

## From Hobby to Achievement: Utilizing AI to Enhance Writing Skills of Indonesian Migrant Workers in Malaysia

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**ABSTRACT** This study presents the outcomes of a community service program designed to enhance the writing skills of Indonesian Migrant Workers (PMI) facing challenges in Malaysia. The program, conducted in collaboration with LSM SHARING, the Indonesian Embassy in Kuala Lumpur, PPI UPSI Malaysia, and 115 universities from Indonesia and Malaysia, utilized Artificial Intelligence (AI) applications to personalize language learning for PMI. The hybrid learning approach, combining online modules and face-to-face workshops, aimed to empower participants to articulate their thoughts effectively in various contexts. Preliminary results indicate a significant improvement in writing skills, evidenced by enhanced grammatical accuracy, vocabulary usage, and overall coherence. The tailored AI applications, addressing specific linguistic challenges, contributed to this positive shift. Beyond quantitative improvements, participants exhibited increased confidence and empowerment in expressing themselves. Practical application of acquired writing skills in formal letters, emails, and community discussions showcased the program's efficacy in addressing real-life scenarios. A collaborative learning environment fostered by workshops and peer interactions further enriched the program. Continuous feedback loops ensured adaptability, addressing challenges such as connectivity issues and reinforcing learned skills. Acknowledging lessons learned, the program emphasizes the importance of ongoing support and proposes future directions for scalability, incorporating additional technologies. In conclusion, this community service initiative signifies a transformative blend of education and technology, empowering PMI with vital writing skills and fostering a supportive learning community. The program's success lays a foundation for future endeavours, emphasizing adaptability, collaboration, and holistic approaches in addressing the unique challenges faced by vulnerable populations.

**Keywords:** *Indonesian Migrant Workers, Artificial Intelligence, Writing Skills, Community Service, Empowerment*

## INTRODUCTION

Indonesian Migrant Workers (PMI) play a crucial role in contributing to the economies of destination countries, becoming the backbone of labor forces across the globe. However, their

journey is fraught with challenges, ranging from linguistic barriers to exploitative working conditions. The experiences of PMI in Malaysia, currently under the care of the Indonesian Embassy in Kuala Lumpur, have highlighted a pressing need for targeted interventions to address their multifaceted challenges.

Numerous studies underscore the vulnerabilities faced by migrant workers globally. The work of Hugo (2013) emphasizes the social and economic challenges faced by migrant workers, often leaving them in precarious situations. Language barriers, identified by Biswas (2017), further exacerbate their difficulties, limiting their ability to communicate effectively, access information, and fully engage with their surroundings.

Effective communication is a cornerstone of empowerment, and for PMI, the ability to express themselves in writing becomes paramount. This initiative arises from the recognition that improving the writing skills of PMI can significantly enhance their agency, enabling them to articulate their concerns, navigate complex legal frameworks, and actively participate in the socio-cultural dynamics of their host countries.

Drawing from the work of Chiswick and Miller (2010), we understand that educational interventions are essential in mitigating the challenges faced by migrant workers. The literature emphasizes that linguistic capabilities are not only essential for daily interactions but also for socio-economic integration and advancement. Therefore, this initiative addresses a critical gap in the educational support system for PMI by focusing on enhancing their writing skills, a proficiency that transcends basic communication and extends to self-advocacy.

The role of technology in education, specifically the utilization of Artificial Intelligence (AI), has been a transformative force in addressing educational disparities globally. As highlighted by Picciano (2017), AI applications in language learning have demonstrated efficacy in tailoring educational content to individual needs, providing a personalized and adaptive learning experience.

Moreover, the work of Vygotsky (1978) on the Zone of Proximal Development (ZPD) underscores the importance of educational interventions that meet learners at their current cognitive abilities and gradually advance them beyond their current understanding. This concept aligns with the core principles of the AI-driven language learning platforms utilized in this initiative, tailoring content to the specific needs and challenges faced by PMI in Malaysia.

In light of the above, this initiative seeks to amalgamate the transformative potential of AI in language education with the pressing needs of PMI. By doing so, it aspires to create an educational ecosystem that not only imparts language skills but also fosters empowerment, resilience, and active participation in the host society.

## **2. METHOD**

### **2.1 Participants:**

The participants in this community service program are Indonesian Migrant Workers (PMI) currently under the care of the Indonesian Embassy in Kuala Lumpur. Selection criteria include those facing challenges due to linguistic barriers, limited access to educational resources, and other issues hindering their personal and professional development.

### **2.2 Collaborative Partnerships:**

The success of the program is built on collaborative efforts between SHARING, the Indonesian Embassy in Kuala Lumpur, the Indonesian Student Association at Sultan Idris Education University (PPI UPSI) in Malaysia, and 115 universities from Indonesia and Malaysia. This collaborative approach ensures a diverse range of expertise and resources, contributing to a comprehensive and holistic community service initiative.

### **2.3 AI Application Integration:**

The heart of the program lies in the integration of AI-driven language learning platforms. These platforms are carefully selected based on their adaptability to individual learning needs, focusing on enhancing writing skills, grammar proficiency, and vocabulary relevant to the daily experiences of PMI in Malaysia. The curriculum is designed in collaboration with language experts, educators, and AI developers, ensuring that the content addresses real-life scenarios faced by PMI. The AI applications employ natural language processing and machine learning algorithms to personalize the learning experience for each participant, taking into account their proficiency level and specific challenges.

### **2.4 Hybrid Learning Environment:**

Given the diverse backgrounds and locations of the PMI participants, a hybrid learning environment is adopted. This includes both online modules accessible through various devices and face-to-face sessions held at the Indonesian Embassy in Kuala Lumpur. The hybrid approach allows flexibility, catering to the different needs and circumstances of the participants.

### **2.5 Workshops and Mentoring:**

The program includes a series of writing workshops facilitated by language experts and educators. These workshops cover various aspects of writing, including structure, style, and content. Participants also receive one-on-one mentoring sessions, providing personalized feedback and guidance to address their specific challenges.

### **2.6 Feedback Mechanism:**

A robust feedback mechanism is implemented throughout the program. Participants are encouraged to provide feedback on the AI applications, workshops, and overall learning experience. This feedback is used to continuously refine and improve the program, ensuring its relevance and effectiveness.

### 2.7 Monitoring and Evaluation:

The progress of each participant is closely monitored through regular assessments, both automated through AI applications and manual evaluations by language experts. The evaluation criteria include improvements in writing skills, increased confidence, and the application of learned skills in practical situations.

## 3. RESULT AND DISCUSSION

### 3.1 Improvement in Writing Skills:

The implementation of AI-driven language learning platforms has yielded promising results in enhancing the writing skills of Indonesian Migrant Workers (PMI). Preliminary assessments conducted after the first phase of the program reveal a noticeable improvement in participants' ability to articulate their thoughts in writing. The tailored nature of the AI applications, which adapt to individual proficiency levels and specific linguistic challenges, has played a pivotal role in this positive outcome.

The quantitative analysis of writing samples demonstrates a statistically significant increase in grammatical accuracy, vocabulary usage, and overall coherence. AI algorithms, as applied in platforms such as Duolingo and Babbel, have successfully identified and targeted specific language deficiencies commonly found among the participants. For instance, participants showed substantial progress in constructing complex sentences and employing appropriate vocabulary related to their daily experiences in Malaysia.

### 3.2 Increased Confidence and Empowerment:

Beyond the quantitative improvements in writing skills, a qualitative shift has been observed in the participants' confidence and sense of empowerment. Engaging with the AI applications and participating in the workshops has instilled a newfound belief in their ability to express themselves effectively. This transformation is particularly evident in their interactions during face-to-face sessions at the Indonesian Embassy in Kuala Lumpur.

The impact on empowerment extends beyond mere language proficiency. Participants reported an increased willingness to engage in discussions, share their experiences, and actively seek information. This empowerment is a crucial outcome, aligning with the findings of previous

research by Castañeda and Smith (2013), which emphasized the connection between language proficiency and the ability to assert one's rights and navigate challenging situations.

### 3.3 Application of Writing Skills in Practical Situations:

One of the primary objectives of the program was to ensure the practical applicability of the acquired writing skills in the real-life contexts faced by PMI in Malaysia. The participants' ability to apply their newfound skills is evident in various contexts, including drafting formal letters seeking assistance, composing emails for job applications, and contributing to community discussions.

The practical application of writing skills is a key indicator of the program's success in addressing the specific needs of PMI. The AI applications, designed with real-life scenarios in mind, have effectively prepared participants for the challenges they encounter, ranging from communicating with employers to interacting with local authorities. This aligns with the findings of Li (2016), who emphasized the importance of contextualized language learning for effective communication in diverse and dynamic environments.

### 3.4 Collaborative Learning Environment:

The hybrid learning environment, combining online modules and face-to-face sessions, has proven to be an effective strategy for fostering collaboration and peer learning among participants. The diversity of experiences and backgrounds within the group has facilitated rich discussions and knowledge sharing. The collaborative workshops, led by language experts, have provided a platform for participants to learn from each other's experiences and collectively address common challenges.

The collaborative learning environment aligns with socio-constructivist theories (Vygotsky, 1978), emphasizing the importance of social interaction in the learning process. The shared experiences of the participants contribute to a supportive community, enhancing the overall effectiveness of the program.

### 3.5 Continuous Improvement through Feedback:

The program's success is not solely attributed to its initial design but also to its adaptability and responsiveness to participant feedback. Regular feedback sessions, both formal and informal, have allowed participants to express their opinions on the AI applications, workshops, and overall learning experience. This iterative feedback loop has been instrumental in refining the program, addressing emerging challenges, and incorporating participant suggestions. The collaborative partnership with 115 universities from Indonesia and Malaysia has facilitated a diverse range of perspectives and expertise in the feedback process. This collaborative feedback mechanism not only enhances the quality of the program but also ensures its relevance across various cultural contexts.

### 3.6 Challenges and Lessons Learned:

While the program has shown considerable success, challenges have arisen, highlighting areas for further refinement. Connectivity issues, particularly for online modules, have been identified as a challenge faced by some participants. In response, strategies such as providing offline resources and scheduling flexible online sessions have been implemented to accommodate varying connectivity situations. Additionally, the need for ongoing support and reinforcement of learned skills has been recognized. To address this, post-program resources, such as online forums and periodic check-ins, are being developed to ensure that participants can continue to strengthen their writing skills independently.

### 3.7 Future Directions and Sustainability:

The success of this community service program lays a foundation for future initiatives and expansions. Scaling the program to reach a broader audience of PMI and collaborating with additional organizations, both governmental and non-governmental, can amplify its impact. The integration of feedback loops and continuous improvement strategies ensures the sustainability and relevance of the program in the long term. Moreover, exploring the potential integration of additional technologies, such as virtual reality and artificial intelligence for speech recognition, can further enhance the language learning experience for PMI. This aligns with the evolving landscape of educational technology and opens new possibilities for addressing diverse learning needs.



**Figure 1.** Community Service Activities

## CONCLUSION

In conclusion, the community service program has demonstrated significant strides in improving the writing skills, confidence, and empowerment of Indonesian Migrant Workers in Malaysia. The integration of AI-driven language learning platforms, collaborative workshops, and a hybrid learning environment has created a comprehensive and effective educational initiative.

The program not only addresses the immediate needs of PMI but also contributes to their long-term socio-economic empowerment. The success stories emerging from this initiative serve as a testament to the transformative potential of education, technology, and collaborative community engagement in enhancing the lives of vulnerable populations.

## **ACKNOWLEDGMENT**

The success of this program is attributed to the collective efforts of SHARING, the Indonesian Embassy in Kuala Lumpur, PPI UPSI Malaysia, and the 115 universities from Indonesia and Malaysia. Their commitment and collaboration have been instrumental in empowering Indonesian Migrant Workers through education. This community service program stands as a model for future endeavors, emphasizing the importance of adaptability, collaboration, and a holistic approach in addressing the unique challenges faced by Indonesian Migrant Workers and similar communities worldwide.

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