

## **Android Animation Application for Malaysian Natural Herbal Medicine**

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**Abstract:** The development of Android animated applications for the Malaysian natural Herbal Medicine is an initiative taken to enhanced for animation application focus on traditional treatment using natural herbal medicine by indigenous Temuan. The existing approach is by verbally from their ancestors and not documented. This shows a lack of lost and not complete information. Therefore, this study proposed developing an animation application focused on Malaysia Natural Herbal Medicine for first aid treatment such as swollen, fracture and wound injuries. The objective of this study is designing an animated application for people of herbal medicine. Secondly, is to develop an animated application for Orang Asli herbal medicine. Lastly, is to test the functional reliability level of the Orang Asli Herbal medical animation application towards target users. This animation application has three subtopics which are the swollen treatment, fracture treatment and wound treatment. Developers have included animated videos and a description of their treatment via audio to attract users. The animation application was developed based on the ADDIE Model and the testing was implemented with the target user, the native tribe of Temuan. Assessment is carried out based on the questionnaire content design and multimedia design. The test results show that the application is able to improve herbal medicine as a method of initiative to the maintenance of orang Asli community entities especially in the medical field. The development of an effective animated application can help to improve consumer knowledge on the herbal medicine of this orang Asli. As such, the Android animation application for the Malaysian Orang Asli herbal medicine is able to give a positive impact on the availability of interactive designs that will meet the needs of consumers.

**Keywords:** Android Apps, Indegeneous Medicine, Herbal Medicine, Animation

### **1. Introduction**

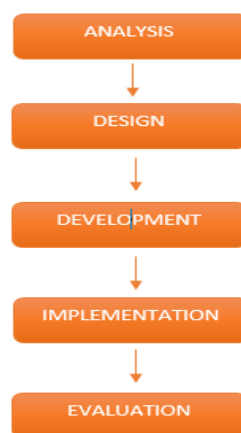
Today, the current development of technology has given tremendous impact to residents around the world. Tan (2016) stating the progress and competitiveness in developing a smart phone device is now increasing as the number of applications available to be downloaded rapidly becomes increasing.

This development affects the use of Android applications that are increasingly widely used by Malaysians in which these applications are not only used in the field of education, businesses or other areas but also many are used in the medical field. Not to miss, Herbal medicine is now also experiencing changes from conventional treatment methods to the modern technology-based treatment methods.

Hence, an initiative to the Orang Asli herbal medicine needs to be taken to introduce this medicine to future generations, particularly the orang Asli generation. The environment known as plants are now threatened as an extinction where the identity of the Orang Asli community and their traditions and cultures need to be preserved. It can be seen that the method of using technology is to be developed to ensure the traditions and culture of the orang Asli community, especially in herbal medicine, remains and is preserved.

## 2. Methodology

This study uses the model ADDIE method. Nasohah et al. (2015) the use of the ADDIE design model in application development is able to provide an effective impact and attract the interest of the consumers.



**Figure 1: Model ADDIE (Roosert 1987)**

Based on the figure 1, there are five phases of Model ADDIE involved in this application. Below are described of each phase:

### 2.1 Analysis

In this study, the data collected through the interview study to determine the needs of the design model and to identify problems. As such, the developers conducted a structured interview session with the native Temuan tribe of herbal medicine. This study focused on the Temuan tribe living in Peninsular Malaysia. According to the interview, the developer tends to choose medical treatment for injuries and wounds that are still practiced by the Orang Asli community.

### 2.2 Design

In this phase, developers design prototype such as interface design, interaction design, content design and elements of multimedia design Designing and sketch storyboard where the work poses is

more systematic and planned. To develop the Orang Asli Herbal Medical animation application, developers have identified three main designs that need to be implemented in this phase. Among the design content planned by developers is content design, storyboard design and interface design. Example storyboard shown in Figure 2.

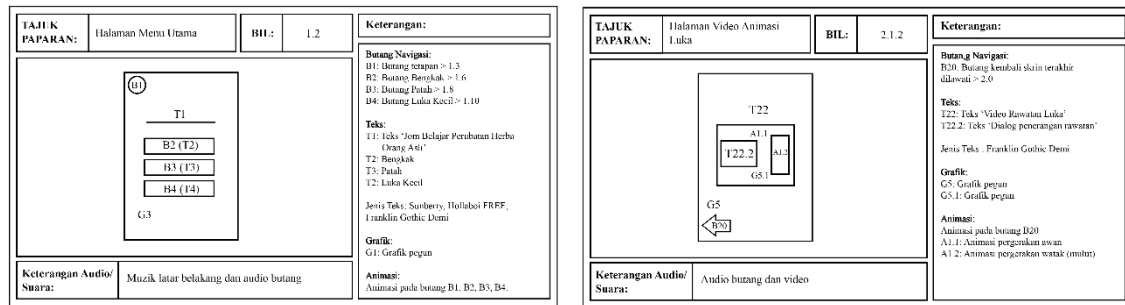


Figure 2: Storyboard

### 2.3 Development

This phase has displayed a more realistic physical design according to the sketch that has been drawn on the storyboard that have been developed through the Adobe Animate software. The storyboard that has been developed is an important reference for developers in producing the development of the Orang Asli Herbal Medical animation application. Character development or object has been implemented by developers in this phase by using the Adobe Illustrator software.

This stage consists of the development of the main page, content page and closing page. In the content page displays medical related descriptions and there is an animated video button related to the Orang Asli herbal medicine. Each page contains multimedia elements such as text, graphics, animation and audio.

### 2.4 Implementation

This phase was done after the process analysis was identified that involved the native of Temuan tribe to evaluate the effectiveness and detect the problems from the design and development phase. Implementations are to ensuring that the design content in this application android can work properly without error.

### 2.5 Evaluation

In this phase, the Orang Asli herbal medical tests and assessments are carried out. The assessments are used form of Questionnaires that needs to be answered by experts. There are two content expert that were selected from the native Temuan tribe and two multimedia design experts were selected form lecturer Faculty of Technical and Vocational Education. The multimedia design expert was propose suggestions in interactive design and multimedia design. In figure 3 below show the final of applications design.



Figure 3: Final Applications Design

### 3. Results and Discussion

#### 3.1 Instrument of study

The instruments carried out in this study are used questionnaires to record feedback received from assessors. This instrument is built as an effort to collect data for the purpose of achieving the objectives of this study. It is a form of findings acquired in the form of comments suggestions from experts. A contains questions including expert demographic profiles, content design, interaction design and multimedia element design by expert field. The specialist consists of 2 people of Temuan and two multimedia lecturers.

#### 3.2 Expert Assessment Procedure

The selected expert was given the android animation application for the Orang Asli Herbal medicine that was completed together with the specialist questionnaire. Questionnaires were submitted for the week for evaluation, comment and suggestion. Below are the demographic tables and can be overall based on comments and recommendations given by experts.

Table 1: Demographic

Item	Expert 1	Expert 2	Expert 3	Expert 4
Type of Employment	(Village Work)	Villagers & Cleaner	Lecturer	Lecturer
Workplace	Kampung Orang Asli Bukit Kepong, Pasir Panjang Port Dickson	Cocobay Resort Port Dickson	Faculty of Technical and Vocational Education, UTHM	Faculty of Technical and Vocational Education, UTHM
Field of Specialization	<i>Tok Batin</i> (Perubatan Orang Asli)	Perubatan Orang Asli	Information Technology	Technology Education
Work Experience	30 Years	15 Years	12 Years	5 Years

Based on the tables 1 shows demographics for each of the above specialists shows a brief profile selected as a multimedia expert and content-body expert. As such, the selection of experts taken is based on the field of specialisation and experience as more assessors in the past in relation to product design and content.

**Tables 2: Comment and Recommendations Experts**

Experts	Comment and recommendations
Expert 1	The application can provide a simpler and easy to understand information
Expert 2	The advantage of this application can provide an easy understanding to those who want to try traditional natural treatments This app is very good and easy to understand
Expert 3	Add some introduction about the Orang Asli treatment in the app Background music used in the application is quite tedious and has no introduction about the traditional natural treatments
Expert 4	Add montage before going to the main page menu On the text information section need to use audio description of the information so that users do not need to read and can listen Overall, including video is clear.

Tables 2 shows the comment and recommendations experts for the Android animation application used the Questionnaire. All comments and suggestions given by experts; developers have been fully to make improvements based on the recommendations given by specialists. Overall, of the findings of the study have shown that the Android animation application for this natural herbal medicine is good to be used and was achieved the objectives of the study.

#### 4. Conclusion

Based on the outcome of the research analysis, the overall objective of the study for the development of the Android animation application for the Malaysian natural herbal medicine was achieved and had answered.

Development of the animation application is designed based on storyboard that have been developed in connection with the Orang Asli herbal medicine. Therefore, the animation application for natural herbal medicine of Malaysia can help in maintaining traditional treatment methods practiced in the life of the Orang Asli community. Developers have implemented all the research plans with best possible and orderly to ensure that the development of the animation application is well and smoothly.

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