral views provide potential for enhancement through educational initiatives.

The overall tendency towards neutrality supports the conclusion that MIL levels may not significantly differ within the studied communities. The study’s detailed analysis consistently supports Hypothesis 1, revealing a shared and stable level of proficiency in media and information literacy within underprivileged communities in Pahang, Malaysia.

In examining the ability to search, access, and retrieve information retrieval skills, it is evident that there is no significant correlation between age and gender, indicating that both males and females exhibit comparable capabilities in accessing and utilizing online information. This finding contradicts the assumptions of Hypothesis 2, which posited a significant impact of age and gender on information retrieval skills. Moving on to the ability to understand, assess, and evaluate information, the analysis shows a slight positive correlation between age and the evaluation of the credibility and relevance of online information. However, gender does not exhibit a substantial correlation with these critical evaluation skills, suggesting that age and gender play a minor role in influencing this aspect of MIL within the studied communities. Exploring the ability to create and monitor information, weak correlations are observed between age, gender, and these skills. While some dimensions show minor associations, the overall results do not strongly support Hypothesis 2, indicating that age and gender have limited influence in shaping the ability to create and monitor information.

In the context of digital privacy awareness and online behaviours, the analysis reveals weak correlations between age, gender, and these factors. Age exhibits a weak correlation with awareness of website cookies, while gender does not significantly correlate with any of these aspects. The results lean towards rejecting Hypothesis 2, highlighting that age and gender do not exert a substantial influence on various dimensions of MIL within the underprivileged communities studied.

CONCLUSION AND IMPLICATIONS

This study, involving 366 participants, provides an insight into MIL level of underprivileged communities in the state of Pahang. The research encompassed a wide range of dimensions reflecting the multifaceted nature of individuals’ interactions with digital information in contemporary society, aligning closely with the goals of the UNESCO Information for All program. The study revealed that age and gender had relatively minimal influence on participants’ digital literacy and online behaviour. These demographic factors did not significantly impact the participants’ abilities to seek, access, and evaluate online information. The analysis furthers into the importance of social media in fostering critical thinking skills, as participants who encountered divergent viewpoints on social media platforms exhibited heightened levels of confidence in various facets of digital literacy. This finding suggests that exposure to diverse perspectives on social media contributes significantly to enhanced critical thinking skills in online information consumption.

The effective digital communication also played a pivotal role in participants’ overall digital literacy. Those who could effectively communicate, and share knowledge digitally tended to have higher digital literacy skills, highlighting the interconnectedness of these abilities. Privacy awareness was another dimension explored in the study, with participants who were aware of personal data vulnerability online also demonstrating a better understanding of data collection practices, including the use of cookies on websites. Tailored educational initiatives and awareness campaigns can help address these variations and empower individuals with valuable skills in the digital age. Overall, this research highlighted the significance of assessing and improving MIL among underprivileged communities, not only in Pahang, Malaysia, but also in similar contexts worldwide. It highlights the need for comprehensive strategies that encompass various dimensions of digital literacy, acknowledge the role of social media, and promote effective digital communication and privacy awareness. By doing so, we
can work towards bridging the digital divide and ensuring equitable access to the benefits of the digital era for all members of society.

ACKNOWLEDGEMENTS

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Navigating Challenges, Realising Opportunities of Digital Transformation, 5.


