

## Mobile Application for Promoting Orang Asli Product (Product Asli)

Nur Haryani Zakaria<sup>1\*</sup>, Tan Eu Jin<sup>1</sup>, Zahurin Mat Aji<sup>1</sup>, Hapini Awang<sup>2</sup>, Al Hanisham Mohd Khalid<sup>3</sup>

<sup>1</sup>School of Computing, Universiti Utara Malaysia, Sintok, 06010 Bukit Kayu Hitam, Kedah, MALAYSIA

<sup>2</sup>Institute for Advanced and Smart Digital Opportunity, School of Computing, Universiti Utara Malaysia, Sintok, 06010 Bukit Kayu Hitam, Kedah, MALAYSIA

<sup>3</sup>School of Law, Universiti Utara Malaysia, Sintok, 06010 Bukit Kayu Hitam, Kedah, MALAYSIA

\*Corresponding Author Designation

DOI: <https://doi.org/10.30880/mari.2023.04.01.005>

Received 15 October 2022; Accepted 30 November 2022; Available online 15 January 2023

**Abstract** : Orang Asli (OA) in Malaysia could produce many high-quality products, but the products they made cannot be sold. This is due to the lack of platform to promote or sell the products. The aim of this project is to create a platform which is a mobile based platform which specifically used to promote OA products. Aligned with the technological advancement these days, majority of consumers are shopping online or even do some searching on the Internet before going to physical store to buy. In addition, in this pandemic era of Covid-19, many having business done in online platform is no longer regarded as competitive advantage but is considered necessity. Thus, creating a mobile application would be a good solution to this problem. By resolving this problem, we could help OA to generate income from their own products and increase the exposure of technology and ICT skills among them.

**Keywords**: Orang Asli, Orang Asli Product, Mobile Application, ICT skills, Online Shopping

### 1. Introduction

Malaysia is a multi-racial country consist of many different races such as Malay, Indian and Chinese as the majority. Apart from these three major races, Orang Asli (OA) is also acknowledged as among the local “bumiputera” of Malaysia. In 2015, the population of OA in Malaysia is about 13.8% of the population of 31,660,700 million. OA is just a common name for all indigenous people but mainly for those of Peninsular Malaysia, where in Sarawak indigenous people are more known as natives (Dayak and/or Orang Ulu). Where it includes the Iban, Bidayuh, Kenyah, Kayan, Kedayan and many more. On

---

\*Corresponding author: [haryaniz@gmail.com](mailto:haryaniz@gmail.com)

2023 UTHM Publisher. All rights reserved.

[publisher.uthm.edu.my/periodicals/index.php/mari](http://publisher.uthm.edu.my/periodicals/index.php/mari)

the other hand, in Sabah there are 39 different indigenous ethnic groups which knowns as natives or Anak Negeri [1].

Unfortunately, the OA are always associated under-served community with lack of education exposure and economically affected which resulted in poor quality of life. It is widely known that the OA communities are active in producing local goods for their own consumption. They produced many things like handcrafts, exotic plants and food using natural resources (e.g.: pure honey) and many others. However, these products are only sold or exchanged between themselves due to lack of exposure for wider market outside their community. There is also an entrepreneurial carnival which organized at the Seremban 2 Shopping Centre which help the OA to sell their products. On the carnival general could know the product which produced by OA which include hand-woven mobile phone holders with traditional motifs, wooden sculpture of different shapes and colors. Where this five-day fair was held to promote entrepreneurship as well as showcase the handicraft of OA [2]. As from these we could know that OA need a platform or chances to promote and sell their products.

The products produced by local OA had good quality or at least at par with the local existing brands and might even be cheaper than some of the products on the market, unfortunately not many people know about it. This problem arises due to two issues that has been identified. This issue can be seen in two perspectives: (1) physical platform and (2) online platform. Physical platform can be solved by asking local shop to help selling OA product. However, this physical platform is still limited to local consumers among the OA community themselves. On the other hand, for online platform it is quite challenging as the online shopping platform is currently dominated by major shopping platform such as Shopee and Lazada. The OA products might find it difficult to compete with existing products currently available in the online shopping platform. As we conduct a search with the keyword “product asli” had resulted in around 279 items by different category in Shopee and 272 items in the Lazada website. This can be proven that it is hard for OA to compete with other seller on these two majors online/mobile shopping platform. Thus, a new dedicated mobile platform precisely on promoting OA products is deemed necessary. Secondly, OA had been lived in the heart of the country’s deep jungles for more than 60,00 years. Currently still many of the OA live inside the forest [3]. This had caused OA to be away from the modern civilization and the major market for entrepreneurship activities. Even though some of OA do not live inside deep jungle anymore but still they reside in the rural areas whereby it is only surrounded by captive market. Besides OA also prefer to build own villages where it consists only themselves. This had caused OA are hardly able to promote and sell their products.

## **2. Materials and Methods**

The project will be adopting the Waterfall model as its methodology whereby it is a well-known plan- driven approach. This model follows a rigid linear model that consist of sequential phases (i.e.: requirements analysis, system design, implementation, verification, maintenance) focusing on distinct goal making it easier to understand and manage. As this project is part of the undergraduate program requirement, the objectives and requirements of the proposed system has been well defined. Thus, having the chosen methodology is deemed appropriate since it was not designed to accommodate too many changes. Each phase in this method is required to be carried out in sequence one after another requiring each phase to be completed before moving to the next phase [3]. The Waterfall model’s phases will be discussed in detail in the following section:

### **2.1 Requirement Analysis**

The requirement of the mobile apps will be collected and analyzed. The requirement could be collected by many techniques such as survey and observation. The survey could be done by distributing questionnaire to our targeted person and get feedback from them. Besides, we could also observe what is the main thing people use in online shopping platform to obtain the suitable criteria for the mobile apps. All this information would then be analyzed and documented into requirement specification

document. This phase is considered the most important as the following phase would follow all the requirement which stated in requirement specification.

## 2.2 System Design

The requirement specification is used to determine the software and hardware requirement of the mobile apps to be developed. For instance, which type of operating system to implement the mobile apps will be determined. This goes the same to the hardware requirement whereby aspects like space required by the mobile apps will be determined. Another aspect to be determined is the software development tool and programming language to be used in the development. The user interface and design of the application also will be generated from this phase. This phase will eventually produce the overall structure of the system which is important as the foundation to the next phase.

## 2.3 Implementation

The tool and programming language which had been decided in previous phase will be used as to create the mobile apps. All the function and design of the mobile apps will be implemented in this stage. This phase will produce a prototype of the system that will be validated in the next phase.

## 2.4 Validation

The mobile apps which had been developed in previous phase will undergo verification and testing. The verification will focus on the requirement of the mobile apps in terms of whether it fulfilled all the requirement stated in requirement analysis phase. While for testing, the software will be tested with data to see if the input and output are correct and whether the logic of the system is correct. A usability study involving several selected users will also be carried out in this phase. Once the mobile apps have passed the verification and testing procedures, it is considered ready to be released into the market.

## 2.5 Maintenance

The aspect of maintenance will be taken care. As the system has been released to the users, some aspects of functionality or design required to be updated from time to time. This is either due to new functionality or design occurred or simply just the requirements have expanded due to time basis. This is where the developer needs to update the system with new functionality or new user interface which would suit the current users better. Sometimes, the system also would have some bug as nothing is perfect and these bugs will be solved during this maintenance phase

## 3. Results and Discussion

A usability evaluation has been conducted on Product Asli application to determine the relevance and level of achievement of project objectives, development, effectiveness, efficiency, impact, and sustainability. Besides, the evaluation findings could be used for quality improvement on the existing system and to ensure the future planning can be more evidence-based. To conduct the evaluation, there are a total of 34 participants. The questionnaire was divided into two which the first one focused on user/buyer opinion of the application while the second one focused on Orang Asli for the seller part of the application. Based on **Table 1** and **Table 2**, most of the respondents are satisfied with the Product Asli application in term of the user interface design and user satisfaction as most of the respondents agree with the user evaluation statements.

**Table 1: Results of User Interface Evaluation**

The questionnaire items	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Do you think the Product Asli application overall looks good?	0(0.0%)	0(0.0%)	4(11.8%)	23(67.6%)	7(20.6%)
Do you think the Product Asli application interface design looks attractive to you?	0(0.0%)	0(0.0%)	5(14.7%)	17(50.0%)	12(35.3%)
Do you think the Diet Diary application menu design is simple?	1(2.9%)	0(0.0%)	7(20.6%)	10(29.4%)	16(47.1%)
Do you think the Product Asli application is user-friendly?	0(0.0%)	0(0.0%)	3(8.8%)	17(50.0%)	14(41.2%)
Do you think the Product Asli application is easy to use?	0(0.0%)	0(0.0%)	4(11.8%)	13(38.2%)	17(50.0%)
Do you think the Product Asli application can be easily used without any written guide?	0(0.0%)	2(5.9%)	1(2.9%)	18(52.9%)	13(38.2%)

**Table 2: Results of User Satisfaction Evaluation**

The questionnaire items	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Do you satisfy with the Product Asli application?	0(0.0%)	0(0.0%)	4(11.8%)	21(61.8%)	9(26.5%)
Do you think the Product Asli application has all the functionality needed by you?	0(0.0%)	3(8.8%)	6(17.6)	16(47.1%)	9(26.5%)
Do you think the Product Asli application work as you wanted to?	0(0.0%)	0(0.0%)	7(20.6%)	20(58.8%)	7(20.6%)
Do you think you prefer to use the Product Asli application?	0(0.0%)	0(0.0%)	2(5.9%)	21(61.8%)	11(32.4%)
Do you think you would recommend the Product Asli application to your friends?	0(0.0%)	0(0.0%)	3(8.8%)	18(52.9%)	13(38.2%)

Based on the **Table 3**, we could conclude that the seller part of the application also on the right track and could be used easily by Orang Asli as the responses we obtain from the evaluation. Based on the results from the evaluation study, the Product Asli application could be considered under well-development and it is a very useful application which allow Orang Asli to sell and promote their product on the platform, which could lead to the increase in the income and the exposure of technology among Orang Asli where at the same time general user/buyer could find their desired product which made by Orang Asli easily through the application.

**Table 3: Results of Seller Functionality Evaluation (Seller Questionnaire Only)**

The questionnaire items	Yes	No	No with reason
Do you think you could use seller function easily?	3(75.0%)	1(25.0%)	<ul style="list-style-type: none"> <li>Should have a guidance</li> </ul>
Do you think the seller function is enough?	3(75.0%)	1(25.0%)	<ul style="list-style-type: none"> <li>Separation for duplicated item</li> </ul>
Do you think seller functionality is well designed	2(50.0%)	(50.0%)	<ul style="list-style-type: none"> <li>Usage of more color in application</li> <li>Clearer separation when buy from two different seller</li> </ul>

#### 4. Conclusion

In a conclusion, the completion of this project will be beneficial to the society because the development of Product Asli plays a significant role in promoting and selling Orang Asli product. As a result, Orang Asli could use this platform to sell and promote their product to generate some side income for the product they made and increase their economic sustainability. Besides by using the application, it will also urge the Orang Asli to increase their knowledge on ICT related field as well as the ICT skills and increasing their exposure on technologies. At the same time, more people could know and learn about the product which produced by Orang Asli and could easily purchase it through the application.

#### Acknowledgement

This research was supported by the Ministry of Higher Education (MoHE) through the Fundamental Research Grant Scheme (Ref: FRGS/1/2019/WAB04/UUM/03/1, S/O CODE: 14410). The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of MoHE, Malaysia. We also would like to thank the Institute for Advanced and Smart Digital Opportunity (IASDO) for the support given in publishing this article

#### References

- [1] IWGIA, "Indigenous peoples in Malaysia," [Online]. Available: <https://www.iwgia.org/en/malaysia.html>
- [2] S. Bedford, "The History of Malaysia's Orang Asli People," Culture Trip, 30 August 2018. [Online]. Available: <https://theculturetrip.com/asia/malaysia/articles/the-history-of-malysias-orang-asli-people/>
- [3] Tutorialspoint.com, "SDLC - Waterfall Model," [Online]. Available: [https://www.tutorialspoint.com/sdlc/sdlc\\_waterfall\\_model.html](https://www.tutorialspoint.com/sdlc/sdlc_waterfall_model.html)