



Implementation of Adobe Captivate Program in Developing Multimedia Module for Alas Kedaton Monkey Forest Bali



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Abstract

This study aimed at 1) implementing an adobe captivate program in developing a multimedia module for Alas Kedaton Monkey Forest Bali, and 2) evaluating the quality of the developed module through a Likert Scale questionnaire. Delphy method proposed by Rusli *et al.*, (2017) is applied by the researchers to conduct step-by-step instructions. The steps are 1) define the instructional goals and learning objectives, 2) investigate the results of existing module, 3) specify the output format, budget, and timeline, 4) determine the content, learning activities, and assessment strategies, 5) develop the evaluation strategies, criteria, and instruments to assess the effectiveness, 6) develop the flowcharts and storyboard, 7) develop the prototype, 8) conduct the formative evaluation, 9) complete the design. As a result, the module contains some displays. They are 1) Initial display, 2) Menu display, 3) General information display, 4) News display, 5) Events display, 6) Gallery display, 7) Guidelines display, 8) Quiz display, 9) Contact information display. Then, the module was tested in order to determine whether it has good quality or not. 30 respondents were asked to fill the Likert Scale questionnaire. The overall mean score shows 3.7 which is categorized as *High* where $3.68 \leq 3.7 < 5.0$. It indicates that the respondents agree with the developed module. They also suggest that it would be more interesting if there are more pictures, videos, or animations.

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1 Introduction

Tourism has been an important part of the growth of the economic sector in Indonesia. This is caused by the number of tourists who come and visit object tourism are increased. Other tourism sectors like art shops, hotels, restaurants, beaches, and villas also give lots of contributions. This fact is in line with the statement from [Bojanic & Lo \(2016\)](#), who says

“Tourism sector is very influential on economic growth in most countries especially the country with the largest archipelago. Archipelagic countries have more tourism objects so that income from taxes and levies obtained through these attractions can improve regional economic growth.”

Indonesia is the largest country with 17,504 islands. That becomes Indonesia is very dependent on the tourism sector in increasing economic growth.

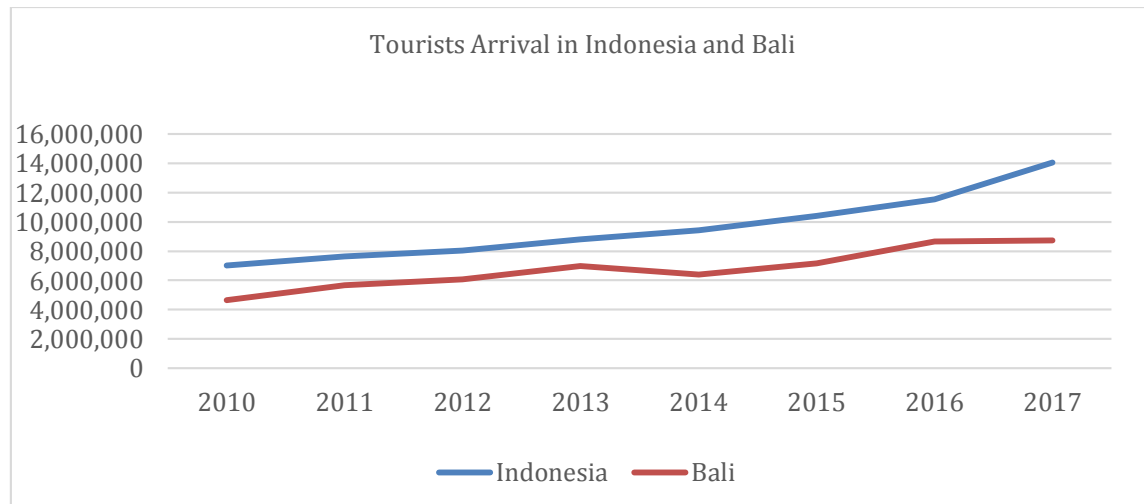


Figure 1. Tourists arrival in Indonesia and Bali

Source: <https://data.worldbank.org> and <https://bali.bps.go.id>

Bali is one of the islands which produces lots of devices in Indonesia. In Bali, the significant growth of the economic sector is caused by the contribution of tourism. The number of tourists who visit some tourist attractions in Bali are increasing every year. One of the favorite tourist attractions which are famous for the population of long-tailed monkey is Alas Kedaton Monkey Forest. This place is located in Tabanan regency. Another thing which also attracts tourists is the secret Hindu temple. This temple is residing in this forest surrounded by the pure natures and fresh atmosphere that create more secret and serenity. The tourists can also meet the bats and some other animals.

The advancement of information and communication technology (ICT) in this era has made people can access information quickly and accurately, whenever and where ever they are. This advancement of ICT has influenced and transformed the tourism sector. As an information-intensive industry, tourism requires the help of ICT, and the two influence each other ([Bing Pan, 2015](#); [Arjawa et al., 2017](#)). For instance, the tourists can make plans on their route, purchase products later in the planning stage, and ease the uncertainty and cultural barriers associated with tourism. There are many mobile apps exist for tourists, including flight trackers, destination guides, apps from online travel agencies, and attraction guides. Mobile technologies especially smart phones are changing the tourist experience and the ways that firms communicate and do business with their customers ([Wang et al., 2012](#); [Gani et al., 2018](#)).

The current study aimed at creating the interactive multimedia tour guide module for Alas Kedaton Monkey Forest area and how the quality of the developed module is. The developed module contains some information about this object tourism. The information is written in English and delivered in the form of text, pictures, videos, and maps.

2 Materials and Methods

In this study, the data were analyzed descriptively and quantitatively. The qualitative data was obtained through an interview and document study. The interview was conducted towards some visitors of Alas Kedaton Monkey Forest. It resulted in some feedback and suggestions. Thus, those feedbacks and suggestions helped the writer to develop the quality of the module. Another instrument was document study. The information shown in the module was taken from printed books entitled "English for Professional Tour Guide" by Munir and "Pura Dalem Kahyangan Kedaton" by Sutaba.

The quantitative data was collected through the result of questionnaires from 30 respondents. There are ten statements in the questionnaires, such as:

- a) Learning Objective (LO) are clearly stated
- b) Language is appropriate to target the audiences
- c) Content is accurate and factual
- d) Content meets objectives
- e) Clear instructions are available on how to use the content
- f) Content is easy to understand
- g) MLM is interactive
- h) The use of media is appropriate
- i) The interface is user-friendly
- j) MLM sensitive to gender and socio-cultural factors

There are nine steps in developing the interactive multimedia tour guide module as proposed by [Rusli et al., \(2017\)](#), such as:

- a) Define the instructional goals and learning objectives
- b) Investigate the results of the existing module
- c) Specify the output format, budget, and timeline
- d) Determine the content, learning activities, and assessment strategies
- e) Develop the evaluation strategies, criteria, and instruments to assess the effectiveness
- f) Develop the flowcharts and storyboard
- g) Develop the prototype
- h) Conduct the formative evaluation
- i) Complete the design

3 Results and Discussions

The researchers answered two research questions in this study, such as the interactive multimedia tour guide module for Alas Kedaton Monkey Forest Bali and its quality.

- a) Developing An Interactive Multimedia Tour Guide Module for Alas Kedaton Monkey Forest Bali
As mentioned in the previous chapter, the interactive multimedia module is developed based on the procedures proposed by [Rusli et al., \(2017\)](#), such as:

- 1) Define the instructional goals and learning objectives

A goal states a target or a general outcome of a course or learning. The goal of this current research is to create an interactive multimedia module that is mainly used for guiding to Alas Kedaton Monkey Forest Bali. The module presents important information about the place, such as general knowledge, ticketing, facilities, news, events, photos, and videos. This information will help the users or visitors to understand well about the place and share the information with others.

2) Investigate the results of an existing module

There are some existing modules that have been looked at and investigated by the researcher. Those modules were developed using Delphi method as well. The result shows that Delphi method as a model development of multimedia learning is effective and useful (Rusli, 2018).

3) Specify the output format, budget, and timeline

Using adobe captivate, the multimedia creator has the ability to publish online courses in multiple devices such as Desktops, iPads, and mobile devices. Adobe captivate can now publish to various formats such as HTML, SWF, Video, Executable, App, Adobe Connect and Captivate Prime. In this research, the multimedia module is published into devices (App). Based on the output format, then the budgets and timelines would be specified.

4) Determine the content, learning activities, and assessment strategies

In determining the content, there are seven principles applied by the researcher (Rusli *et al.*, 2017), such as (1) multimedia principle: the contents will be effective if it is delivered with animation and narration (audio), (2) contiguity principle: the contents will be effective if the pictures and its description placed closely, (3) coherence principle: the contents will be effective if irrelevant text, sound, or pictures are removed, (4) modality principle: the contents will be effective if the description of images or animation is not only delivered through words but also with sound, (5) redundancy principle: the contents will be effective if the elements used are not excessive, this will burden the learners, (6) segmentation principle: the contents will be effective if difficult contents are broken down into simpler ones in order to be understood easily by the learners, (7) pre-training principle: the contents will be effective if it discusses some key words or difficult words in the beginning, (8) personalization principle: the contents will be effective if it is delivered through conversation style, not using paragraph.

5) Develop the evaluation strategies, criteria, and instruments to assess the effectiveness

In evaluating the multimedia module, there are 10 indicators to check whether the module is considered effective or not. These indicators (score 1-5 points scale) are used as a reliable tool to assess Multimedia Learning Material (MLM) (Nasir & Bashir, 2012; Sutapa *et al.*, 2017; Maba, 2017). Those are (1) the learning objectives are stated clearly, (2) the language used is appropriate to the target, (3) the content is delivered accurately, (4) the content is aligned with the learning objectives, (5) the instructions are clear and easily understood, (6) the content is understandable, (7) the module is interactive, (8) the use of elements is appropriate, (9) the interface is user-friendly, (10) the module is sensitive to gender and socio-cultural factors.

6) Develop the flowcharts and storyboard

Flowchart or flow chart is a diagram with graphic symbols that express the flow of algorithms or processes that display the steps symbolized in the form of boxes, along with the sequence by connecting each of these steps using the arrow. Picture 3.1 below is a general flowchart which describes stages or steps from the beginning until the end of the interactive multimedia module. The interactive multimedia tour guide module has some contents, such as learning materials, video, assessment or evaluation and profile of the creator.

7) Develop the prototype

A prototype is an early sample, model, or release of a product built to test a concept or process (Blackwell *et al.*, 2015; Pemayun & Brata, 2018). It is a term used in a variety of contexts, including semantics, design, electronics, and software programming.

8) Conduct the formative evaluation

After the prototype of the developed multimedia tour guide module finished, then the researcher conducted an evaluation. The evaluation applied was a formative assessment. Formative evaluation is useful for collecting data and information as the feedback of students or audiences when the project is built. Formative evaluation is done as a continuous process in the development of multimedia and even before the development process actually starts. The researcher used the Likert Scale with score 1-5 points to measure the quality of the developed multimedia tour guide module. This instrument has been tested in the reliability and then can be used to conduct a formative evaluation. According to Dick & Carey as cited in Rusli (2018), there are three phases in obtaining data related to the assessment of quality, such as:

- (a) Phase of the clinical (one-on-one participant)
 (b) The group phase (small groups of participants)
 (c) Case studies (up to 30 participants)
- 9) Complete the design

The final phase of this study is to complete the design. The developed prototype then completed by the researcher by adding video, audio, graphics, photos, animation, assessment, activity, and other learning materials. The following figures are the screenshots of the menu and quiz displays of the product.



Figure 2. Menu display

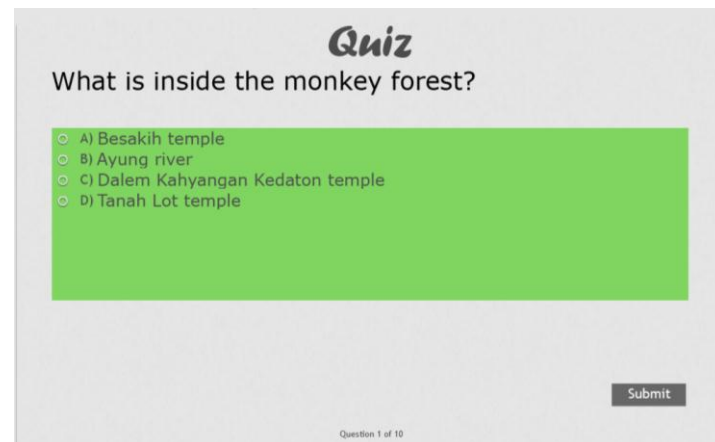


Figure 3. Quiz display

b) The Quality of The Interactive Multimedia Tour Guide Module for Alas Kedaton Monkey Forest Bali

The following table outlines all the 10 statements in the questionnaire, their resulting itemized mean scores, using descriptive statistics of mean scores and their corresponding levels, which serve as the basis for further interpretation and implication.

Table 1
 Calculation of the questionnaire result

No	Statements	Mean Score	Quality Level
1	Learning Objectives (LO) are clearly stated	3.0	Moderate
2	Language is appropriate to target the audiences	4.0	High
3	Content is accurate and factual	4.0	High

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No	Statements	Mean Score	Quality Level
4	Content meets objectives	3.5	Moderate
5	Clear instruction is available on how to use the content	3.8	High
6	Content is easy to understand	4.0	High
7	MLM is interactive	3.8	High
8	The use of media is appropriate	3.8	High
9	The interface is user-friendly	3.9	High
10	MLM sensitive to gender and socio-cultural factors	3.2	Moderate
	Total	3.7	<i>High</i>

The above table reveals that the respondents possessed a high level of interest in the interactive multimedia module. This is clearly seen by the average mean score is 3.7 in the table. Statements number 2, 3, 5, 6, 7, 8, 9 show the highest level of interest with mean score 4.0, 4.0, 3.8, 4.0, 3.8, 3.8, 3.9. Statements number 1, 4, and 10 have a low level of interest. Statement number 1 has the lowest. However, the overall mean score demonstrates a high level of interest.

4 Conclusion

The interactive multimedia tour guide module for Alas Kedaton Monkey Forest Bali was developed by using the Delphy method proposed by [Rusli et al., \(2017\)](#). The developed module contains some displays related to Alas Kedaton Monkey Forest Bali. They are 1) Initial display, 2) Menu display, 3) General information display, 4) News display, 5) Events display, 6) Gallery display, 7) Guidelines display, 8) Quiz display, 9) Contact information display. The overall mean score of the questionnaire result shows 3.7 which demonstrates that the interactive multimedia tour guide module has a high level of the mean score. The respondents also suggest that it would be more interesting if there are more pictures, videos, or animations.



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