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**JOHOR  
INNOVATION  
INVENTION  
COMPETITION  
AND  
SYMPOSIUM  
2023**



"Innovation Inspires a Society  
to be Critical and Creative"

# **JOHOR INNOVATION INVENTION COMPETITION AND SYMPOSIUM 2023**



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**Editors-in-Chief**

**AHMAD KHUDZAIRI KHALID  
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UNIVERSITI  
TEKNOLOGI  
MARA

**Cawangan Johor  
Kampus Pasir Gudang**

2023



**First Edition 2023**

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**e ISBN: 978-967-0033-17-4**

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**Published in Malaysia by  
Universiti Teknologi MARA Cawangan Johor  
Kampus Pasir Gudang  
81750 Masai**





## **Preface**

**In the name of Allah, the Almighty who gives us the enlightenment, the truth, the knowledge and with regards to Prophet Muhammad (peace be upon him) for guiding us to the straight path. We thank to Allah for giving us guidance and strength to write this e-book.**

**This e-book compiles the extended abstracts that submitted to Johor Innovation Invention Competition and Symposium 2023 (JIICaS2023), where JIICaS2023 is a virtual platform for all creative minds to share and present their invention and innovation. The extended abstracts are divided into two categories, which are Category A (Higher Educational Student/ Any Recognized Institutional Students in Malaysia) and Category B (Primary/ Secondary School Students / Special Education School Students in Johor). Each abstract gives a brief background on the innovation or project.**

**We hope that this e-book will help the readers to get to know the innovation done by the students from both categories and get some ideas to develop future innovation products.**



## GOOINO

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## ABSTRACT

Gooino is a digital marketing mobile application (DMMA) that helps consumers to discover high-quality, locally produced goods and supports small-town entrepreneurs such as in Tellian, Mukah to market their goods digitally. Gooino aims to tackle many issues such as poor monthly income among Tellian entrepreneurs, difficulty in selling Mukah products across Sarawak and Malaysia, lack of exposure to Mukah's famous sago-based products with its advantages and nutrients, and communication barriers between non-Melanau Mukah speakers and Mukah people. The development of Gooino aims to assist Tellian entrepreneurs to earn extra income, promote local products widely not only in Sarawak, educate the public about the advantages and nutrients of sago-based products, and help the non-Melanau Mukah speakers to communicate with Tellian entrepreneurs. Gooino has a user-friendly interface that targets entrepreneurs as well as potential customers with features that allow entrepreneurs to register their businesses and update the information about their products while customers can communicate with the entrepreneurs directly for any inquiries. Three factors make Gooino a unique smartphone app: (1) Sarawak's first mobile app that promotes Mukah's distinctive tourist destinations and local items, (2) In partnership with CRAUN Research, this application will provide nutritional information for all Mukah entrepreneurs' products, notably those from Kampung Tellian, (3) This mobile app promotes the uniqueness of the Mukah Melanau Language, enabling customers to connect with local entrepreneurs and tourists who wish to visit Mukah but are worried about language barriers. Gooino will be released for free on the iOS and Android platforms. TVS, a Sarawak broadcaster, will also promote this application. This application registered its copyright (LY2021Q02670) and trademark (PSA20211058).

**Keywords:** digital marketing, mobile application, social entrepreneurship, Tellian entrepreneurs, location-based services.

## 1.0 INTRODUCTION

The emergence of the COVID-19 pandemic in early 2020 has sparked an uproar. The Malaysian government enacted the Movement Control Order (MCO) on March 18, 2020. Consequently, many local entrepreneurs especially in Tellian, Mukah could not carry out their business activities as usual. Most local entrepreneurs from the Tellian area do small business with a gross income of less than RM1500.

Therefore, Tellian entrepreneurs need to find suitable methods to continue their business activities despite the restrictions due to the movement control order. The method that can cater to the needs of entrepreneurs from the Tellian area is the use of digital marketing. The way entrepreneurs interact with their target market has been revolutionised by mobile applications, which provide them access to a substantial consumer base at their fingertips. Local business owners can leverage these platforms to expand their sales, visibility, and customer base. Correspondingly, they stand to benefit immensely from mobile applications for digital

marketing. The State of Sarawak's administration disclosed key initiatives and policy decisions to transform the State of Sarawak into a digital economy powerhouse during the first International ICT Infrastructure and Digital Economy Conference Sarawak (IDECS). Subsequently, this innovative product should be aligned with Sarawak's digital strategy which can significantly increase the state's economy, encourage innovation in business, and raise the standard of living for local business owners, particularly Tellian Entrepreneurs.

As one of the social entrepreneurship efforts, UiTM Sarawak Branch Mukah Campus would like to contribute to the nearest, surrounding community to reduce the financial burden borne and respond to the Sarawak state government's call to move together in further boosting the state's digital economy. Gooino was developed with the consideration of the imminent recession.

## **2.0 OBJECTIVES**

This product was developed to achieve these objectives:

1. To promote local products widely not only in Sarawak.
2. To assist Tellian entrepreneurs in earning extra income.
3. To educate the public about the advantages and nutrients of sago-based products.
4. To help the non-Melanau Mukah speakers communicate with Tellian entrepreneurs.

## **3.0 METHODOLOGY**

The workflow in developing Gooino was guided by the ADDIE model developed by Florida State University in 1975. By the time this extended abstract was written, the development progress of Gooino had reached the development stage (Stage 3 of the ADDIE model).

### **Stage 1: Analysis**

Local entrepreneurs of Kampung Tellian were approached to analyze their needs and problems, especially those affected by COVID-19 through an entrepreneurial workshop. An entrepreneurial workshop called Program Pembangunan Produk EkoPelancongan & Pembangunan Mobile Apps (ProPPEMA) was conducted to: (1) develop ecotourism products for commercialisation, (2) provide basic knowledge and understanding to the entrepreneurial community about the functions and abilities to use mobile applications, (3) develop a Gooino mobile application that can be launched on various platforms such as iOS, Android, and Windows easily, and (4) produce rural entrepreneurs based on ecotourism.

During this time, a questionnaire (pre-test) was given to tap on their experience using existing mobile applications before using the Gooino application. The study sample involved 51 Tellian entrepreneurs. The justification for the selection of Tellian entrepreneurs is that the entrepreneurs are the target market that will utilise a mobile application still in the developing phase by UiTM Sarawak Branch, Mukah Campus. The instrument used was a survey with 5 Likert scales ranging from (1) strongly disagree to (5) strongly agree. The survey had four sections. Section A had seven items on the demographic profile. Section B had 13 items on experience in using the existing mobile applications. Section C had ten items on entrepreneurial knowledge, while Section D had ten on entrepreneurial skills. For this extended abstract, only findings from Section A and Section B will be reported to demonstrate how Gooino was developed based on the feedback received from Tellian entrepreneurs regarding their needs that are being met through the innovation of this Gooino application.



Figure 1: One of the workshops conducted in ProPPEMA which is a hands-on activity to take quality photos for the purpose of promoting the entrepreneur's products before uploading them on Gooino.

## Stage 2: Design

Several decisions regarding the content of the application have been discussed in developing the application based on the needs that have been identified based on the Tellian entrepreneurs' feedback from the questionnaire.



Figure 2: A meeting was conducted with the collaborative partner of Gooino, CRAUN Research Sdn. Bhd.

### Stage 3: Development

The Gooino application has been developed using the concept of No Coding/Low Coding where the application development process does not involve a complicated process and the content of the application can be easily changed according to current needs.

Gooino is scalable via links and does not require large storage space when installed on mobile devices.

### Stage 4: Implementation

The next meeting/workshop with local entrepreneurs from Tellian Village will be organised to explain how to use Gooino.

This meeting will mark a pilot test for the use of Gooino.

### Stage 5: Evaluation

After a period that will be set for local entrepreneurs to use this application, their experience using this application will be evaluated to continuously improve this application for the future.

At this stage, another questionnaire (post-test) will be given to find out their entrepreneurial experience after using the Gooino application.

## 4.0 RESULTS

51 Tellian entrepreneurs have responded to the pre-test questionnaire prior to using Gooino. The results from the pre-test distributed during the entrepreneurial workshop are reported below.

Table 1: Respondent's Gender

	Frequency	Percent
Male	16	31.4
Female	35	68.6
Total	51	100

Table 1 shows that most of Tellian entrepreneurs are female (68.6%) as compared to male entrepreneurs (31.4%).

Table 2: Respondent's Age

	Frequency	Percent
65 years old and above	1	2
55 years old and above	8	15.6
45 years old and above	11	21.6
35 years old and above	9	17.7
20 years old and above	18	35.3
19 years old and below	3	5.8
Not stated	1	2
Total	51	100

Table 2 shows that most of Tellian entrepreneurs are within the age of 20 to 35 years old (35.3%).

Table 3: Monthly Income

	Frequency	Percentage
RM500 and below	10	19.6
RM1000 and below	10	19.6
RM1500 and below	6	11.8
RM1501 - RM3000	10	19.6
More than RM3001	13	25.5
Not stated	2	3.9
Total	51	100

Table 3 reports the estimated monthly income earned by Tellian entrepreneurs prior using Gooino.

Table 4: Business Experience

	Frequency	Percentage
Yes	48	94.1
No	3	5.9
Total	51	100

Table 4 reveals that the majority (94.1%) of Tellian entrepreneurs have experience in business activities.

Table 5: Business Experience Period

	Frequency	Percentage
Less than 1 year	5	9.8
Less than 5 years	21	41.2
Less than 10 years	14	27.5
More than 10 years	5	9.8
More than 20 years	4	7.8
Not stated	2	3.9
Total	51	100

In relation to Table 4, Table 5 further indicates that most of Tellian entrepreneurs have business experience less than 5 years (41.2%).

Table 6: Types of existing mobile applications used.

	Frequency	Percentage
Facebook	2	3.9
Whatsapp	5	9.8
Others	1	2.0
Use 2 apps together	16	31.4
Use 3 apps together	6	11.8
Use 4 apps together	8	15.7
Use all types of apps	3	5.9
Not using any	10	19.6
Total	51	100

Before Gooino was introduced to the entrepreneurs, most of them used two applications together because they paired up Facebook and WhatsApp together (31.4%) as shown in Table 6.

Table 7: The level of dependency on existing mobile applications.

	Frequency	Percentage
Very low	8	15.7
Low	3	5.9
Moderate	14	27.5
High	12	23.5
Very high	14	27.5
Total	51	100

Table 7 shows that Tellian entrepreneurs have a moderate dependency to very high dependency on existing mobile applications. This finding gives relief to Gooino's developers as the Tellian entrepreneurs do not have digital resistance against mobile applications and thus it will be easier to promote the use of Gooino to them.

Table 8: Respondent's interest in using Gooino.

	Frequency	Percentage
Yes	43	84.3
No	8	15.7
Total	51	100

Table 8 shows that the Tellian entrepreneurs revealed their interest with the introduction of Gooino.

Table 9: Respondent's interest to pay if Gooino places subscription fees.

	Frequency	Percentage
Yes	23	45.1
No	28	54.9
Total	51	100

Despite their interest in Table 9, most Tellian entrepreneurs are reluctant if they were to pay any subscription fee when using Gooino. These entrepreneurs might be less inclined to pay for a subscription when they can get the same capability from other existing mobile applications without paying anything.

Table 10: Weaknesses to be improved from existing mobile applications.

Themes	Feedback
The weaknesses of existing mobile applications	<ul style="list-style-type: none"> <li>• Limited features on WhatsApp to conduct online transaction (Entrepreneur 8).</li> <li>• A lot of competition (Entrepreneur 13).</li> <li>• Existing mobile applications such as Facebook cannot accept payments made by buyers (Entrepreneur 15).</li> <li>• There are not many bank options for online banking (Entrepreneur 18).</li> <li>• Many challenges in terms of brand, transportation is quite expensive, and underservice takes a long time (Entrepreneur 20).</li> <li>• My account got hacked and scammer issue (Entrepreneur 25).</li> <li>• User interface (UI) is very important (Entrepreneur 31).</li> <li>• Complex, not user-friendly (Entrepreneur 45).</li> </ul>
The weaknesses of mobile application users	<ul style="list-style-type: none"> <li>• I am less skilled (Entrepreneur 21).</li> <li>• To attract the attention of customers because they don't know how to promote sales items carefully (Entrepreneur 27).</li> <li>• Don't know how to promote sale items properly (Entrepreneur 29).</li> <li>• Require a lot of creativity (Entrepreneur 37).</li> </ul>

The weaknesses of internet service

- The internet line factor needs to be upgraded (Entrepreneur 24).
- Internet power usage that needs to be upgraded (Entrepreneur 36).
- Internet access problem (Entrepreneur 38).
- Internet connection should be fast (Entrepreneur 43)

Identifying weaknesses in the existing mobile applications is needed as this will relate to performance expectancy. The entrepreneurs will have a solid intention to use Gooino if they:

- believe that using this new application would enhance their income (perceived usefulness),
- achieve valued outcomes such as their business performance and increased income (extrinsic motivation),
- enhance their business performance by using the new application (job-fit),
- perceive that using the new application is better than using the existing mobile applications (relative advantage),
- meet their outcome expectations in terms of boosting sales and increasing income by using this new application.

Based on the individual responses given by the entrepreneurs, their responses signify individual acceptance of existing mobile applications, which provide prescriptive guidance to the developers of Gooino to include and exclude certain features in this innovative application. The responses from the entrepreneurs are essential in ensuring that the developers can further develop Gooino which can suit the specific needs of the Talian entrepreneurs.

## 5.0 DESCRIPTION OF INNOVATION

After undergoing Stages 1, 2, and 3 of the ADDIE model, a prototype of Gooino was produced. Gooino's features, functionality, usefulness, and practicality are shown as follows.

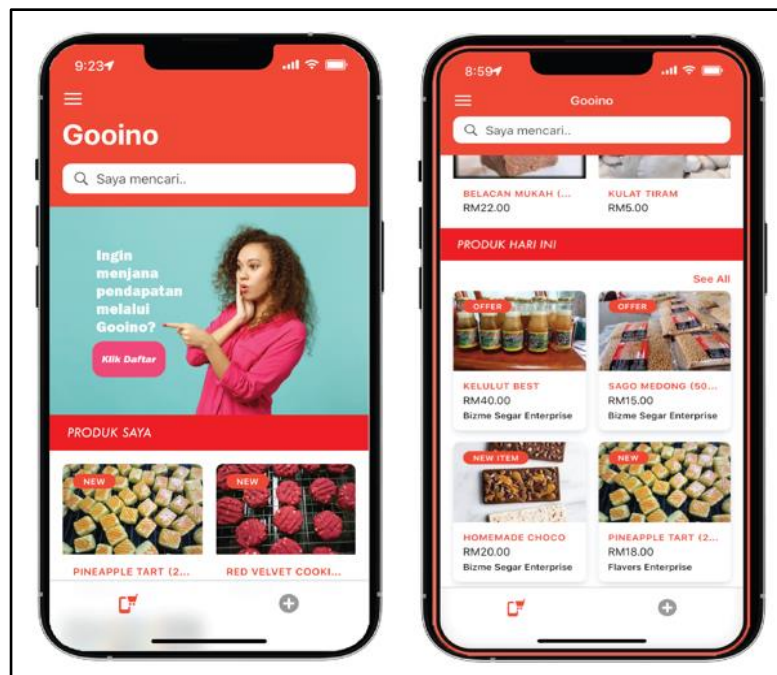


Figure 3: The user interface of Gooino.

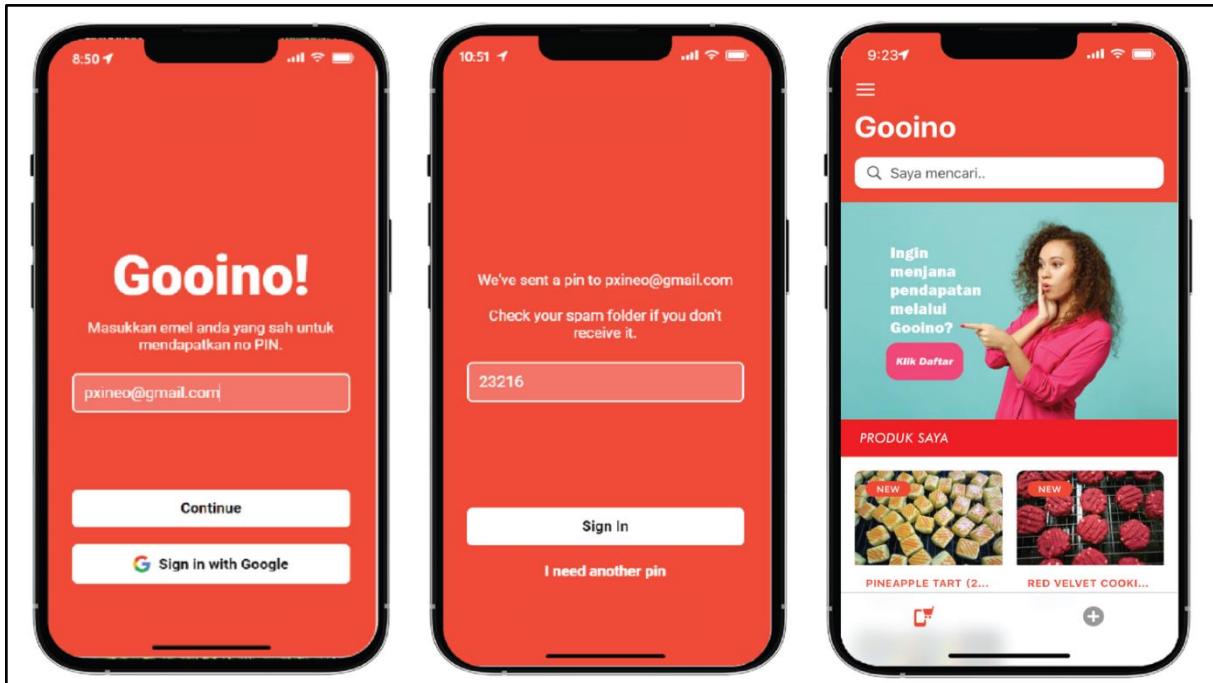


Figure 4: The entrepreneurs must complete a simple registration before they are able to use the application.

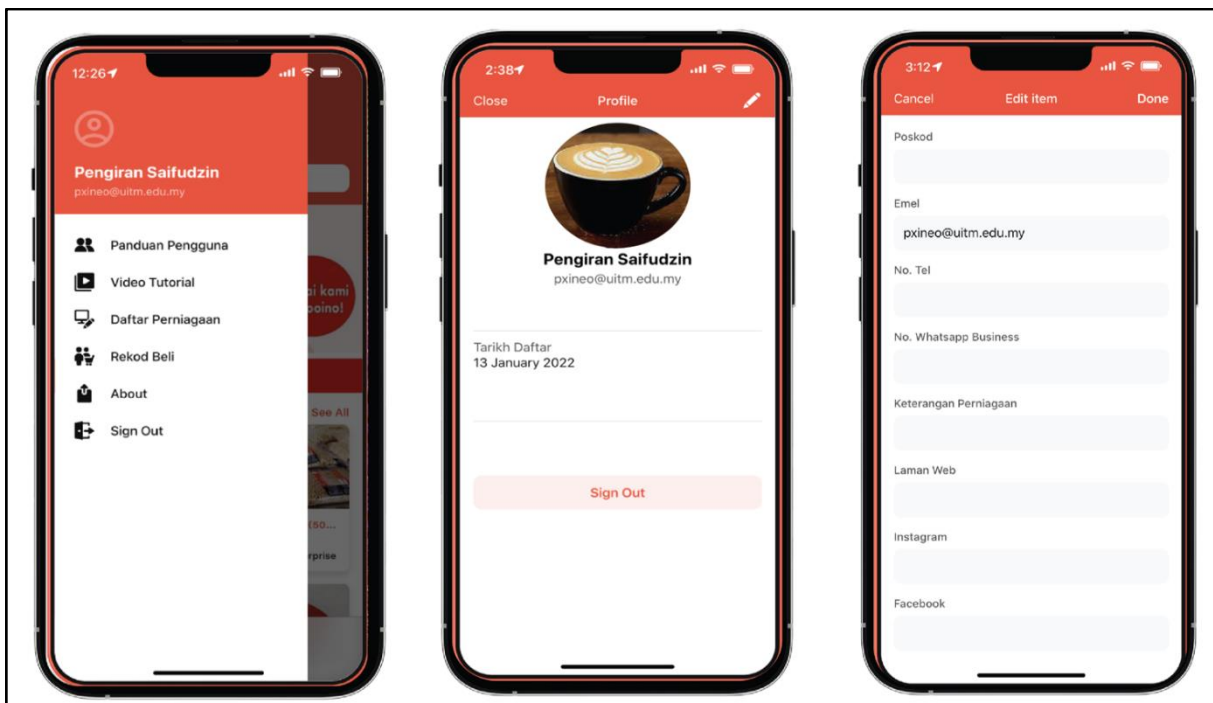


Figure 5: The entrepreneurs can update their profiles by providing their details so that they can be contacted easily by potential customers.

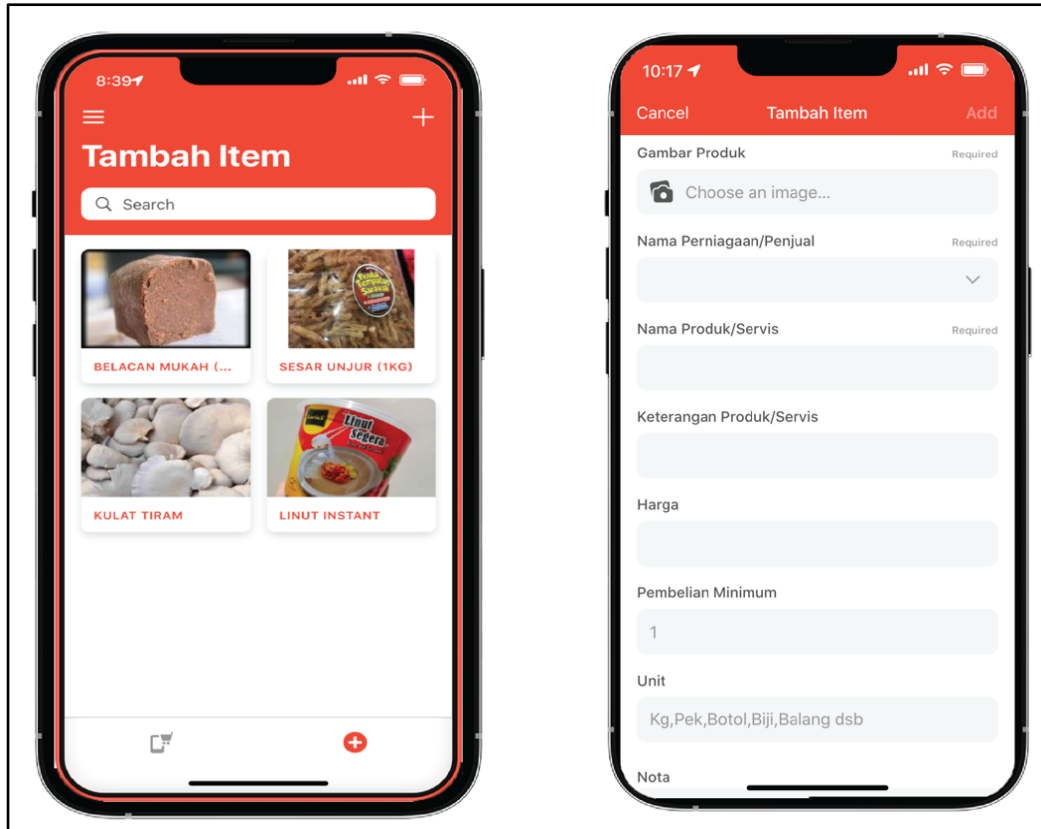


Figure 6: The entrepreneurs can inform the customers about their products by providing the information and the availability in stocks.

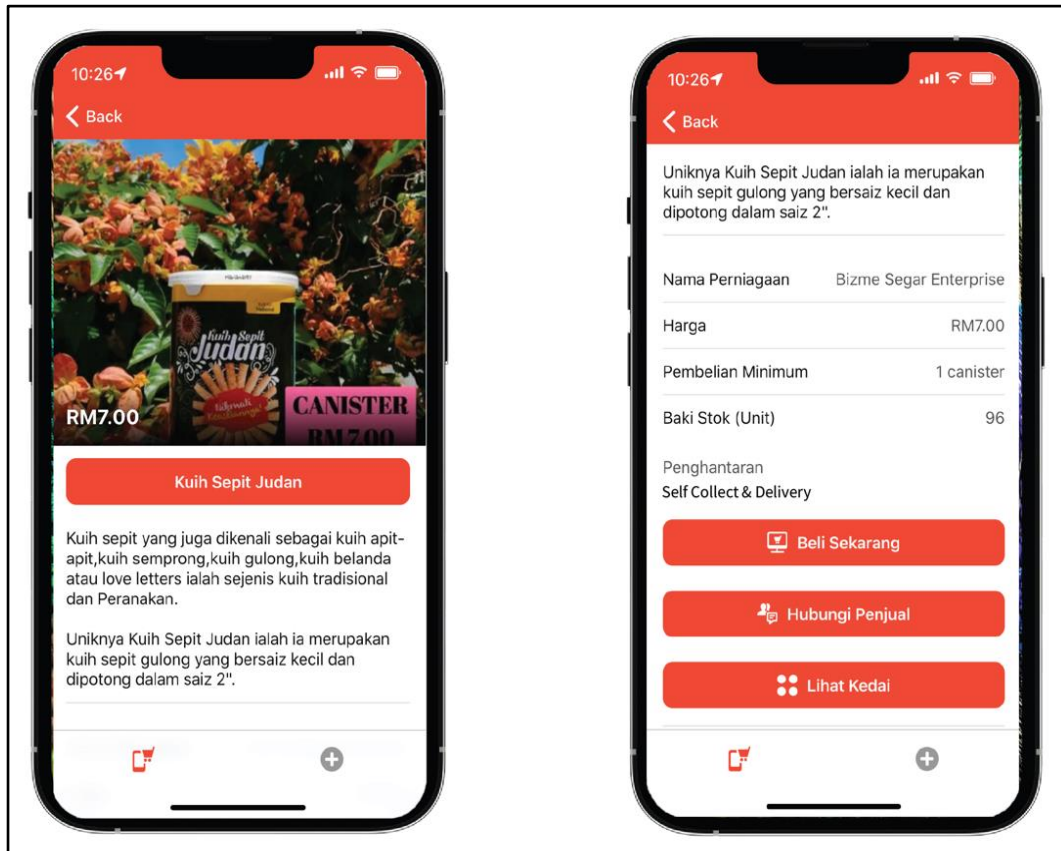


Figure 7: The sample of product description.

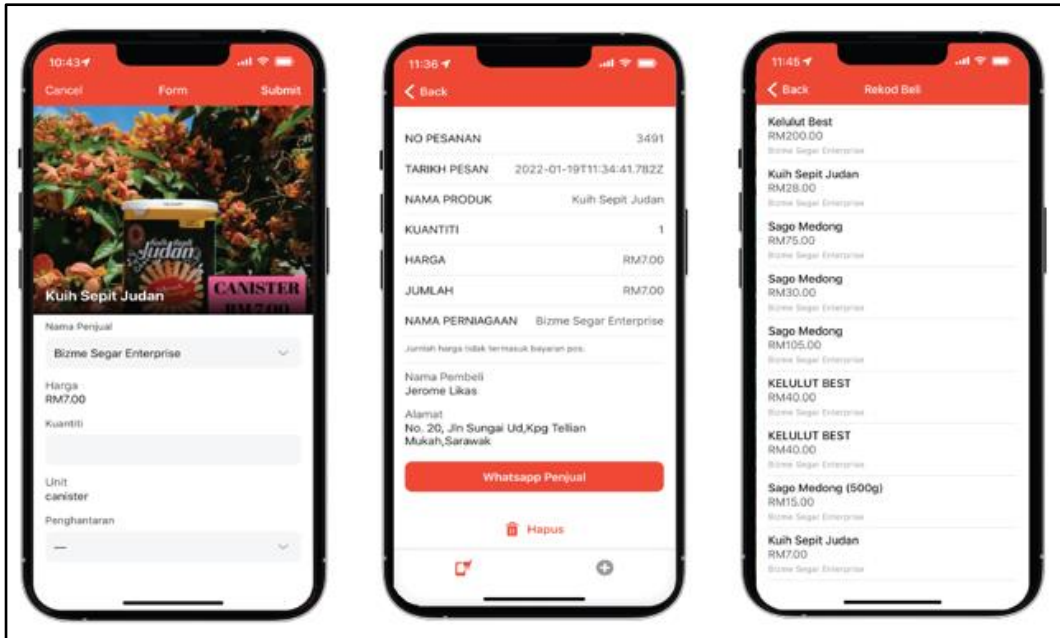


Figure 8: A demonstration of business transaction that took place on Goino.

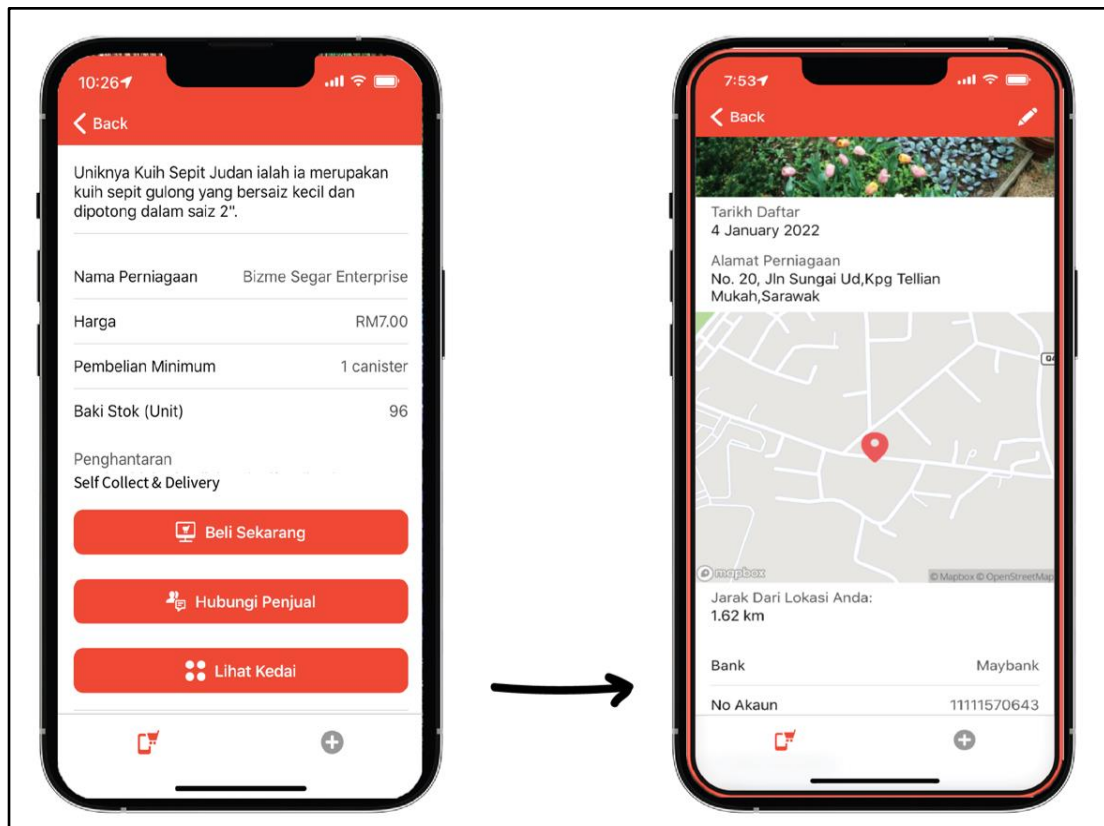


Figure 9: The customers can get the information about the store that sells local products.

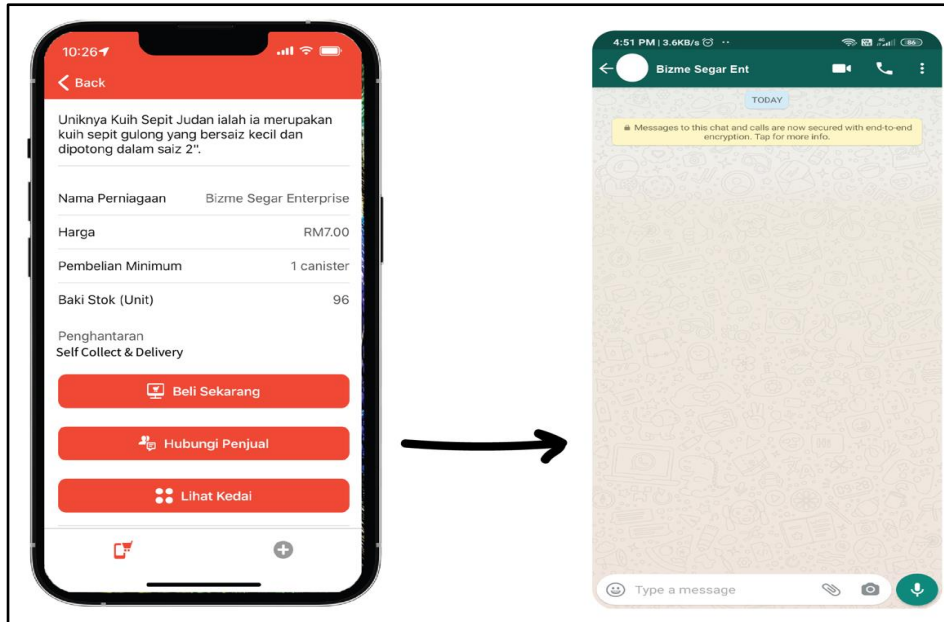


Figure 10: The customers can contact the entrepreneurs directly if they are interested to purchase the local products.

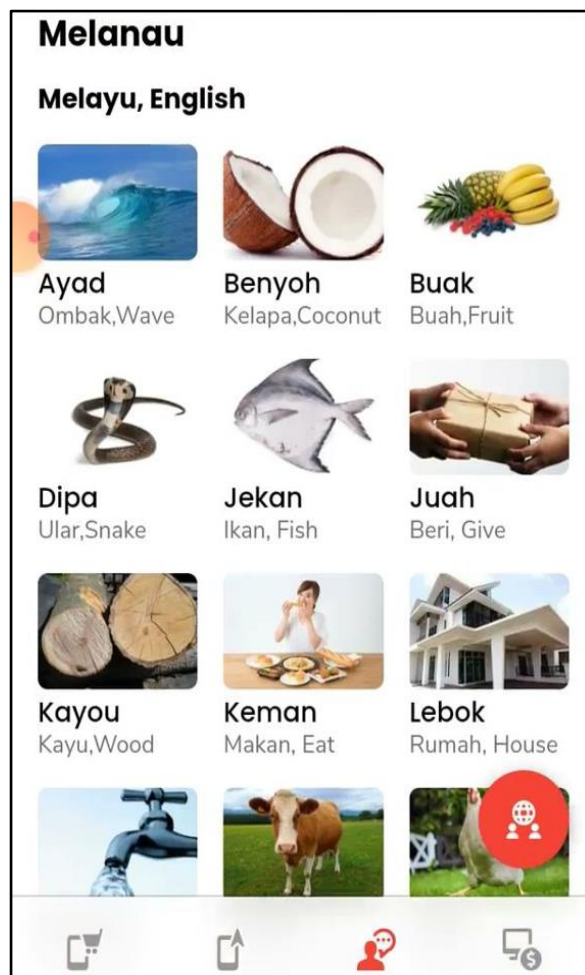


Figure 11: This application allows the non-Melanau Mukah language speakers to communicate with the local entrepreneurs.

## **6.0 CONCLUSION**

The development of Gooino as demonstrated from Figure 3 until Figure 11 has indicated that the requests and issues raised by the Tellian entrepreneurs from the pre-test questionnaire have been addressed by considering their needs. Gooino is developed with the understanding that Gooino application should be user-friendly, it should include online payment facilities from various banks, it should be able to be operated despite unstable internet connection and it should prioritise the security of users' data. The development of Gooino is also a continuous collaborative effort between the university and Tellian entrepreneurs as they need proper teaching and guidance in using Gooino effectively. Honing creativity in marketing requires time and expertise before the implementation of Gooino can be maximised to boost the economy among the Tellian entrepreneurs. If the use of Gooino among Tellian entrepreneurs has proven successful, this effort will be extended to other entrepreneurs throughout Mukah before Gooino can reach other entrepreneurs in Sarawak. So, the plan to expand the use of Gooino will involve TVS, a Sarawak-based broadcaster, to promote this application. Gooino will also be released for free on the iOS and Android platforms in the future. This application has been registered for its copyright (LY2021Q02670) and trademark (PSA20211058).