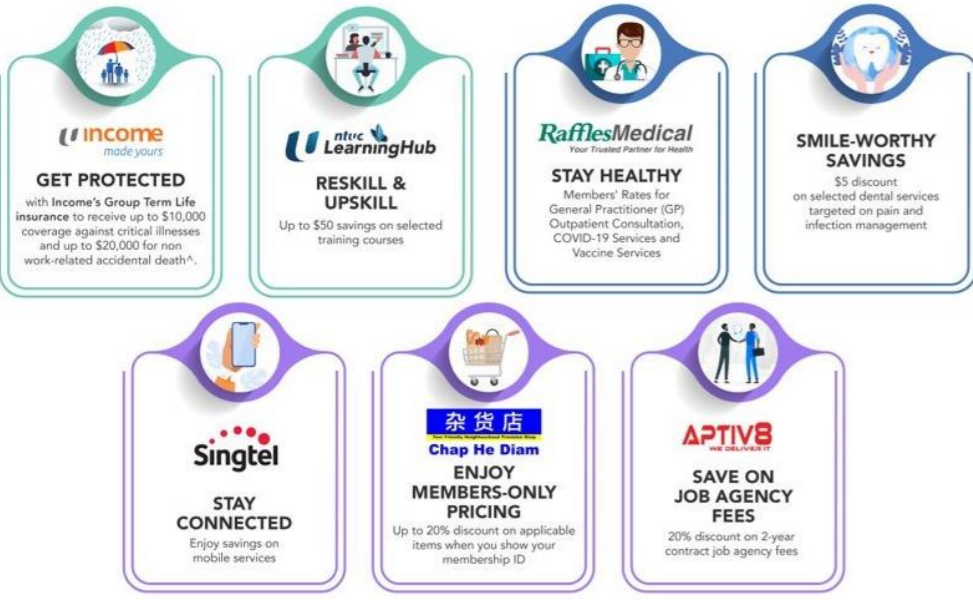


### Motivation & Objectives

#### MWC Membership and MWC Progressive Web App

- Improving the communication of membership benefits to migrant workers
- Developing the MWC Progressive Web App as a central tool in their digital transformation journey



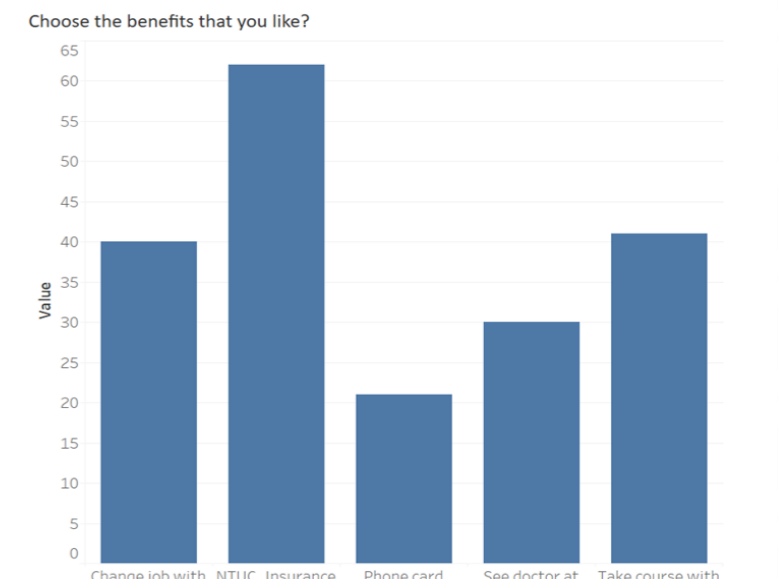
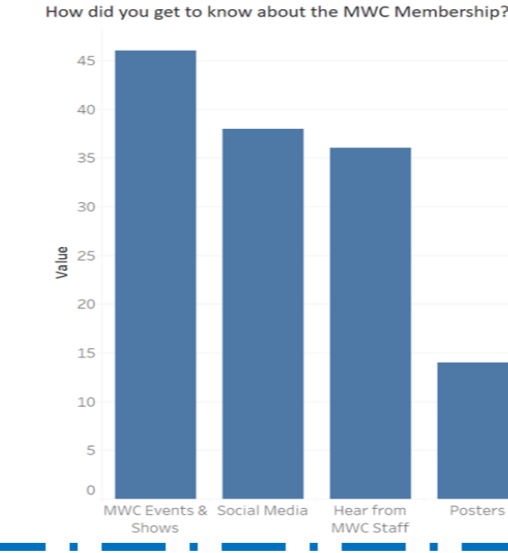
MiDiGi Project A collaborative effort between MWC and DBS which aimed to enhance the digital literacy of migrant workers.

A collaborative effort between MWC and DBS which aimed to enhance the digital literacy of migrant workers.

### Analysis & Results

#### 1. Awareness Phase

In this phase, we examined how migrant workers discover MWC membership. Survey results indicated that migrant workers primarily become aware of membership through MWC events, exhibitions, social media, and word of mouth.



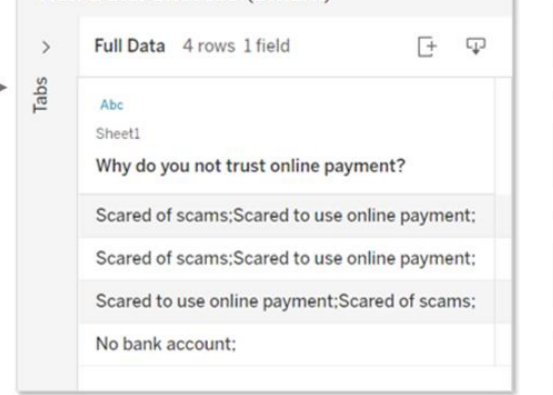
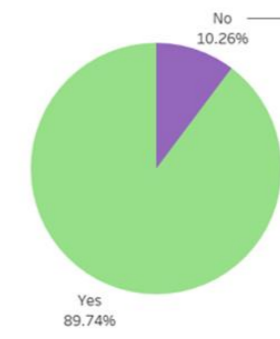
#### 2. Consideration Phase

In this phase, we investigated the benefits associated with MWC membership among migrant workers. The survey results revealed that NTUC Insurance was the most preferred benefit, followed by enrolling in courses at NTUC Learning Hub and utilizing activ8 employment services for job changes. On the other hand, seeking medical assistance at Singtel were the least favored benefits. This implies the need for MWC to align its communication approach with workers' preferred benefits and enhance value-oriented touchpoints.

#### 3. Registration Phase

In this phase, we aimed to assess how digital literacy concerns affected migrant workers' membership. The data showed that 10.26% of respondents expressed mistrust in online payments, citing fears of scams. This underscores the importance of MWC recognizing and addressing these concerns to help workers overcome them.

Do you trust to do online payment in MWC Membership App (PWA)?

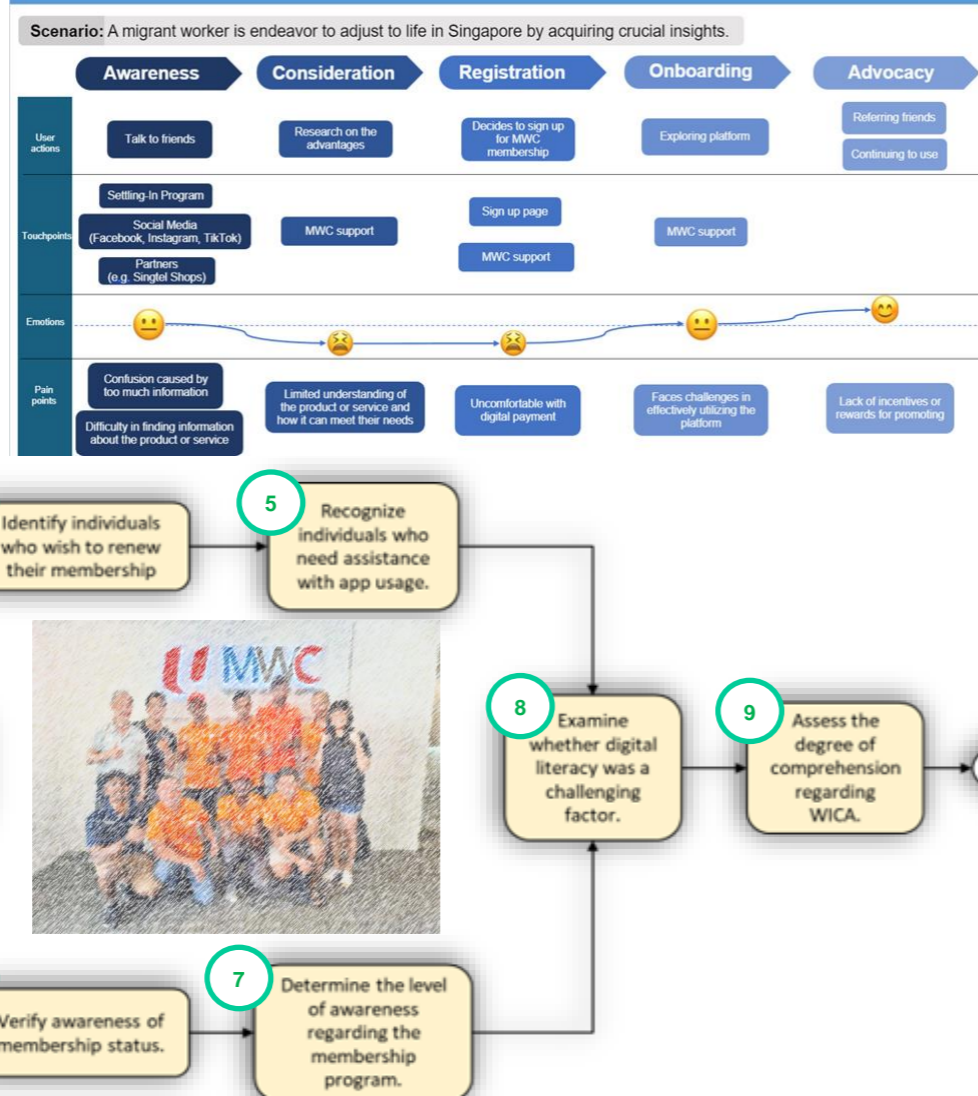


### Research Design & Methods

#### MWC Membership Survey

Stages	Hypotheses	Survey Questions
Awareness	If migrant workers possess awareness of the availability of MWC membership, it is more probable for them to opt for joining.	Do you have MWC Membership App (PWA) on your phone? Are you a MWC member? Do you know about MWC Associate Membership? How did you get to know about the MWC Membership? Why do you not want the membership? Choose the benefits that you like?
Consideration	If migrant workers are well-informed about the benefits and opportunities offered by MWC membership, then they are more likely to choose to join.	Do you trust to do online payment in MWC Membership App (PWA)? Why do you not trust online payment? Which of these payment methods would you most prefer?
Registration	If migrant workers possess a limited understanding and lack of trust in digital payment systems, then they are more likely to experience registration discomfort during the MWC registration process.	Do you need help in using MWC Membership App (PWA)? What kind of help will be useful?
Onboarding	If migrant workers lack familiarity and experience in using digital applications, then they will require assistance in effectively navigating the MWC PWA.	MWC Membership is now \$6 for one-year. Will you continue MWC Membership at \$24 after one-year? Why would you not renew your membership?
Advocacy	If migrant workers have a comprehensive understanding of the benefits of MWC membership and have a positive experience using the MWC PWA, then they will exhibit a higher willingness to utilize the MWC PWA and actively advocate for membership promotion.	Identify individuals who wish to renew their membership. Recognize individuals who need assistance with app usage.

#### Migrant Worker Journey Map

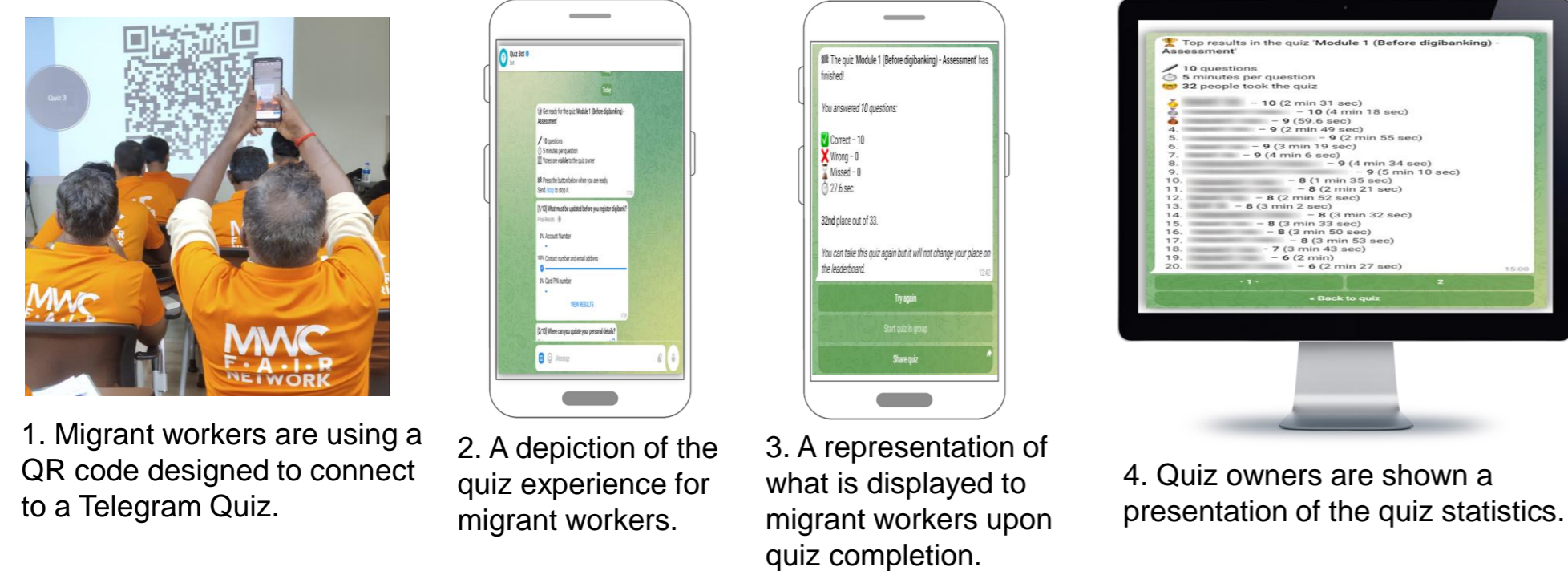


A focus group session with migrant workers was conducted to improve the survey questionnaire's clarity and effectiveness.

#### Survey Flow

- Demographic data is collected through the survey.
- Mobile phone usage among migrant workers is analyzed to improve MWC's marketing strategies.
- The survey checks if workers have the MWC PWA on their phones as an indicator of their willingness to use it.
- Workers with the PWA are questioned about their membership renewal preferences.
- Workers with the PWA are also asked if they require additional guidance for using the PWA.
- Workers without the PWA are surveyed regarding their membership status.
- Those without the PWA are also asked about their reasons for not participating.
- The survey explores the challenges related to digital literacy.
- It assesses the understanding of the Work Injury Compensation Act (WICA) among migrant workers.

#### MiDiGi project



#### Using Large Language Model (LLM) to answer quizzes from Module 1 to 4

Evaluated AI technology precision, encompassing ChatGPT 3.5 and Perplexity, in Singapore's DBS iBanking domain with reference to DBS's 40 quiz questions.

Additionally, investigated improved NLP tasks with the Retrieval Augmented Generation (RAG) framework and Langchain. The right image shows source documents, while the bottom one represents the custom prompt.

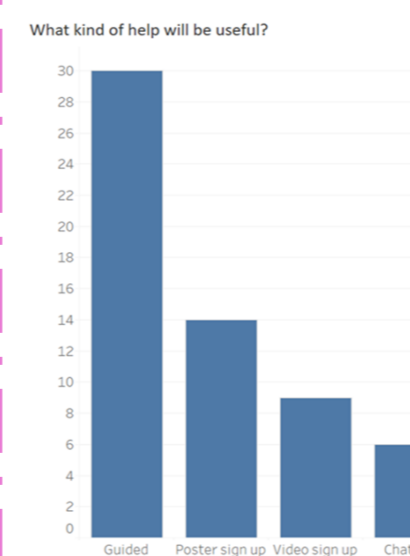
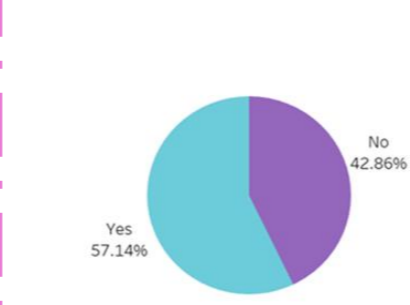
```
question = "Does the bank charge you service fee when you are transferring money overseas?"
result = qa({"question": question})
print("Response: \n", result["answer"])
```

Response: No, you do not get charged a service fee by the bank when you transfer money overseas.

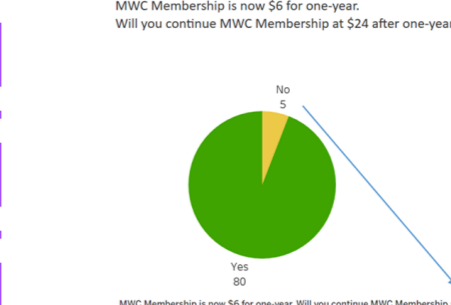
#### 4. Onboarding Phase

In this phase, we aimed to determine if migrant workers needed assistance with MWC PWA. The survey found that 57% of respondents required help, with most preferring in-person guidance for onboarding. These findings underscore the importance of exploring alternative methods to support workers during the onboarding process, particularly in MWC's digitalization efforts.

Do you need help in using MWC Membership App (PWA)?



MWC Membership is now \$6 for one-year. Will you continue MWC Membership at \$24 after one-year?



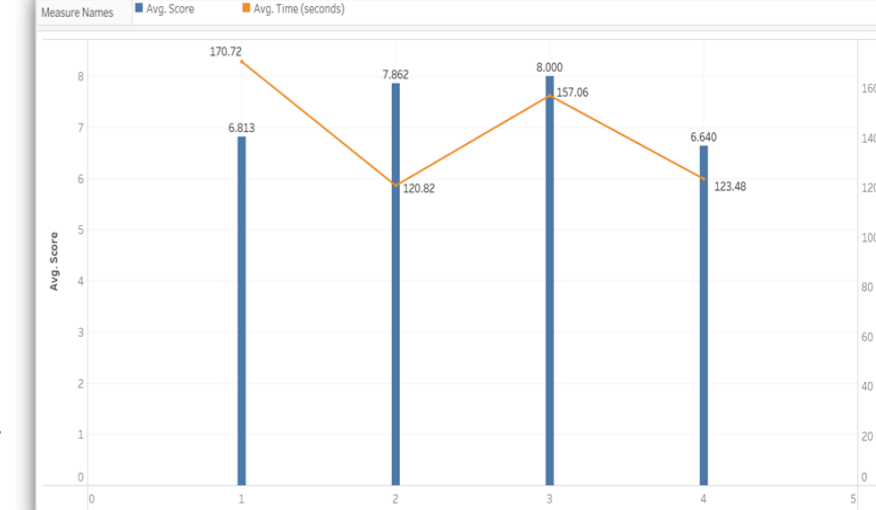
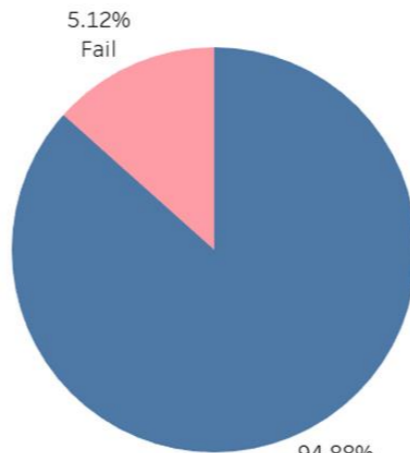
Why would you not renew your membership?

Scared of scams	Scared to use online payment	Scared of scams	Scared to use online payment	Scared to use online payment	Scared of scams
Scared to use online payment	Scared of scams	Scared to use online payment	Scared of scams	Scared to use online payment	Scared of scams
No bank account					

#### 5. Advocacy Phase

In the last phase, the data showed that most respondents planned to renew their membership, emphasizing the perceived value of MWC membership. However, a minority of 5 out of 80 respondents considered the fee costly. This data can guide MWC in their membership renewal approach and value proposition communication.

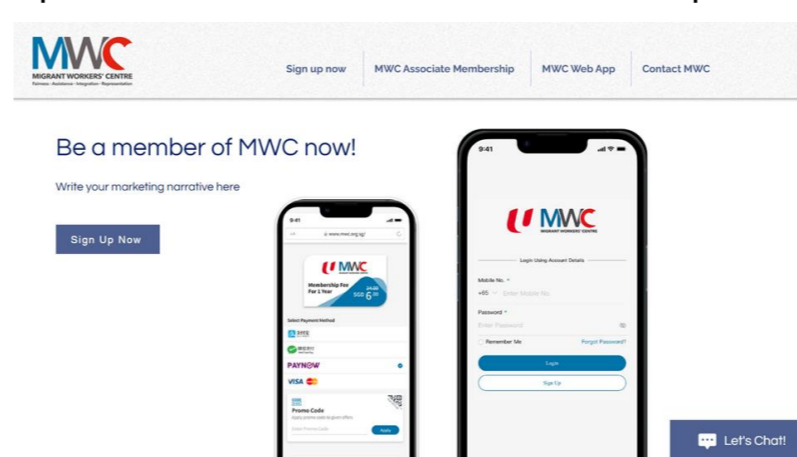
The pie chart on the left provides an overview of pass and fail rates in the four quizzes. For a more detailed analysis, the figure on the left shows average scores and completion times for each module. Notably, the first module's quiz had the longest completion time, possibly due to it being the initial class. On the other hand, the lowest average score was in the quiz for module 4, suggesting challenges with the content. Overall, the right-hand figure helps MWC and DBS identify areas in need of revision and reevaluation.



### Conclusions

#### Landing Page

Awareness of MWC membership primarily occurs through on-site platforms like events and word-of-mouth, and a landing page can increase awareness, provide guidance on advantages, and improve sign-up rates due to the absence of an online platform by MWC.



#### Utilising Chatbots for Assessment

The digital literacy campaign employed the Telegram Quiz bot for post-class assessments, revealing a remarkable pass rate of over 90% across all four quizzes. This underscores the success of the collaboration between MWC and DBS in educating migrant workers about DBS iBanking.

#### Potential open-ended chatbot

The project's results highlight the benefits of incorporating an open-ended chatbot into MWC's programs, particularly in providing continued support in digital literacy after initial training. It also stressed the value of having predefined question-answer sets for team members with limited domain knowledge.

### Acknowledgements

Sincere gratitude is extended to Professor Andrew, the Project Sponsor (MWC), and the DBS team for their unwavering guidance and support during this project. Their invaluable mentorship and unwavering commitment have proven essential to the project's success, and their collaborative expertise has significantly enriched the experience.