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## **Empowering Indonesian Migrant Workers Through Technology-based Capacity in the Digital Era**

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### **Abstract**

Indonesian migrant workers (IMW) who have long resided in Sabah, Malaysia, face unique challenges in this digital era: they possess strong social capital and years of work experience, yet are systematically disconnected from the development of the digital ecosystem in both Indonesia and Malaysia. This study aims to assess the effectiveness of a participatory digital capacity-building program in empowering IMWs residing in Kota Kinabalu, Sabah, using an andragogical approach tailored to participants' backgrounds and real needs. The activity involved 40 active IMWs from various sectors, including oil palm plantations, fisheries, construction, informal trade, and domestic services, originating from South Sulawesi, Southeast Sulawesi, Kalimantan, and Nusa Tenggara. The method used included four interrelated stages: needs assessment through focus group discussions, gradual delivery of materials, hands-on practice and simulation, and sustainability evaluation and monitoring. Data collection was conducted through pre-test and post-test questionnaires, observation sheets, short interviews, and process documentation. The results showed consistent and significant improvements in all seven aspects of digital competency measured, with the average overall score increasing from one point nine to seven point three six on a scale of ten, or equivalent to an increase of two hundred and eighty-seven point four percent. The largest increase occurred in understanding digital economic opportunities through affiliate marketing, which increased by six point one five points, followed by self-development motivation, which increased by five point nine five points, and learning time management, which increased by five point seven points. The highest score in the post-test was achieved in the self-development motivation dimension with a score of eight point four, indicating that the program not only improved short-term technical skills but also built a sustainable learning orientation. These findings confirm that the main obstacle faced by IMW is not limited learning ability but rather the limited opportunities and platforms currently available

to them, and demonstrate that contextual, participatory, and strength-based digital capacity-building interventions can produce meaningful change in a relatively short time, even without large infrastructure or budgets.

**Keywords:** Indonesian migrant workers, digital capacity, digital literacy, empowerment, Sabah, andragogy

## **1. Introduction**

Every year, millions of Indonesians leave their homelands to work abroad, carrying a simple yet powerful hope: a better life for the families they leave behind. This phenomenon is nothing new. Indonesia has long been one of the largest labor-sending destinations in Southeast Asia, and among the various migration corridors, Malaysia, particularly Sabah, holds a particularly significant position (Warsono et al., 2020). This state, which borders Kalimantan, has long been a primary destination for Indonesian migrant workers, driven by geographic proximity, cultural similarities among some ethnic groups, and the growing demand for labor in the palm oil plantation, construction, fisheries, and domestic service sectors. The Indonesian Migrant Workers Association reports that by 2024, millions of Indonesian migrant workers will be working in Malaysia, with Sabah having one of the largest concentrations (Aswan & Amiruddin, 2020).

The economic contribution of Indonesian migrant workers to Indonesia cannot be underestimated. The remittances they send home amount to tens of billions of US dollars annually, making them a pillar of the country's foreign exchange reserves and often referred to as "economic heroes." This money finances their children's education, builds decent homes, and supports the purchasing power of families in their home regions, whose economic situation is still far from adequate (Aggarwal et al., 2011). These figures are impressive when viewed from above. However, when we go down to the ground, to the cramped huts on the edges of plantations, to the groups of migrant workers gathered in town corners on holidays, the picture that emerges is far more complex and not as simple as the statistics presented in official reports (Rahman et al., 2020).

Most migrant workers, especially those who have lived in Sabah for years, spend their working lives in conditions of structural vulnerability. They often do not understand the terms of the contracts they sign, do not know where to report violations of their rights, and lack adequate access to available protection services (Migration, 2023). The risk of human trafficking, exploitation by unscrupulous employers, and debt traps with opaque recruitment agencies remains a real threats that plague many of them. Moreover, many migrant workers leave without the knowledge and skills necessary to thrive, not just survive, in their destination countries. This situation is not simply a matter of individual underpreparation (Ratha, 2013). This is a systemic failure in the pre-departure briefing process that has persisted for far too long and continues to reproduce vulnerabilities from one generation of workers to the next.

Amidst all these limitations, the digital era offers something unprecedented: a bridge connecting migrant workers to information, protection, and opportunities that previously felt too far away. High smartphone penetration among migrant workers and increasingly widespread internet coverage in many destination countries, including Malaysia, are creating a new potential space. Digital tools can now connect migrant workers to information on employment protection, community networks of fellow workers, Indonesian government consular services, and even financial products that were previously accessible only to those fortunate enough to live close to official offices or have the right connections (Naceur et al., 2020). In many ways, digital technology has leveled the playing field that had previously been highly unequal.

However, that potential does not come naturally. It can only be harnessed by those who have the capacity to use it—and this is where the biggest challenge lies. Digital literacy for migrant workers is not simply about using a smartphone or being active on social media (Kehinde et al., 2024). It encompasses much deeper skills: the ability to critically evaluate information to avoid being easily fooled by hoaxes and digital fraud, the ability to utilize digital platforms for productive economic activities, and the ability to protect personal data from increasingly sophisticated cyber threats. Unfortunately, Indonesian migrant workers (IMW) who have worked abroad for years are often the group most left behind in this regard. While abroad, their daily lives are primarily filled with physical work that requires no digital skills (Mindarti & Umiyati, 2023). Without deliberate, structured exposure, the digital divide that existed when they departed widens year after year.

This fact served as the starting point for the article. A participatory digital capacity-building program was implemented for Indonesian migrant workers (IMW) in Kota Kinabalu, Sabah, using an andragogical approach. This adult learning method positions participants' lived experiences not as barriers but as the most authentic learning resource. Kota Kinabalu was chosen for a reason: as the capital of Sabah and the administrative and economic center of East Malaysia, it boasts the largest concentration of Indonesian PMI in the region, as well as a strategic location where various community and educational services for Indonesian citizens are already established. The program was not designed to teach how to operate an application. Its goal was more than that: to raise awareness that digital technology is a real tool that can transform lives, provided someone is willing to take the time to teach it in a way that is relevant, contextual, and respectful of the participants (Likdanawati et al., 2024). This article outlines the challenges IMW faces in the digital era, the conceptual foundations of the intervention approach, the program's implementation methods, the results achieved, and recommendations for stakeholders seeking to replicate or develop similar initiatives.

## **2. Literature Review**

### *2.1 Indonesian Migrant Workers in Sabah, Malaysia: A Historical Reality*

Indonesian migrant workers in Sabah, Malaysia, represent a longstanding phenomenon (Warsono et al., 2020). Migration from Indonesia to Malaysia is among the world's largest and most enduring flows, with roots dating to pre-colonial times and a significant increase in recent

decades. Sabah, an East Malaysian province bordering Kalimantan, has become a key destination for millions of Indonesian workers, mainly from Sulawesi, Kalimantan, Nusa Tenggara, and Java (Aswan & Amiruddin, 2020). They often work in sectors such as palm oil plantations, fisheries, construction, and domestic service.

Indonesian migrant workers (IMWs) who have resided in Sabah for many decades face complex realities. Many have remained undocumented for extended periods, making them especially vulnerable without proper social or legal protections. This exposes them to significant economic and legal risks (Amyulianthy et al., 2023). Their situation is worsened by limited access to essential services such as education and healthcare. According to a report by the International Labor Organization (ILO), undocumented migrant workers frequently encounter obstacles in obtaining health and social services, and their irregular status often causes them to avoid seeking help for fear of deportation (UNDP, 2018).

However, for those who have resided for decades, Sabah has become a "second home" with strong social and cultural ties. While many comply with local laws, limited access to essential services results in recurring stagnation, perpetuating a cycle of powerlessness (Aswan & Amiruddin, 2020). This situation makes digital capacity-based empowerment interventions particularly relevant and urgent.

### *2.2 The Concept of Migrant Worker Empowerment*

Empowerment for migrant workers involves enhancing their ability to control their lives, including gaining access to information, understanding their rights, and actively participating in decisions that affect their well-being (Ashraf et al., 2015). When creating an empowerment model for undocumented migrants, key areas of focus should include legal support, collaboration and partnerships, social networks, training, and sharing information on regulations—aimed at helping them attain improved legal status and job security. Empowerment goes beyond simple aid; it must be transformational (Borkert et al., 2018). Digital empowerment should leverage existing personal resources and technology to build capacity, reinforce community ties, and maintain cultural links, all through a strengths-based approach that turns challenges into opportunities. This approach is especially important for IMW in Sabah, which has developed strong social capital over decades despite structural pressures.

### *2.3 Digital Literacy: Definition and Dimensions*

Digital literacy is the foundation of all digital capacity-building efforts. Digital literacy reflects an individual's or group's capacity to use digital devices and resources appropriately, construct new knowledge, and innovate in media expression (Yasmin, 2024). This concept encompasses several interrelated dimensions, including general digital literacy, social digital literacy, digital search literacy, creative digital literacy, and digital security literacy. According to Gilster (1997), digital literacy is the capacity to comprehend and utilize information across different formats and sources delivered via computers. As technology has advanced, this definition has expanded from solely technical abilities to include essential skills such as verifying information, safeguarding

personal privacy, and actively engaging in the digital environment. Digital security literacy and access to information are vital for migrant workers (Fahimah et al., 2023). Many lack an understanding of differences in visa types, making them susceptible to exploitation by dishonest agents. Addressing this vulnerability requires systematic capacity building in digital literacy.

#### *2.4 Digital Capacity Building as an Empowerment Tool*

Multiple studies emphasize that developing digital skills can effectively empower migrant workers. Improving digital literacy enhances their integration, especially economically, by expanding access to information and facilitating social connections (Fauzi et al., 2025). The benefits are particularly significant for the most vulnerable workers, highlighting the importance of targeted digital training programs in Sabah, where migrant workers have historically been marginalized. In Indonesia and Malaysia, digital financial literacy has become crucial for migrants' economic empowerment amid the ongoing digital transformation. Participatory training methods effectively improve skills in financial tracking, cash flow management, and the use of financial tools such as digital wallets and mobile banking (Puspitasari et al., 2025). These programs not only provide economic advantages but also promote independence and strengthen social networks.

#### *2.5 Specific Challenges for Long-Term Indonesian Migrant Workers in Sabah in a Digital Context*

IMWs who have resided in Sabah for many years encounter distinct challenges compared to recent migrant workers. Many have been disconnected from advancements in information technology at home due to limited access over the years (Naceur et al., 2020). Additionally, the remote nature of palm oil plantations hampers their ability to reach digital infrastructure. Moreover, their uncertain citizenship status restricts access to formal financial services and digital protection programs offered by the Indonesian government.

Critical digital literacy involves understanding power dynamics, recognizing contextual limitations, and emphasizing action and change. It also includes developing an agentic self-concept rooted in exploring personal learning needs, fostering hope for transforming inequalities (Borkert et al., 2018). This viewpoint is especially important for IMMs in Sabah, who should be motivated not just to use technology but to become active agents who leverage it for meaningful life changes. Understanding the above theoretical and empirical framework provides a solid academic basis for the digital capacity-building activity for IMW in Sabah, Malaysia. This intervention is not only practically relevant but also supported by strong scientific reasoning, ensuring it can be implemented in a structured and sustainable way.

### **3. Method**

#### *3.1 Location and Schedule of Activity*

This digital capacity-building event will take place in Kota Kinabalu, Sabah, Malaysia, in July 2025. Kota Kinabalu was selected as the host location for strategic reasons. As the capital of

Sabah and the center of administration and economy in East Malaysia, it hosts the largest Indonesian migrant worker community in the region. The city also houses the Kota Kinabalu Indonesian School (SIKK), which has served as a hub for educational and social services for Indonesian citizens since 2008, as well as hundreds of Community Learning Centers (CLCs) across Sabah. The activity was selected based on community circumstances and participants' accessibility. Since most target migrant workers are employed in the plantation and service sectors with specific work schedules, choosing the appropriate timing is essential to maximize participation.

### *3.2 Activity Participants*

The activity participants are Indonesian migrant workers domiciled in Kota Kinabalu and its surrounding areas, with the primary characteristic being that they have lived and worked in Sabah for decades. They come from various regions in Indonesia, primarily South Sulawesi, Southeast Sulawesi, Kalimantan, and Nusa Tenggara. They are employed across sectors such as oil palm plantations, fisheries, construction, informal trade, and domestic services. The characteristics of these long-term residents make them a unique and digitally vulnerable group. On the one hand, they possess strong social capital within their local communities, cultivated over many years. However, their limited exposure to formal technology during their time abroad has left them behind in the rapidly evolving digital ecosystem in both Indonesia and Malaysia. This situation is the starting point for the urgency of implementing this activity.

### *3.3 Approach and Methods*

This activity uses a participatory, community-focused approach, viewing participants as active contributors rather than mere recipients of training (Hair et al., 2019). It was chosen because it aligns well with adult learners (andragogy), who bring valuable life and work experience. As a result, the learning process was tailored to match their daily realities and needs. The activity was carried out in four interconnected stages. The first involved a needs assessment using focus group discussions (FGDs) and direct observation of participants' digital habits and conditions (Sul, 2019 C.E.). This phase aimed to identify the most critical digital skill gaps to address and ensure the content was relevant to participants' actual needs. The next stage involved delivering materials via training sessions and workshops.

The materials were developed incrementally, beginning with an introduction to basic digital devices, information literacy, and digital security. The curriculum then covered digital financial applications and technology-based remittance services, followed by digital platforms for communication and accessing Indonesian consular services in Malaysia. The program also included an introduction to digital rights for migrant workers.

Moreover, the phase involved practice and simulation, with each material session immediately followed by hands-on exercises using the available devices. The simulation covered digital financial applications, secure information searches, and online completion of administrative forms. Facilitators provided intensive mentoring throughout the practical sessions to ensure

effective participation from all participants. Last was evaluation and monitoring, conducted to measure the activity's overall effectiveness. Post-activity monitoring was also conducted to assess the sustainability of participants' use of digital skills in their daily lives after the program ended.

### *3.4 Instruments and Data Collection*

Activity data was gathered using multiple complementary tools (Hauser, 2018). Pre- and post-test questionnaires measured changes in participants' digital knowledge and skills. Observation sheets were used to evaluate participant engagement and responses throughout the activity. Short exit interviews captured participants' personal experiences and impressions. The entire process was documented to record the program's implementation. The collected data were analyzed through quantitative descriptive analysis to assess changes in participants' digital skills, and qualitative descriptive analysis to gain a deeper understanding of their experiences and challenges.

### *3.5 Activity Ethics*

Since some participants are migrant workers with various immigration statuses, the activity was conducted in accordance with the principles of confidentiality and voluntary participation. All participant information was kept confidential and used solely for the goals of the empowerment program. This approach builds trust, enabling participants to engage honestly and comfortably without fearing administrative or legal repercussions.

## **4. Results and Discussions**

### *4.1 Participants' Digital Capacity Profile Before the Activity*

Before the activity, all participants took a pre-test to evaluate their initial digital skills across seven areas. The results showed that the 40 Indonesian migrant workers present had very limited abilities in all measured aspects. Their average total score was just 1.90 out of 10, indicating minimal exposure to the digital ecosystem during their years working in Sabah, Malaysia. The lowest-scoring area was understanding of affiliate marketing, with an average score of 1.20. Graphic design skills with Canva followed, at 1.35, and study time management at 1.60. Slightly higher, though still in the very low range, were motivation for self-development (2.45) and personal financial literacy (2.35). These results reflect the participants' profiles as long-term migrant workers who have been primarily engaged in physical labor for many years, without formal mentoring in digital skills.

### *4.2 Activity Results: Comparison of Pre-Test and Post-Test*

After completing the entire training series, participants completed the post-test instrument again, using the same aspects and indicators. The results showed significant improvement across all measured aspects, with the average overall score increasing from 1.90 to 7.36, a 5.46-point increase. The following table presents a complete comparison of the pre-test and post-test results:

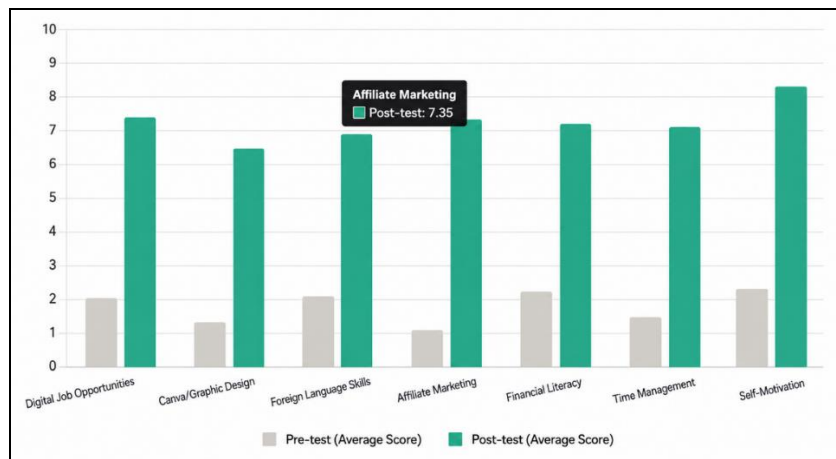
Table 1. Pre-test and Post-test Participant Competency

Aspects	Pre-Test	Post-Test	Improvement
Knowledge of digital job opportunities	2,15	7,45	+5,30
Canva/graphic design skills	1,35	6,55	+5,20
Basic English skills	2,20	7,10	+4,90
Understanding of affiliate marketing	1,20	7,35	+6,15
Personal financial literacy	2,35	7,40	+5,05
Time management for learning	1,60	7,30	+5,70
Motivation for self-development	2,45	8,40	+5,95

Source: Table by author

The greatest improvement was in understanding of affiliate marketing, with 6.15 points, followed by self-development motivation (5.95 points) and study time management (5.70 points). The lowest improvement occurred in the basic English aspect, with a score of 4.90, which is understandable, as language proficiency requires a longer internalization process than conceptual understanding.

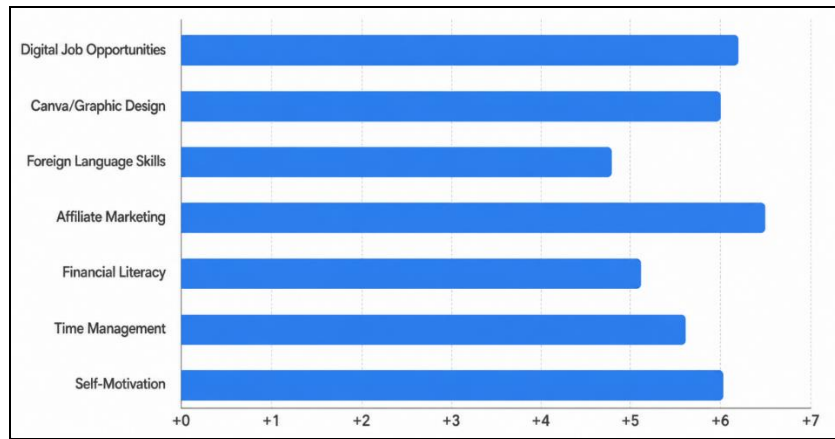
Hereby, Figures 1 and 2 illustrate the comparison between pre-test and post-test results as well as the participants' competency achievements following the training program for Indonesian Migrant Workers (IMW) in Sabah, Malaysia. Figure 1 demonstrates a substantial increase in average scores across all competency areas after the intervention. Before the training, participants generally exhibited limited understanding and skills in digital job opportunities, graphic design, foreign language proficiency, affiliate marketing, financial literacy, time management, and self-motivation, as reflected in the relatively low pre-test scores. However, the post-test results indicate notable improvements in all measured dimensions, suggesting that the training program effectively enhanced participants' knowledge, awareness, and practical competencies.



Source: Figure by author

Figure 1. Pre-test and Post-test Assessment of Financial and Digital Literacy

Furthermore, Figure 2 presents the average post-training competency scores achieved by the participants. The greatest improvements were observed in affiliate marketing, digital job opportunities, and self-motivation, indicating that the participants were highly receptive to practical digital-economic skills that could potentially support income generation and self-development. Meanwhile, financial literacy and foreign language skills also showed positive outcomes. However, their scores were relatively lower than those for other competencies, suggesting the need for ongoing mentoring and follow-up training in these areas. Overall, the findings indicate that the capacity-building program contributed positively to strengthening the digital and financial competencies of Indonesian migrant workers in the digital era.



Source: Figure by author

Figure 2. Participants' Competency Achievement After Literacy Training

### 4.3. Discussion

The improvements seen across all aspects of digital competency after the intervention are not simply a rise in scores from pre-test to post-test. A deeper look reveals a more important story: that groups previously considered "hard to reach" by digital programs are not incapable of learning—they have not been given the right opportunities. The jump in the overall average score from 1.90 to 7.36 in a series of relatively short training sessions is evidence that the learning capacity is there, waiting to be activated in the right way. This finding aligns with Zhao, Tang, and Wang (2025), who, through a large-scale panel data analysis, found that the strongest impact on digital literacy occurs among groups with the lowest levels of integration.

This is precisely the situation of the participants in this activity: Indonesian migrant workers who have long resided in Sabah but are digitally isolated from the evolving ecosystem around them. When relevant interventions finally arrived, the response was significant. The most dramatic improvements occurred in aspects that participants were previously least familiar with, understanding digital marketing affiliate opportunities, which rose by 6.15 points, and self-development motivation, which increased by 5.95 points. This is no coincidence. Concepts that

feel new and open-minded are often more easily absorbed by adults tired of stagnant knowledge, because they offer something previously lacking: the possibility that conditions can change.

This is where the andragogical approach plays a crucial role. The program was not designed with a curriculum imposed on participants. Instead, it began with participants' real needs, identified through focus group discussions. Then it structured them into a gradual, logical sequence, from basic digital device skills and information security to digital financial applications and platform-based economic opportunities. This approach aligns with Knowles' fundamental principle that adults learn most effectively when the material they receive feels relevant to their current lives and work, rather than merely abstract knowledge with unclear application. Participants' years of experience were not seen as a barrier but rather as a bridge to introduce new concepts. This finding supports Tour et al (2025), who highlight that successful digital empowerment involves not only developing technical skills but also boosting participants' confidence in their own abilities.

The highest post-test score was in the self-development motivation dimension, at 8.40. This figure deserves special attention because it is not simply an indicator of technical skills, it is a marker of orientation. Participants who leave the program with a high level of learning motivation are those most likely to continue developing independently after the program ends. They not only become more digitally proficient, but they also become learning agents who can share their knowledge with others in their communities. This aligns with Riani's (2025) findings that participatory programs not only directly impact individuals but also foster collective independence and strengthen social networks among participants.

Another noteworthy finding is that the smallest increase occurred in basic English skills, at 4.90 points. This is understandable and not a weakness of the program, as language acquisition is a much longer process of internalization than conceptual understanding, which can be absorbed in one or two intensive sessions. This finding provides a useful signal for future program development: language literacy needs to be a separate component, integrated more systematically and sustainably, rather than tacked on as a side subject (Amyulianthy et al., 2025).

Overall, this discussion confirms two things. First, long-term migrant workers in Sabah are a group that has long endured significant and unfair digital inequality, not by choice, but because of structures that have never afforded them access. Second, well-designed interventions—participatory, contextual, grounded in participants' strengths, and not requiring fancy infrastructure—can produce significant and meaningful change. Digital transformation for migrant workers is not a utopia requiring large programs and huge budgets. It can start with humble beginnings, with an approach that respects its participants.

## **5. Conclusions, Suggestions, and Implications**

### *5.1. Conclusion*

The digital capacity-building program for Indonesian migrant workers in Kota Kinabalu, Sabah, Malaysia, held in July 2025, provided strong empirical evidence that participatory training-based interventions can produce significant change in a relatively short period. Of the 40 participants who attended the entire series of activities, all aspects of digital competency showed consistent and even improvement, with the average overall score increasing from 1.90 to 7.36, representing a 287.4 percent increase. The most notable improvements occurred in understanding affiliate marketing (6.15 points) and motivation for self-development (5.95 points). These findings have a deeper meaning than mere numbers: participants who had not been exposed to digital economic concepts for decades were able to absorb new knowledge quickly when the material was presented in a contextual, participatory way and grounded in the realities of their own lives. This demonstrates that the main obstacle facing IMW lies not in limited learning abilities but in the lack of opportunities and platforms available to them (Duflo et al., 2011). This activity also confirmed that digital empowerment for long-term migrant workers is a viable and replicable intervention. Migrant workers who have lived in Sabah for decades are not an unreachable group; they are a community with strong social capital, solid networks, and a real motivation to develop. Still, they have historically lacked access to knowledge and skills relevant to the digital era.

### *5.2 Recommendations*

Based on the results of this activity and the findings obtained, several recommendations are warranted by various stakeholders. For the Indonesian government, particularly the Indonesian Migrant Workers Protection Agency and the Consulate General of the Republic of Indonesia (CGRI) in Kota Kinabalu, the results of this activity can serve as a foundation for designing a more systematic and sustainable digital capacity-building program. Similar programs need to be integrated into existing consular service mechanisms, so that they are not incidental but become part of a structured IMW protection service. More comprehensive IMW data collection is also needed to expand the reach of similar programs to remote areas in Sabah, including oil palm plantations that have previously been difficult to reach. For educational institutions and universities, international community service activities such as this need to be more actively developed as a tangible contribution to Indonesian diaspora communities abroad. Cross-institutional collaboration among Indonesian universities, Community Learning Centers (CLCs), and Indonesian community organizations in Malaysia needs to be strengthened, as existing on-the-ground networks can serve as effective gateways for similar empowerment programs.

For civil society organizations and non-governmental organizations working on the protection of migrant women (IMW), digital training modules should be developed that are more tailored to the specific conditions of long-term IMW in Sabah. Ideally, such modules should cover digital legal literacy, personal data protection, and guidance on the safe use of digital platforms for administrative and economic purposes. For researchers and academics, the findings of this activity provide opportunities for further, more in-depth research, particularly regarding the long-

term effectiveness of digital training on changing the economic behavior of IMW, as well as examining the determinants of the success of digital empowerment programs for migrant communities long disconnected from the Indonesian technology ecosystem.

### *5.3 Implications*

This activity has several important implications that extend beyond the confines of the training room in Kota Kinabalu. Theoretically, the results of this activity reinforce the relevance of the strengths-based digital empowerment framework proposed by Tour et al. (2025) and confirm Zhao, Tang, and Wang's (2025) finding that the impact of digital literacy is strongest among groups at the lowest levels of integration. In the context of IMW in Sabah, this means that investing in the digital capacity of even the most marginalized groups will yield significantly higher learning outcomes than investing in the digital capacity of groups that are already digitally integrated.

Practically, this activity demonstrates that digital transformation does not require sophisticated infrastructure or large budgets. With the right approach, trained facilitators, and contextual materials, meaningful change can occur in a matter of days. This is an important message for policymakers who often view digital empowerment as a long-term program requiring significant resources.

Socially, the success of this activity suggests the enormous potential of the long-term Indonesian migrant worker (IMW) community in Sabah as agents of change in the digital economy. If their digital capacity is consistently developed, this community has the potential not only to improve their personal well-being through digital employment opportunities but also to strengthen the economic networks of the Indonesian diaspora in Malaysia, ultimately increasing the value and quality of remittances sent home.

From a policy perspective, these findings reinforce the argument that protecting Indonesian migrant workers in the digital era cannot be merely reactive in addressing cases of exploitation or rights violations. Still, they must be proactive by equipping both new and established IMWs with digital skills that enable them to protect and develop independently. In other words, digital literacy and capacity must be integral to policies to protect and empower Indonesian migrant workers at the national level and within the framework of bilateral labor diplomacy between Indonesia and Malaysia.

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