

PERSUASIVE PHOTOGRAPHY TECHNIQUE FOR RESEARCH PRODUCT



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

PERSUASIVE PHOTOGRAPHY TECHNIQUE FOR RESEARCH PRODUCT

MUHAMMAD AZIZI AFIQ BIN MOHD ZAKHI



This report is submitted in partial fulfillment of the requirements for the Bachelor of
Computer Science (Interactive Media)

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TIDAK TERHAD

(TANDATANGAN PENULIS)

Alamat tetap :
194, Taman Suria 1,
06000 Jitra.
Kedah Darul Aman

Tarikh : 26/08/2016

(TANDATANGAN PENYELIA)

DR MOHD HAFIZ BIN ZAKARIA

Tarikh : 26/08/2016

DECLARATION

I hereby declare that this project report entitled
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:  Date: 26/08/2016
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DEDICATION

This thesis is dedicated to my beloved parents Harisson Binti Ramli and Mohd Zaki Bin Jamil, to my siblings Amirul Asyraf, Hafiz Adha and Aisyah Afiqah and for my University, Universiti Teknikal Malaysia Melaka, and last but not least to all researchers especially from Universiti Teknikal Malaysia Melaka.



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ABSTRACT

This project is about an e-Book on persuasive photography techniques to assist UTeM researchers in marketing their research product. Previous research product is not quite good in terms of the techniques of photography been applied to the image produced. It is hard to attract any investor if the research product images are not very good. So the persuasive photography techniques been applied to help the research product to lift the market value. There is some interaction been developed to let the user interact with the images and videos for the explanation of each research products. The e-Book contains of 6 UTeM research products. A tool such as Adobe Photoshop CS6 and Adobe Lightroom been used in order to enhance the image products captured by Canon DSLR EOS. Other tools been used to develop the interface of the e-Book are Adobe InDesign CS6 and Adobe Flash CS6. The publish file can be executed in any platform that support Adobe PDF Interactive. It can be executed in the latest Adobe Reader software. Moreover, I hope this project give a lot of benefit to all researchers especially to UTeM researchers.

اونيورسيتي تیکنیکل ملیسيا ملاک

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ABSTRAK

Projek ini merupakan satu pembangunan buku elektronik berkenaan teknik fotografi meyakinkan yang membantu para penyelidik UTeM dalam memasarkan produk penyelidikan mereka. Gambar produk penyelidikan sebelum ini kurang memberangsangkan dari sudut teknik fotografi yang tidak diaplikasikan pada gambar tersebut. Hal yang sedemikian agak susah untuk menarik para pelabur untuk berminat pada produk tersebut. Jadi, teknik fotografi meyakinkan ini akan membantu untuk menaikkan nilai pasaran pada produk-produk tersebut. Terdapat beberapa fungsi interaktif yang dibentuk di dalam buku elektronik tersebut yang membolehkan pengguna untuk berinteraksi dengan gambar dan video yang memberikan penjelasan terhadap setiap produk di dalam buku tersebut. Buku elektronik ini mengandungi 6 produk penyelidikan UTeM. Antara perisian yang digunakan untuk menyunting gambar yang diambil melalui kamera Canon DSLR EOS ialah Adobe Photoshop CS6, Adobe Lightroom. Tambahan perisian lain yang digunakan untuk membangunkan paparan muka bagi buku elektronik ini ialah Adobe InDesign CS6 dan Adobe Flash CS6. Fail yang siap ini boleh dibuka melalui mana-mana platform yang menyokong Adobe PDF Interactive melalui perisian Adobe Reader yang terkini. Tambahan lagi, saya berharap projek ini dapat memberi manfaat kepada semua penyelidik terutamanya para penyelidik UTeM.

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LIST OF ABBREVIATION

e-Book	-	Electronic Book
UTeM	-	Universiti Teknikal Malaysia Melaka
FTMK	-	Fakulti Teknologi Maklumat dan Komunikasi
MTUN	-	Malaysian Technical University Network



CHAPTER I

INTRODUCTION

1.1 Introduction

DSLR Camera is a complicated device and it requires the user to develop a certain amount of technical photography skills in order to use it effectively. Currently, the existing photos used by the researcher has limited persuasive value and not very attractive to attract the people for a marketing purpose. The photos created by the researchers seldom follow the basic photography techniques such as composition, exposure and color white balance. This project is developed to market the research products photos by using the photography techniques and by developing all the content and items in the e-Book with Adobe InDesign.

This project will provide an interactive content e-Book and is designed with photography technique to enhance the product market. By enhancing the product images with photography techniques, the market value of the product will be increased.

1.2 Problem statement

Researchers have plenty of products that can be commercialized. Yet, limited products have gone through professional photography session due to several reasons such as researchers have limited knowledge on photography technique on how to shoot the product. For example, the product of the images may have wrong composition and poor exposure. So the presentation of the product in form of images is utmost importance because it reflects the quality of it plus influence the investment of the consumers. In addition, it is easier for readers to glance at a photo and gain product information than it is to read the article. Good photos will break the layout and ease the readers to seek out important information. According to Wang and Burris (1997), people can identify, represent and enhance their community through a specific photographic technique.

1.3 Objectives

This project is developed with these objectives, which are:

- To investigate how the right photography technique can be used to enhance a research product.
- To develop an e-Book “Persuasive Photography Technique for Research Product”.
- To evaluate the effectiveness, the photos used in the developed e-Book.

1.4 Scopes

The project scope focused on two areas, the specified user and the content of the e-Book. Each explained in section 1.4.1 for specified user and section 1.4.2 for content of e-Book.

1.4.1 Specified User

The major target is for all entrepreneur who have product to be marketed or promoted also for knowledge. The content of e-Book will be interactive and enjoyable. It is quite same to a textbook, but the content is presented in more interesting and ease people to learn and understand about topic that will be covered. The modules will be developed by developer and after done; it will be added in the e-Book.

1.4.2 Content of E-Book

The content of the e-Book consists of two parts. The first part is the information of the research products. The topics are:

Table 1.1: E-Book Content Topic

No	Topic
1	e-Ticketing System Using QR Technology
2	i-Sejadah: Prayer Rug with Smart Raka'ah Notification Device
3	Smart Obrometer with Flood Alert Apps System
4	Malacca-eco-Stylish-Tiles (MeSTi) – Recycled Plastic Wall Tiles
5	Powered Plugs
6	Tiles Human Pathway System

Next category is media types. The media types consist of:

Table 1.2: Media content in E-Book

No	Learning Object	Description
1	Interactive Image	Users can see and touch left or right to view images.
2	Video	Users can watch videos to get more understanding.

1.5 Project Significance

In this project the user will experience the research products photos that have been developed with photography techniques. Plus, they will also understand the benefit and the details of the research products.

In this project too they will interact with the content such as video and interactive images slide. Furthermore, they will enjoy this e-Book because of the attractive layout design and content presentation.

1.6 Expected Output

The expected output of this project is to develop an e-Book that can help to market research products. For example, it can be used to market UTeM research products. Next, to provide best examples a range of research products photos that follow the photography techniques. To create creative ideas to present the research products in an e-Book.

1.7 Conclusion

In this chapter, we will be introduced and get understanding of the project. Besides, this project is developed based on the objectives and including the contents of the project plus the project significances. The usage of e-Book is expected to ease user to absorb information and enhance their knowledges. Furthermore, it also helps the user to enjoy the content of the book.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

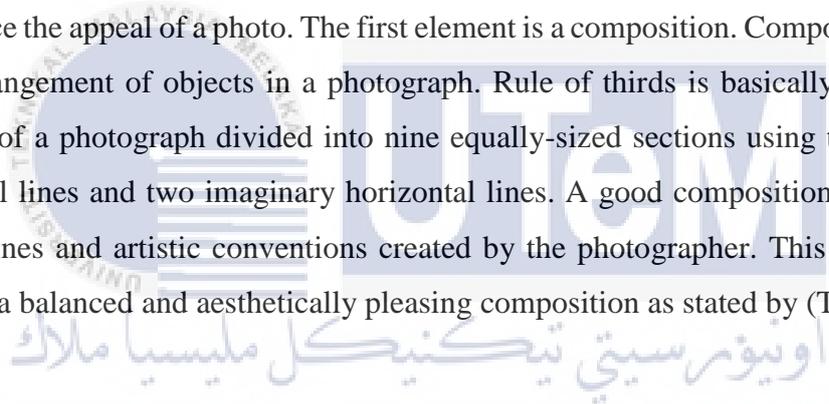
This chapter reviews literatures for any previous project that related with this project. A comparison will be made between this project and previous projects and the comparison is based on the domain of the project, technique to develop the project, different applicable of multimedia skills and maximizing the techniques of photography especially on products to achieve learning experience. This chapter will also explain the methods that have been used through this project development. A list of project requirement like software requirements and hardware requirements are also provided.

2.2 Domain

The domain of this project is about photography technique and how it can enhance research products market value. A good technique of photography will come up with lot of benefits. In this project the focus will be scope to market the products. One of factors that raise the value of certain products is an interesting product presentation. A

good presentation of the product will attract the consumers. Images created by good technique of photography can be classify as a good presentation of a product. A professional photo will increase the business profits and secure the investment of consumers. In addition, great photography will essentially grab the attention of the reader. Thus, the audience of the product will grow from time to time. Last but not least, a good photo will help the readers to gain the product information compare than it is to read the article of the product.

2.3 Existing System

There are lots of images produced by researcher which are some follow the techniques of photography and some don't. There are lots of elements can help to enhance the appeal of a photo. The first element is a composition. Composition is about an arrangement of objects in a photograph. Rule of thirds is basically a rectangular frame of a photograph divided into nine equally-sized sections using two imaginary vertical lines and two imaginary horizontal lines. A good composition depends on a guidelines and artistic conventions created by the photographer. This is believed to create a balanced and aesthetically pleasing composition as stated by (Thomas James, 2014). 

In addition, exposure also one of the important element of the photography. Exposure meant the amount of light reach the image sensor that determined by shutter speed, lens aperture and ISO (image sensor's sensitivity to light). So, it is important to understand in order to produce a good exposure of a photo that have balanced lighting, which meant it not fall underexposure either overexpose.

Next element is a depth of field. Depth of field refers to the range of distance that appears acceptably sharp at the focus point while the background appears to be soft (also known as 'bokeh'). The depth of field depends on lens type, lens aperture

and focusing distance. The depth of field is important to differ the subject and the background. (Bruce Wunderlich, 2014) stated that knowing how to make the parts of your image you want sharp and the parts you want to be out of focus, is a great artistic tool to create great images.

So, the comparison below will explain which one is a good and a bad image presentation in perspective of marketing a product research.

2.3.1 Comparison of Existing System

The system products usually use screen of a device such as phone, tablet or monitor to show the interface of the system. However, there are certain way to make it look interesting instead of a boring images product. Figure A show an image with person holding a phone with the apps opened by the background of the shopping complex environment. For Figure B, the interface of the system is adding in the devices which look more interactive and more appeal with good composition to attract people to look at it.

Table 2.1: Comparison of Existing System Research Product



Table 2.2: Comparison of Figure A and B

Figure	A	B
Composition	No, the image is not in a good composition.	Yes, the image is in good composition.
Exposure	Yes, the exposure of the image is quite good.	Yes, the exposure of the image is very good.
Depth of Field	Yes, the image applies the depth of field.	No, the image does not apply the depth of field.
Framing	No, the image does not apply the framing technique.	Yes, the image applies the framing technique.

2.3.2 Comparison of Material Based Products

For this comparison the material based is both made from a paper. Usually a material based product should come up with a good product images that have related environment with the product or at least an environment that can make it look interesting. Figure C and D is a paper based product research. Figure C actually is a headphone paper, Figure D is a wireless radio paper. Figure C photo is straightforward, direct point and shoot which also the background of the product is not quite good. Figure D is good because it applies depth of field and practice a good composition. Plus, it has better background compare to Figure C.

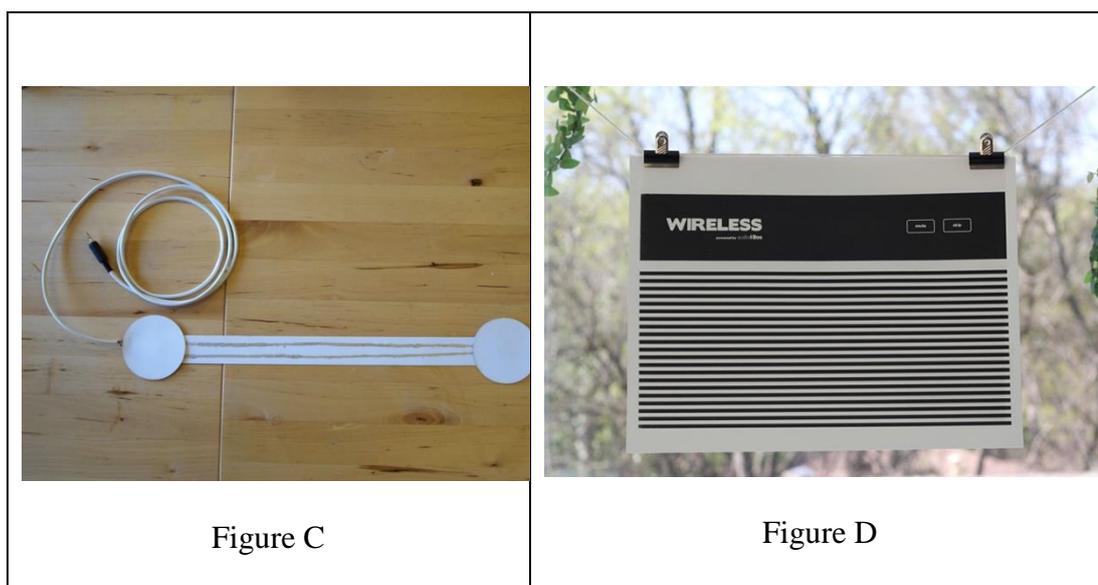
Table 2.3: Comparison of Material Based Research Product**Table 2.4: Comparison of Figure C and D**

Figure	C	D
Composition	No, the image is not in a good composition.	Yes, the image is shoot with a good composition.
Exposure	Yes, the exposure of the image is quite good.	Yes, the image is in good exposure.
Depth of Field	No, the image does not apply depth of field.	Yes, the image does apply depth of field with soft background.
Framing	No, the image does not apply concept of framing.	Yes, the image applies the concept of framing with the leaves between it.

2.3.3 Comparison of Electrical Based Products

The comparison is on electrical based product research. Both product research uses electrical energy to work. As a comparison Figure E images product highlight the function of the product with a clean environment and clear message. Plus, the exposure and composition of the image product also good. However, the Figure F show the inner

part of the product instead of showing the environment of the product with the idea on what the function is. The image produce is a straightforward image. It can be enhancing with lot of angle, for example the angle from top and view from the side.

Table 2.5: Comparison of Electrical Based Research Product

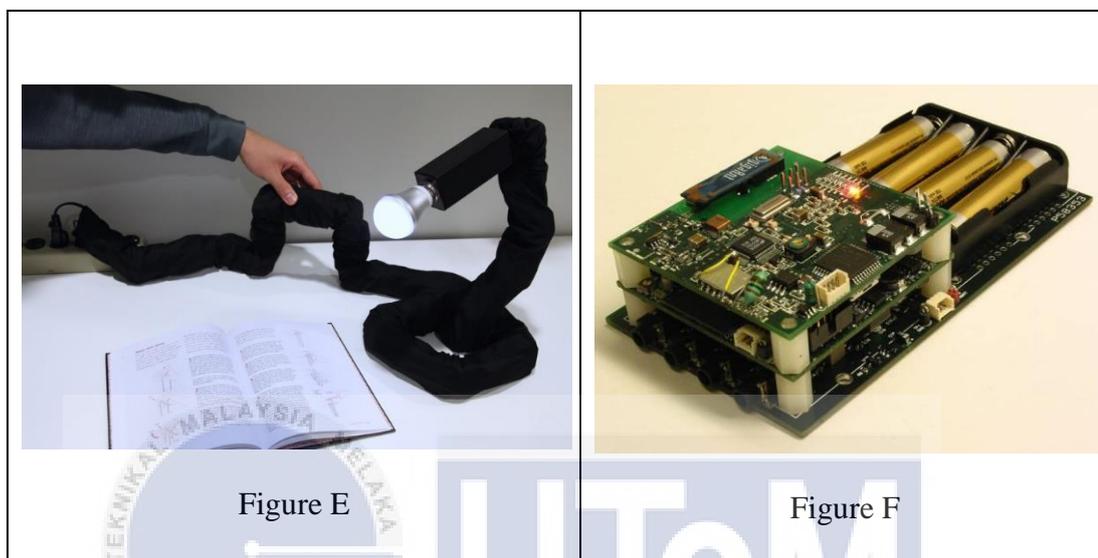


Table 2.6: Comparison of Figure E and F

Figure	E	F
Composition	Yes, the image is shoot with a good composition.	No, the image is not in a good composition.
Exposure	Yes, the image is in good exposure.	Yes, the image is in good exposure. However, the white balance of the colour not so correct.
Depth of Field	No, the image does not apply depth of field.	No, the image does not apply depth of field.
Framing	Yes, the image applies the concept of framing with the structure of the lamp.	No, the image does not apply concept of framing.

2.4 Project Methodology

The methodology use for this project is ADDIE. The phase of the methodology is in the Figure.



Figure 2.1: ADDIE Methodology Phase

There are 5 phases in ADDIE:

First one is Analysis phase. The audience related to this project is been analyzed. The techniques of photography to shoot the products and the models been analyzed first before the process of shooting been taken. Study the photography technique that can enhance the images of the researchers and products to the standard for market purpose.

Next is Design phase. The process include in this phase is create storyboards, design the layout of interface by studying the skills of the graphic design. Shoot the images of the researchers and products. Produce the images with a professional look which have related environment based on each title of the research. Plus, produce images that have a storyline where the audience will understand the benefits of the products.

Next phase is Development. In this phase, the content assets that were created in the design phase will be developed. All the images that been created in Design phase will be touch up through editing process. This process will help to enhance more the details of the images such as the balance of the exposure and the color balance. Furthermore, the details of each research will be developed in the iBook. The content of the iBook may content the details of the researches such as who is the people who develop the product, the process of the product, its benefit and a video of the process on how to use the product. The project is reviewed and revised based on feedback given.

Next phase is Implementation. Explain to researchers about the product design developed for them. Make they understand of why this product is been developed and how it can help them to market their product.

Last phase is Evaluation. This phase consists of tests designed and providing opportunities for feedback from the users. The iBook will be tests by the audience. Feedback will be collected in order to fix any mistake and bug.

2.4.1 Instructional Design

This process consists of educational goals, flowchart, details course content and metaphor.

2.4.1.1 Educational Goals

The goal for the book “MTUN Connect Research Product” is shown below:

- To attract the reader to the research products.

- To advertise the products with persuasive photography techniques.
- To market the research products.

2.4.1.2 Flowchart

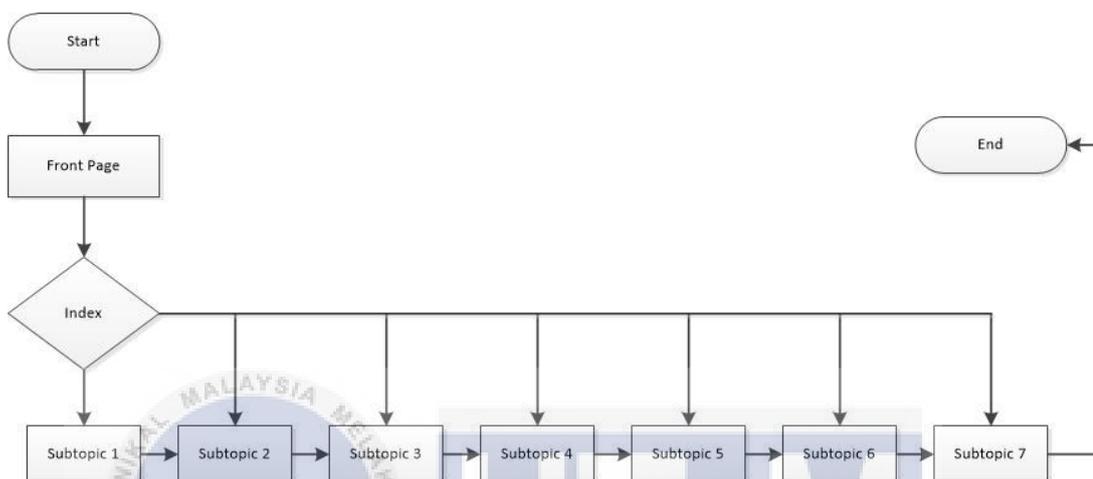


Figure 2.2: Flowchart of the module

2.4.1.3 Comprehensive Flowchart of System Module Content

There are eleven contents that were developed in this project. The content is in the form of images, interactive images, explanation video and etc. All content object will contain of the researcher of the product, details about the product and also the images of researchers and products.

Table 2.7: The subtopic and title

Subtopic	Title
Subtopic 1	Acknowledgement
Subtopic 2	e-Ticketing System Using QR Technology

Subtopic 3	i-Sajadah: Prayer Rug with Smart Raka'ah Notification Device
Subtopic 4	Smart Obrometer with Flood Alert Apps System
Subtopic 5	"Mesti" Malacca-Eco-Stylish-Tiles
Subtopic 6	Powered Plugs
Subtopic 7	Human Powered Emergency Pathway Guiding System

The good layout design with rich of research products images can help to attract the reader. Topics to be covered are not complicated for user to understand because the layout and the information is direct and clear. Plus, the explanation video will help them to understand more in an interesting way. Thus, with all of the interactivity and the style of the information presentation, the users can easily absorb the messages.

2.4.1.4 Metaphor

All of the multimedia elements that will be used in this book will ease users to understand more about all the research products that will be developed in “MTUN Connect Research Products”. This book will contain variety of multimedia elements such as images, videos, animation, text and more. The layout design acts as a crucial role in the development of the content. By applying several good photography techniques for the photos and also an attractive layout design, positive feedback from the user can be gained.

2.5 Project Requirement

There are several important software and hardware that required in developing this project. Both software and hardware requirements are explained in this section.

2.5.1 Software Requirement

This are the software requirements that can be used to develop the project:

Software	Usage
Adobe Photoshop CS6	To create graphics with suitable background based on the research product.
Adobe Lightroom 5.6	To enhance the exposure and color of the images taken from the DSLR camera.
Adobe Illustrator CS6	To create a vector graphic to be used for animation part.
Adobe After Effects CS6	To produce a simple animation to explain to user about certain function of the research product.
Adobe InDesign CS6	To integrate all the multimedia contents and developed the e-Book.

Table 2.8 Software and its usage

2.5.2 Hardware Requirement

Below is the hardware required to develop the project:

Personal Laptop – ASUS ROG 56JR

Processor: Intel Core i5 2.4 GHz

Memory: 8GB DDR3 dual-channel 2.4 GHz

Platform/OS: Windows 10

Disk: 1TB

Display: Full HD 1920 x 1080

Camera

Canon DSLR EOS Kiss X4

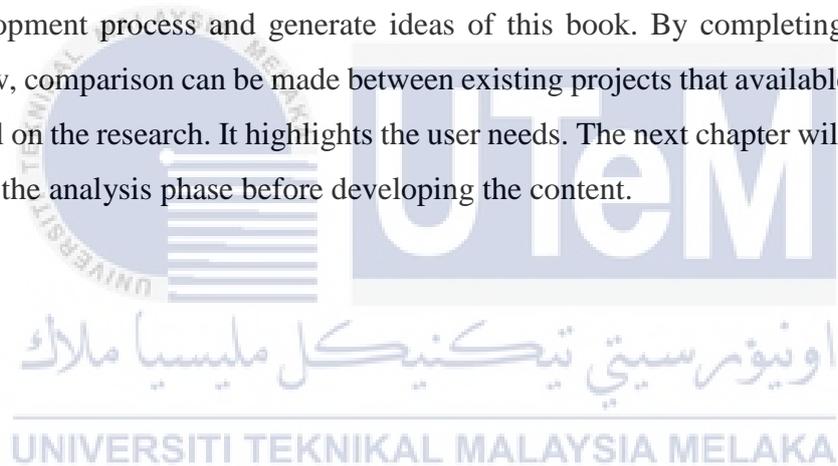
Nikon DSLR D5200

2.5.3 Project Schedule

This project has to be done within one semester which consisting of 14 weeks. In order to ensure that the project runs fluently, all things that have been planned must be followed starting from the analysis phase until the maintenance phase.

2.6 Conclusion

In conclusion, the literature review is important in developing a product. The literature review helps us to understand each review of the literature through the development process and generate ideas of this book. By completing the literature review, comparison can be made between existing projects that available in the market or still on the research. It highlights the user needs. The next chapter will be discussing about the analysis phase before developing the content.



CHAPTER III

ANALYSIS

3.1 Introduction

This chapter will discuss about the process that occur in analysis phase. This chapter provides a general idea of the entire process implicated in the analysis phase. Throughout the requirements analysis, the system must be defined in more detail in consider to the system inputs, processes, products and interfaces. Process occurs at the functional level.

Analysis activities focus on problem area and apprehensive to make sure the accurateness and comprehensiveness of the requirements. Intention of the analysis phase is knowing the requirements of the user and system field. The important of this phase is to decide which function is more suitable and how the function performs. Each data and information will extract from the internet as a resources.

To develop the project, it is first needed to recognize the requirements for software, hardware and user. The software requirements for this project are Adobe Illustrator CS6, Adobe Photoshop CS6, Adobe InDesign CS6, Microsoft Office Word 2010.

The importance of this phase is to decide which function should do and how to perform that function. Each category of data and information extract from the internet

as resource. These details were no doubt is used in making the comparison between the sources.

3.2 Current Scenario Analysis

This part is a process to analyze the possible future outcomes by study the existed system or scenario. All the data and the information that received from this analysis gathered to figure out the strength and the weakness of the current system. When all the data has been collected, the useful data or information will be integrated into the new proposed project. Indirectly, this will enhance the quality of the proposed project.

The images produced for the research product previously discussed do not follow the technique of photography at all. It is quite hard to market the research product when the images to present is not good enough especially in terms of photography technique and multimedia approach. All the research products being categorized to three categories which are System Product, Material Based Product and Electrical Based Product.

The images produce presented in Figure 3.1 and Figure 3.2 do not applied the basic technique of photography. The process of the images produced are first the product has been setup, the product is being point and shoot and lastly the image is used for a presentation purpose. Before producing the images, the photographer should think the idea by following the basic photography rules as been stated in Chapter II which are composition, exposure, depth of field and framing. When the images do not follow this basic rule, the images will be boring and hard to attract people to love it.



Figure 3.1 Example of previous images research product



Figure 3.2 Example of previous images research product

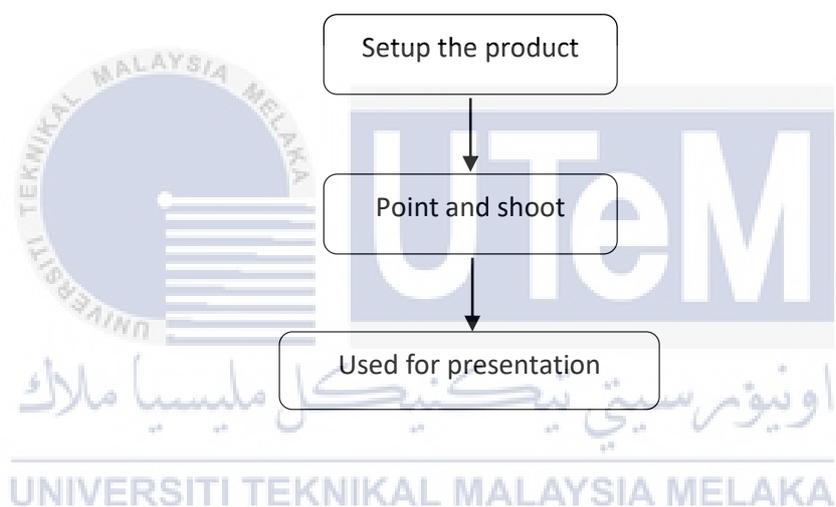


Figure 3.3 Flowchart of existing process

3.3 Specific Technique

3.3.1 Widget

The Adobe InDesign CS6 now support interactivity through Adobe PDF Interactive file. There are lot of interaction that can be applied in the file such as linked bookmark, interactive gallery, video and etc.

3.3.1.1 Type of Widget

In this Adobe InDesign CS6, it can support many interactive elements that must be created manually from the designer. The interactive elements supported by Adobe InDesign CS6 are linked bookmark, interactive gallery, videos and etc. The details of the widget are shown as below:

i. Linked Bookmark

For this widget, user can simply click on the title of the product research at the table of content from the early page of the book and directly go the title selected from the user. This will help user to directly move to selected title without any need to scroll along the e-Book.



Figure 3.4: The linked bookmarks

ii. Interactive Gallery

The interactive gallery is actually the image gallery. Using this widget, the user can click the button at left and right of the current image to move to next image either it to the left or to the right. This is because the gallery contained more than one image which encouraged user to feel the environment of interactivity.



Click left or right to view images.

Figure 3.5: The image gallery

iii. Media

InDesign also provide media widget to attract user while read the book. This widget provides video also with audio on the e-Book which give user easy explanation of the product research benefit and function.



Click the monitor to play video

Figure 3.6: The video embedded in the monitor graphic

3.4 Requirement Analysis

Requirement analysis is a process of understanding what the user needs and expectation from a previous developed research product images. Requirements are a description of how a system should behave or a description of system properties or attributes. It can alternatively be a statement of what does an application is expected to do. It also helps to persuade the user needs towards the product.

3.4.1 Learning Analysis

a. Need Analysis

Need analysis specify the reason to develop the e-Book and its functional requirement to complete the module. Functional requirement is relating directly to content development process for what information it needs to have. Functional requirement explain how the content development performs its task in the right way.

Besides, it is developed to ease the user to understand about the persuasive photography technique for marketing the research product. The functional requirement in the module directly related to a process the system has to perform and the information it needs to contain.

b. User Analysis

The most crucial objectives of the user analysis phase are deciding the way to develop the product research images for each product research which have its own function. Simple point and shoot images without the basic rule of photography is quite boring in this modern age. This analysis must be completed to develop the interface of the content and need to meet the user's requirement. This module is developing for UTeM researchers especially for those that being participate in the MTUN Connect. This module will be developed in Adobe InDesign and it will help to lift the market value of the UTeM research product with some interactivity included in the e-Book.

c. Technical Analysis

The main objectives of the technical analysis are too clear on the cost, efforts and implication for the content development. The reason of this module being developed is to lift the market value of UTeM research product or can be used for presentation purpose. The content development takes lots of time and effort. There are some of multimedia elements that will be used in the content which are interactive gallery and video.

The images used in the content must be edited before being used in the e-Book. There will be six sub-topics that need to be developed for this module. This module will be transfer into Adobe PDF Interactive. Adobe PDF Interactive is an interactive reading file and can be read in any platform that have latest Adobe Reader software. Adobe PDF Interactive also can be classified as an E-Book since it can contain rich of interactivity.

d. Resource Analysis

The module of this project will covers six sub-topics of “MTUN Connect Research Product” module. All the elements or contents that are developed in this project are redefined according to the “MTUN Connect Research Product” and being developed by my own. The resources required for this project were supplied by UTeM researchers who agreed to participate in the study.

3.4.2 Software Requirement

i. Adobe InDesign CS6

Adobe InDesign is a digital book authoring software developed and published by Adobe Systems. This application is use to develop a digital book which is an e-Book that will be used to develop e-Book for this module.

ii. Adobe Photoshop CS6

Adobe Photoshop is an advance graphic editing software used to enhance the images produce from the Canon DSLR camera.

iii. Adobe Photoshop Lightroom 5.6

Adobe Photoshop Lightroom have the same function of the Adobe Photoshop, but this software has some simple editing function which is more fast to enhance the images.

iv. Adobe Flash CS6

Adobe Flash is a software used to create simple animation based on timeline. This software helps to develop interactive gallery image which one of the multimedia elements for this project.

3.4.3 Hardware Requirement

Table 3.1: List of Hardware Requirement

Software	Description
ASUS ROG 56JR	The ASUS ROG is a Gaming Laptop build by ASUS. This laptop has a well-built graphic card which ease the process to enhance the images and develop the e-Book.
Mouse	Mouse is needed to ease the process of image editing and developing the e-Book. It saves a lot of time and very helpful.
Canon DSLR EOS Camera, Nikon DSLR D5200	This device is used to capture image and also record the video that will be used in this module.

3.5 Project Schedule and Milestone

The milestones will describe the activities that involved through the development of this project.

Table 3.2: Project Schedule and Milestone of the project.

No.	Activity	Roles	Start Date (2015)	End Date (2015)	Result
1.	Propose Supervisor with ideas	Student	19 Feb	22 Feb	Propose preferred supervisor
2.	PSM proposal	Student	22 Feb	26 Feb	Submit proposal through email
3.	Redo PSM proposal	Student	27 Feb	29 Feb	Acceptance or rejected
4.	Proposal correction and improvement	Student	29 Feb	4 March	Make corrections for proposal
5.	Start develop project and submit Chapter 1	Student	7 March	11 March	Deliver Chapter 1
6.	Develop product and redo Chapter 1 and do Chapter 2	Student and supervisor	14 March	18 March	Guided from SV and submit redo Chapter 1 and Chapter 2
7.	Developing product and redo Chapter 1 and Chapter 2	Student	21 March	25 March	Improve the product and submit again the report
8.	Presenting Chapter 1 and Chapter 2	Student and supervisor	28 March	1 April	Presenting system progress and

					supervisor give advice
9.	Product demonstration and submit Chapter 3 and Chapter 4	Student and supervisor	18 April	22 April	Demonstrate the product and submit reports.
10.	Project demonstration and PSM report	Student and supervisor	9 May	13 May	Demonstrate the product and report before present.
11.	Final presentation	Student and supervisor	30 May	8 June	Supervisor and evaluator give marks.
12.	Submit final report	Student	10 June	12 June	Finish PSM 1

3.6 Conclusion

As a conclusion, analysis phase is an important phase to develop a product. Throughout the analysis, the pros and cons of the existing product can be detailed out. When the disadvantages been found, it will help the process of developing the content. It is mandatory to make the user satisfied with the product that is going to be developed. Generally, the hardware and software are played as a crucial role in order to help the process of developing the module of “MTUN Connect Research Product”.

CHAPTER IV

DESIGN

4.1 Introduction

This chapter defines the result from the analysis phase of the initial design and the result of the detailed design. Design phase is an important phase in the development of the content, as it will help the developer to design the project based on the requirements gathered from the previous phase. Preliminary design will be describing about the interface and the widgets of interactivity of the products. All the elements of multimedia such as images, text and video are needed throughout the production of this project and later.

4.2 System Architecture

This e-Book has 8 sub-topics including introduction and acknowledgement. The e-Book can be opened using Adobe Reader latest software. At first page, it is a page cover. The user can navigate through each title of the sub-topic which are the research product itself by clicking the bookmark function at the left of the software. In the e-Book, user can interact with the interactive gallery by clicking the button provide in the image. The user can either click right or left button to view the image. Each product will be explained with text and a video as a media.

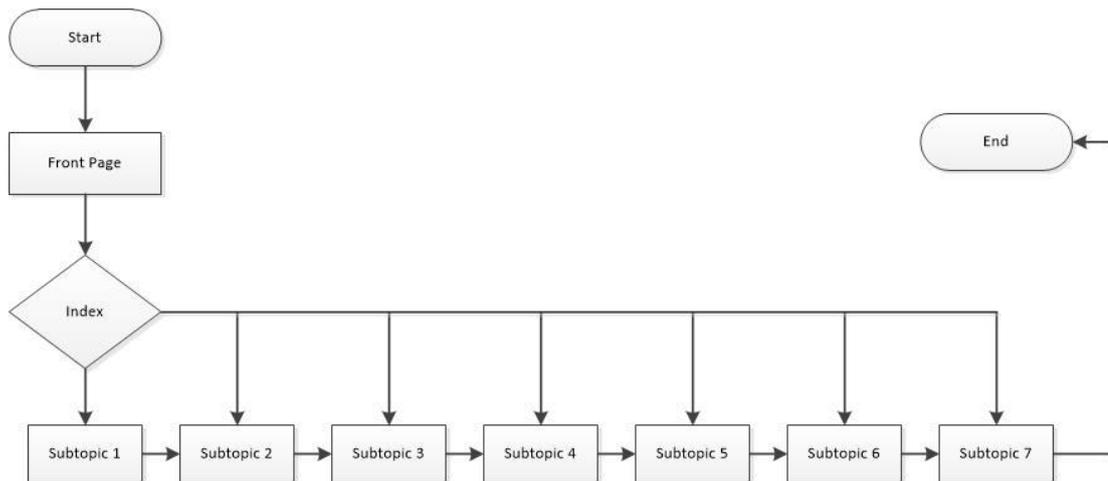


Figure 4.1: Flowchart of the system

4.3 Preliminary Design

Preliminary design is a first phase in a design process. It also known as a conceptual design. Higher level design concept will be implemented in this stage. Among this project development, the preliminary design is divided into few parts which are core content and concept design.

4.3.1 Concept Design

The main reason of this project is to create an e-Book that highlight the persuasive photography technique that can attract user to keen about the content in “MTUN Connect Research Product” module. After the comparison and evaluation process is made between the existing system, the Adobe InDesign is chosen as a tool to develop this project because it allows developer to manually craft the design layout and the interactivity.

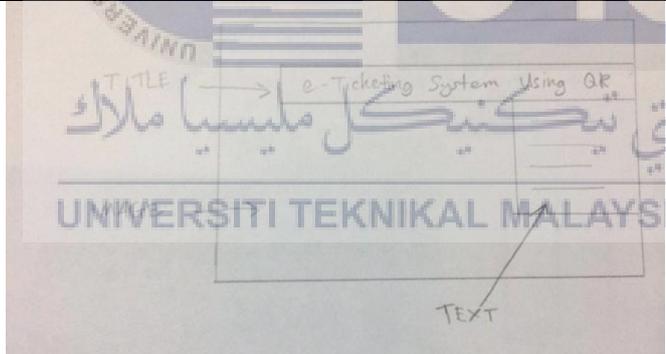
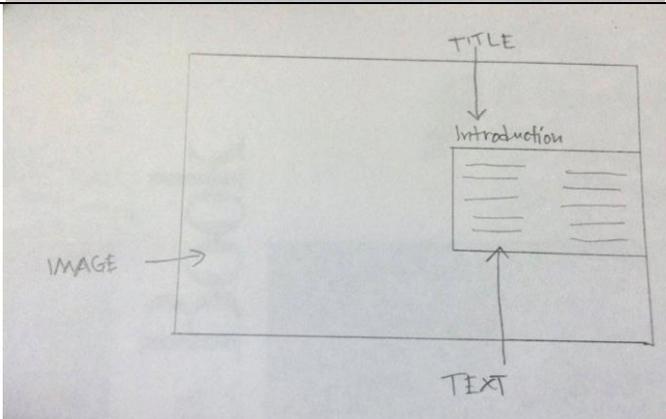
First process that to be carried out is to create the idea to find the concept of design by making a research on the internet to find the inspiration on the form of book layout. After the idea planation, the layout idea been drafted on paper.

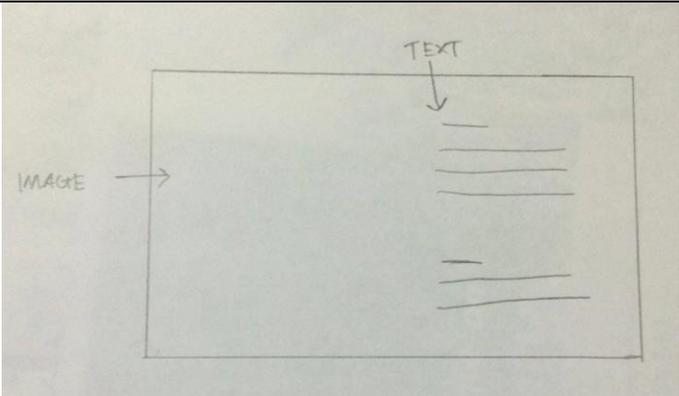
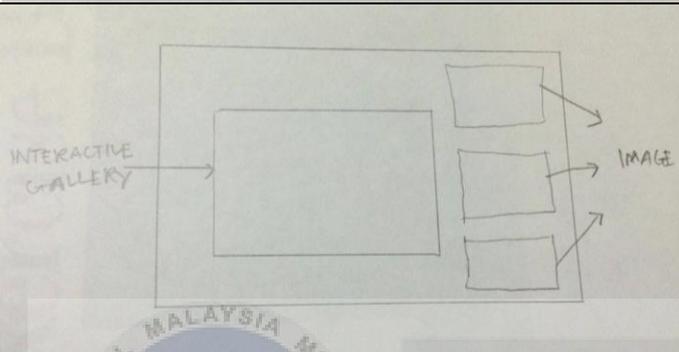
Besides, every topic must be detailed out of what kind of media each of it should have. Each of the topic contained the picture of the principal researcher, images product from lot of angle and abstract images. The widgets of the interactivity are the interactive gallery, linked bookmarks and also a video.

4.3.2 Storyboard Design

Storyboard is a technique for designer to sketch it first before start the designing process in a software. By doing this technique the flow of the product can be seen clearly and the process will be organized well. During this development, the storyboard design is sketch on an A4 paper for the layout design of the e-Book. Images below is the sketch and the final design which have been selected and finalize to be implemented inside the e-Book.

Table 4.1: Storyboard of the E-Book

Sketching	Explanation
	<p>This is the sketch for the first page of each chapter. Each chapter use same design, only the number, title, text and image will be change for other chapter.</p>
	<p>This interface of e-Book is consisting of image, title and text.</p>

	<p>This interface of e-Book is consisting of image and text.</p>
	<p>This interface of e-Book consists of interactive gallery and images.</p>
	<p>This interface of e-Book consists of video.</p>

4.4 User Interface Design

i. Navigation Design

Navigation of the e-Book will be shown in the flow chart below.

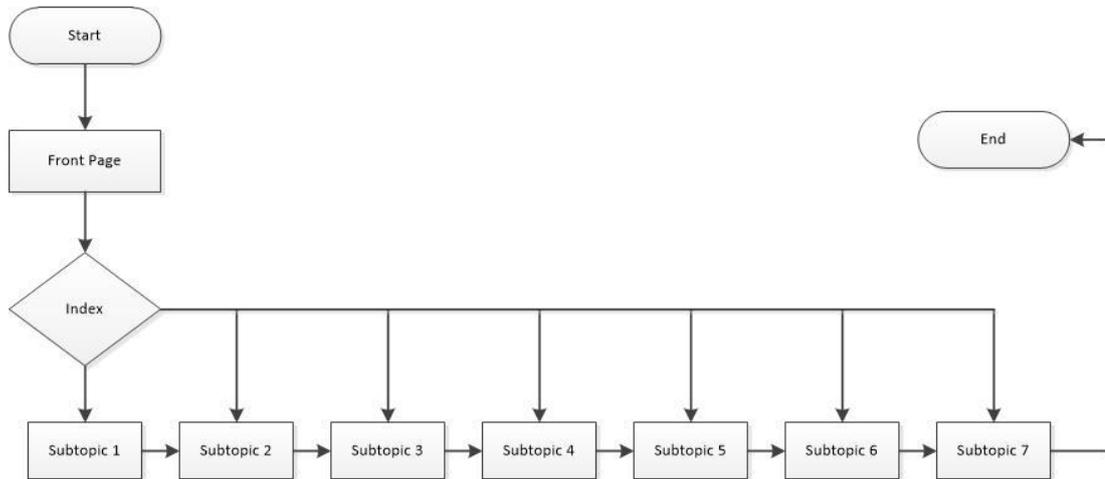


Figure 4.2: Navigation Structure of the E-Book

ii. Input Design

The e-Book does not have any of input information. The user only can scroll throughout the e-Book, and interact with interactive gallery plus video.

iii. Output Design

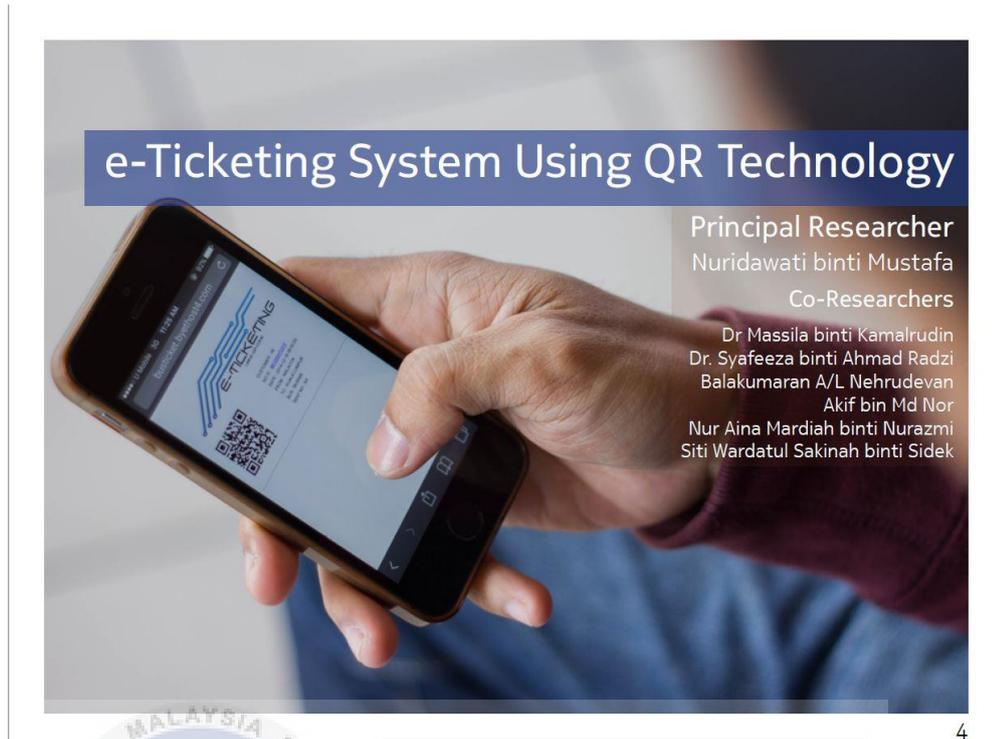
All the topics have same content that need to be simplify to make the user understand all of the research product.



Figure 4.3: The cover page of the book

Contents	
Acknowledgement	3
1 e-Ticketing System Using QR Technology	4
2 i-Sajadah : Prayer Rug with Smart Raka'ah Notification Device	12
3 Smart Obrometer With Flood Alert Apps System	20
4 "Mesti" Malacca-Eco-Stylish-Tiles	28
5 Smart Plug	36
6 Human Powered Emergency Pathway Guiding System	44

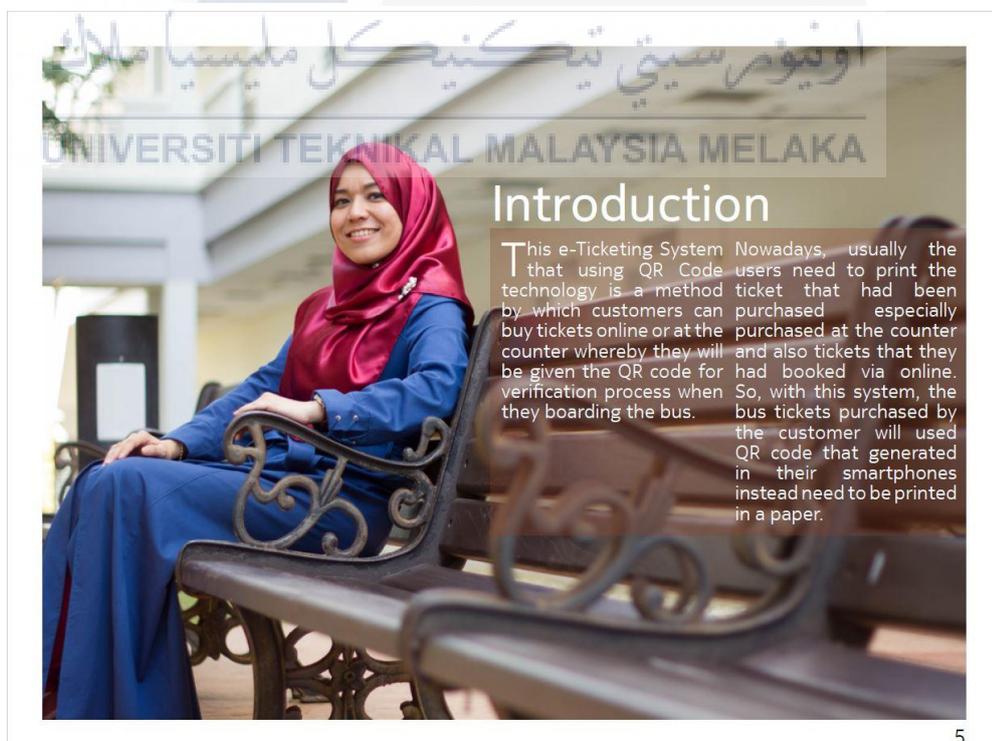
Figure 4.4: The table of contents for the book



4

Figure 4.5: The layout of the first page of the product

All the page uses the same layout design for every first page introduction for the product research title.



5

Figure 4.6: The second layout design page

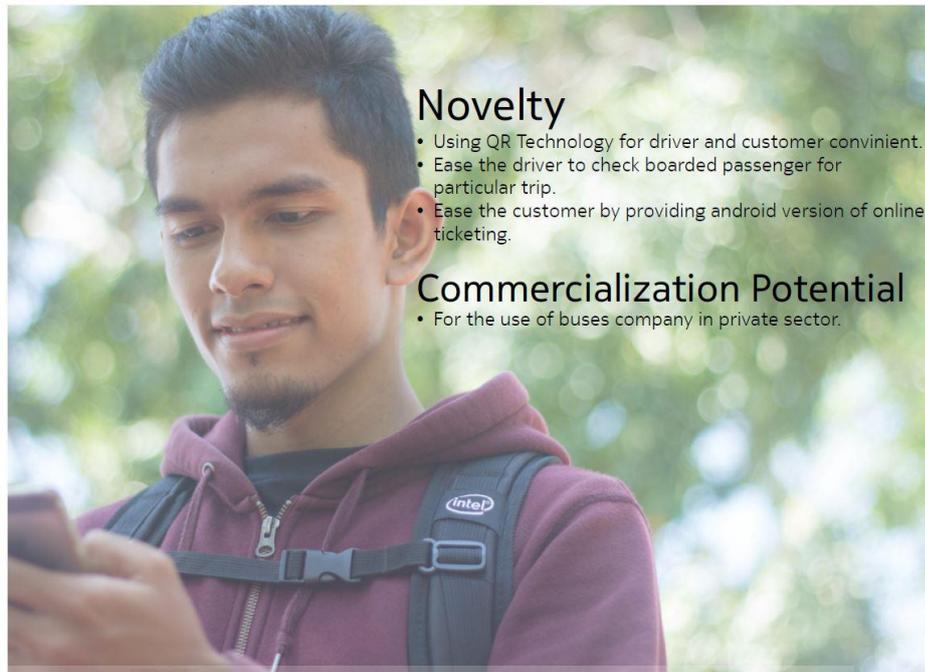
At the introduction page, all the principal researcher images will be placed here to maintain the style of the content presentation.



Figure 4.7: Third layout design

6

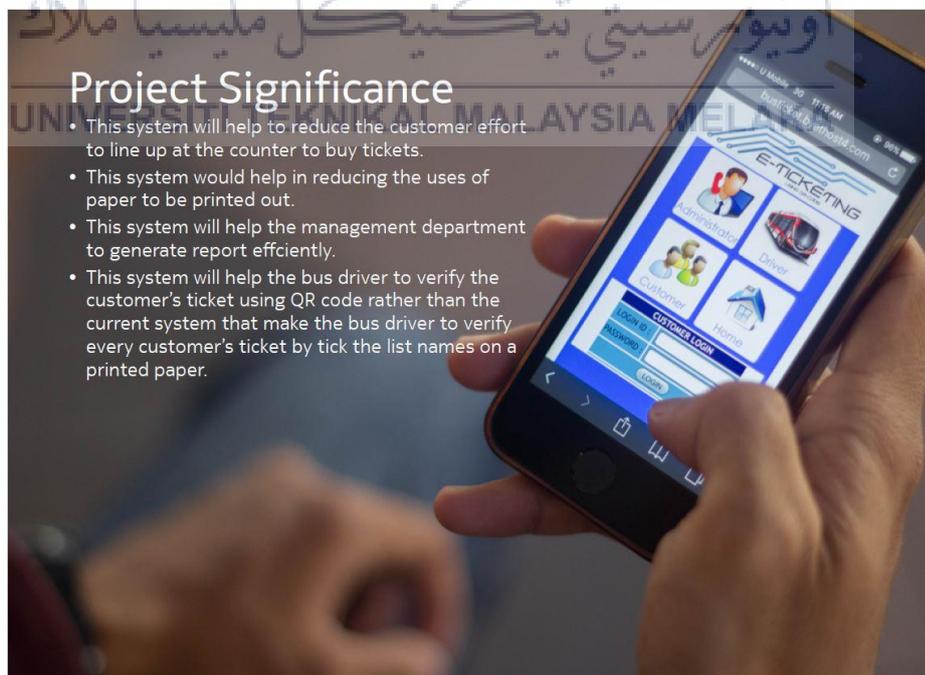
Third layout design is the extend page of the introduction title. The content need to be extend to next page in order to make the space enough to allow user to read the content comfortably.



7

Figure 4.8: Fourth layout design

This layout explains about the novelty and the commercialization potential of each research product.



8

Figure 4.9: Fifth layout design

This layout states the project significance of each research product.



9

Figure 4.10: Sixth layout design

This layout contain the images related to the research product.



10

Figure 4.11: Seventh layout design

This layout contains the interactive gallery images which can be interact by user.



Figure 4.12: Eight layout design

This layout contains the video explanation of the research products.

iv. Metaphor

All the images produce for this project is been captured in UTeM environment. Beside of the main objective of this project, UTeM environment also will be look as a very beautiful scene and will present a good image.

v. Media creation and Integration

The images produce been enhance using Adobe Photoshop and Adobe Lightroom. For the e-Book layout, it is being developed in Adobe InDesign. For the testing process, it being tested with latest Adobe Reader software.

4.5 Conclusion

Wrapping up, the design phase is remarkable progressions along the development of the content for e-Book. The core concept is important to strengthen the design concept. The storyboard is used to draft the initial idea and lead the designer for developing the design in the software. Design phase also helps to reduce problem occur in implementation phase. Whole thing was discussed in this phase, the development of the storyboard, input and output design. Thus, it will ease the next phase which is implementation.



CHAPTER V

IMPLEMENTATION

5.1 Introduction

Along the previous chapter, the design phase, design architecture, storyboards and all the multimedia elements that are used in the development of this project module has been discussed, produced and planned. All this process was done according to the flow.

Along this phase, the design is being modified and custom made in order to meet specialized needs. One of the crucial issues is how much effective was these modules were delivered to the user. All of the basic multimedia elements such as words and texts, motion graphic, images and video were added in this project.

The related media creation, media integration, product configuration management and implementation status will be discussed in this chapter.

5.2 Media Creation

Wide range of multimedia elements were used while developing the module for the e-Book. These multimedia elements were produced to generate attractive environments throughout the e-Book. Below is the list of multimedia element used while developing “MTUN Connect Research Product” module.

- Production of text
- Production of graphics
- Production of animations

5.2.1 Production of Text

Along the development of the module and the development of e-Book, various type of text was used to make the product became more attractive and outstanding. By applying attractive style of presentation of text in the e-Book, the integration of module and the e-Book became more alive too see and enjoy to read.

Same theme of text has been used in the development of the module and also the e-Book which is Nokia Pure Text and Nokia Pure Text Light. This font was used and chose because these fonts are suitable for the layout of a book and the font is very clear to read. Each of the module used the same font to keep the theme of the layout style. The size of the font for the title is bigger than the font for the body paragraph which is 34pt to 60pt for the title and 20pt for the body paragraph. Refer Figure



Figure 5.1: The text for title of the topic

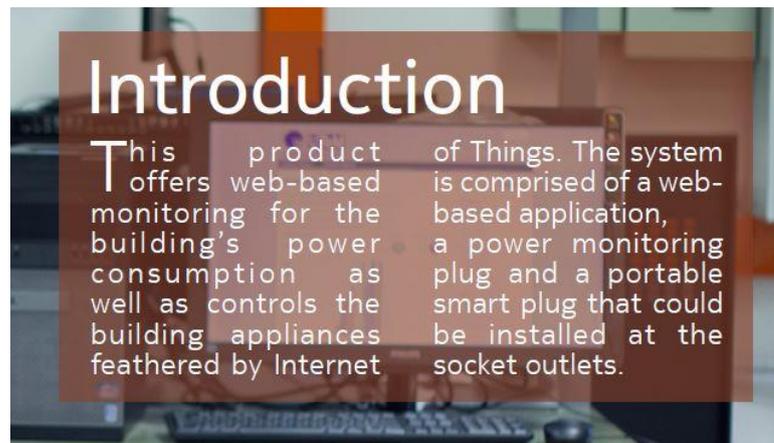


Figure 5.2: The text for the body paragraph

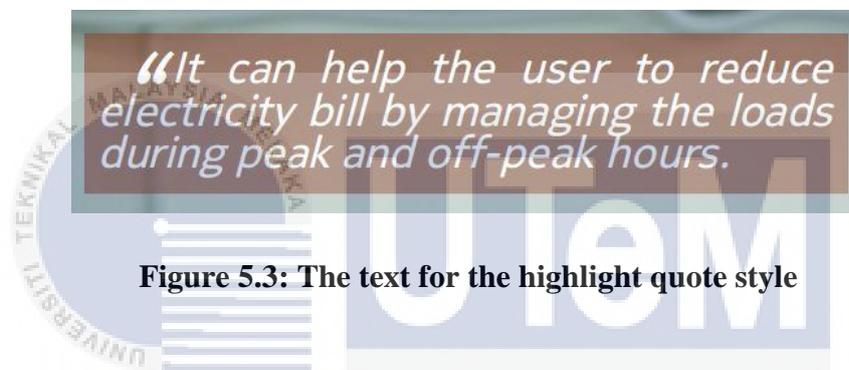


Figure 5.3: The text for the highlight quote style

5.2.2 Production of Graphic

The graphic is mostly used in photography which the images produced for the research product. Only a few of the graphic been developed using illustrating objects. These two types of graphic also known as bitmap and vector images. Bitmap images are made up of pixel along the grid, while vector images are made up with many individuals, scalable objects.

In this project, all the graphic images are produced and designed using Canon DSLR 550D, Adobe Photoshop CS6, Adobe Lightroom 5.6 and Adobe Illustrator CS6. The image below is produced by DSLR Camera and been enhance using Adobe Photoshop CS6 and Adobe Lightroom 5.6.

Adobe Photoshop CS6

Figure below shows the process of editing graphic for the i-Sejadah topic. The images taken before was took in the Masjid Saiyyidina Abu Bakar which expose the area of the masjid surrounding. The idea is to crop the prayer rug in the original photo and embedded it in the outdoor surrounding.

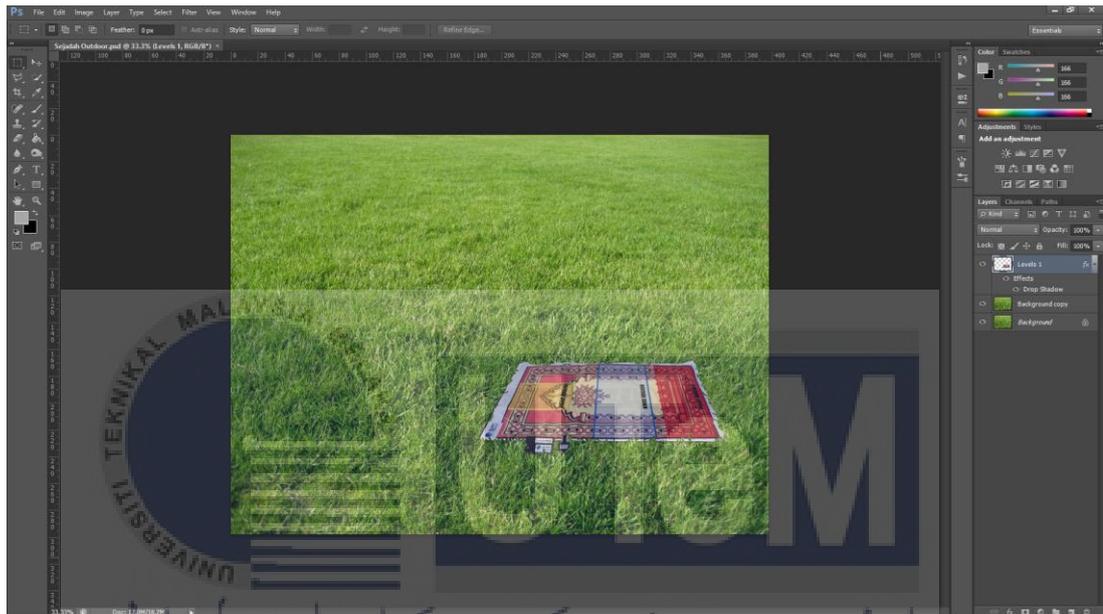


Figure 5.4: Editing graphic content for i-Sejadah

Next is the graphic developed for the Smart Obrometer. The idea is to show the environment which related to the research product itself where it is suggested to be set in rural area as a safety device to alert nearest resident if flood may be occurred there. The technique is the same as previous, crop the Smart Obrometer in the original photo and drag into the more suitable surrounding.

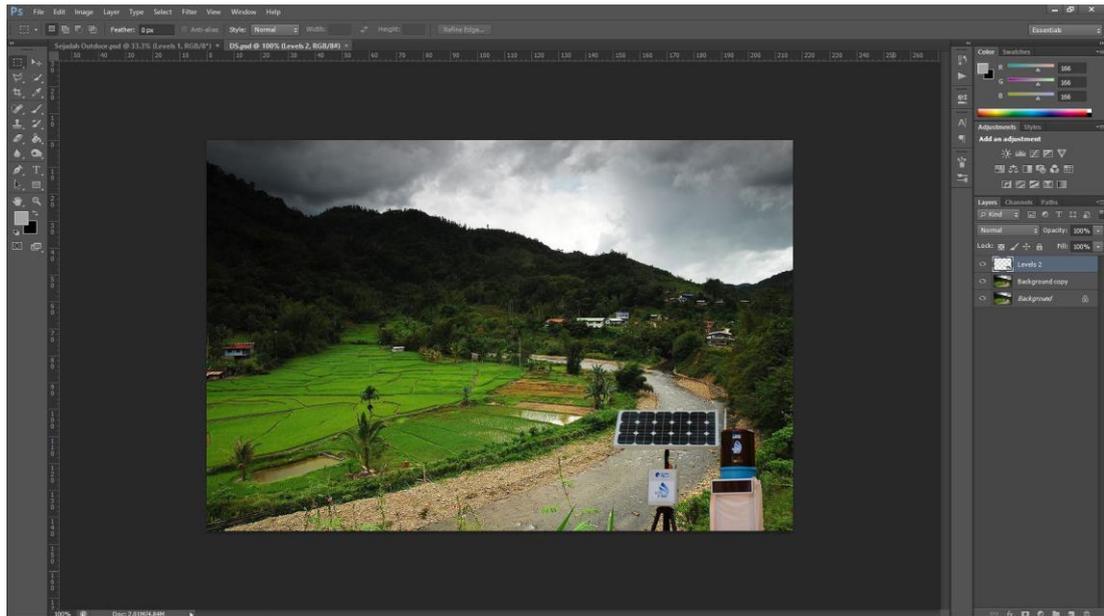


Figure 5.5: Editing graphic content for Smart Obrometer

Adobe Illustrator CS6

The image below is designed using Adobe Illustrator CS6. The idea is to create a battery charge process in an animation. So, the images have been created into frame by frame, from low battery until full. After each of stage of the battery level been designed, each of it need to be saved in separate image one by one. After the process finish, it will be opened in Adobe After Effects CS6.

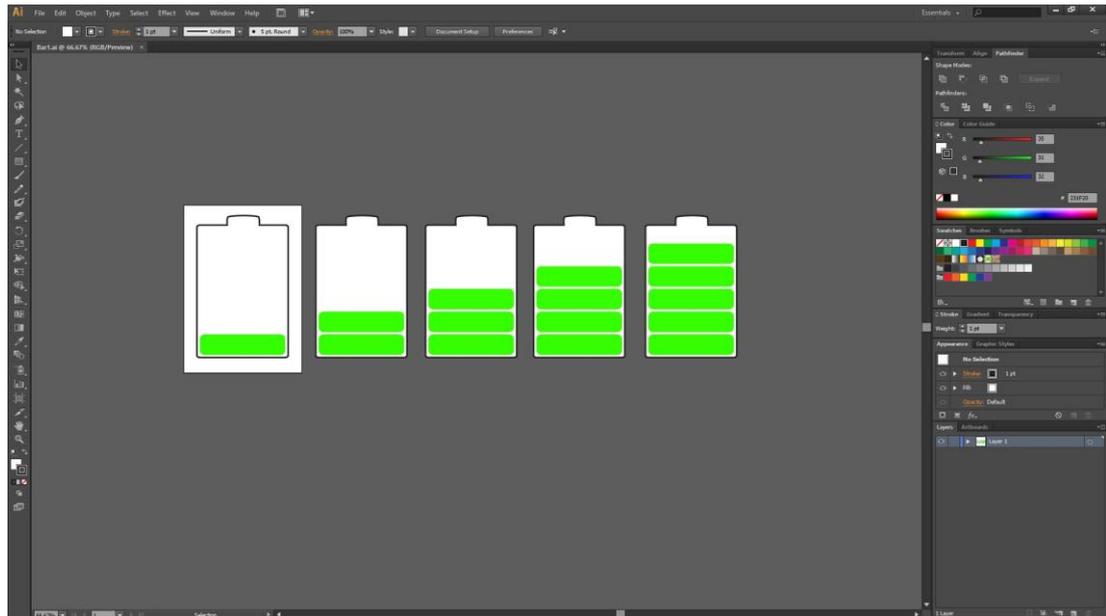


Figure 5.6: Designing the battery vector images

5.2.3 Production of Animation

For this e-Book, an animation is used only for a few parts in order to make sure the user understands the function of certain research product. This “Persuasive Photography Technique for Research Product” e-Book contained lot of research product which have various function. Some of it quite complicated to understand so that’s why animation is being used in order to explain and ease the user to understand the content of this e-Book. The animation is developed using Adobe After Effects CS6. The vector image is illustrated using Adobe Illustrator CS6.

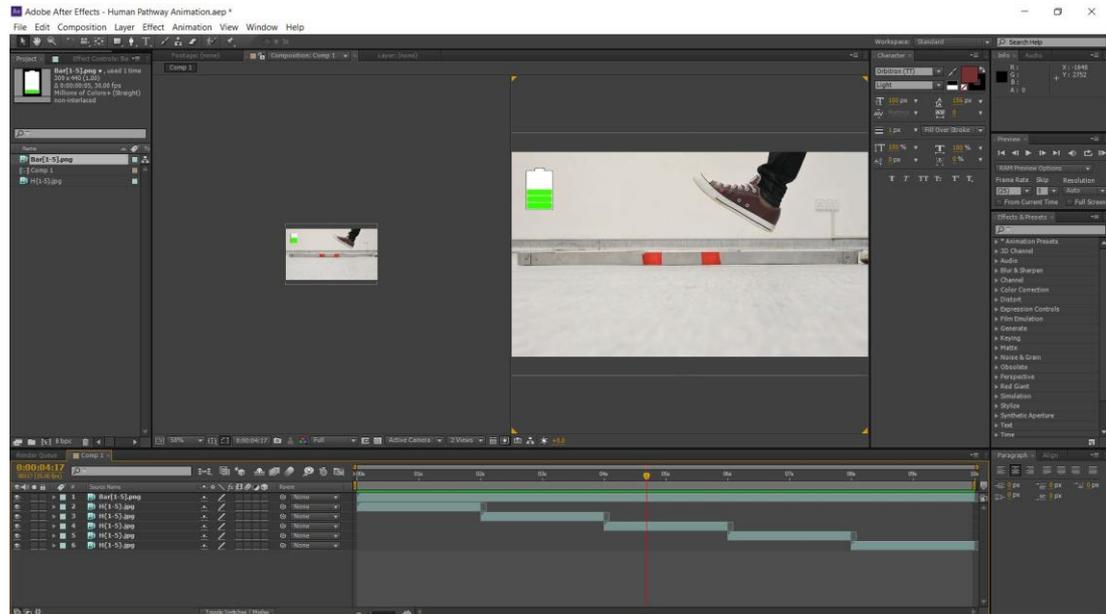


Figure 5.7: Creating an animation with Adobe After Effects CS6

5.3 Media Integration

The integration of module is made in several software such as the images enhancing tools using Adobe Photoshop CS6 and Adobe Lightroom 5.6 and production of animation using Adobe After Effects CS6. After the process of enhancement and animation, the developed object will be embedded in the Adobe InDesign CS6 to be its content. After this process finish, the e-Book can be preview using latest Adobe Reader or Adobe Acrobat Pro. The e-Book is in .pdf format, also known as Adobe PDF Interactive.

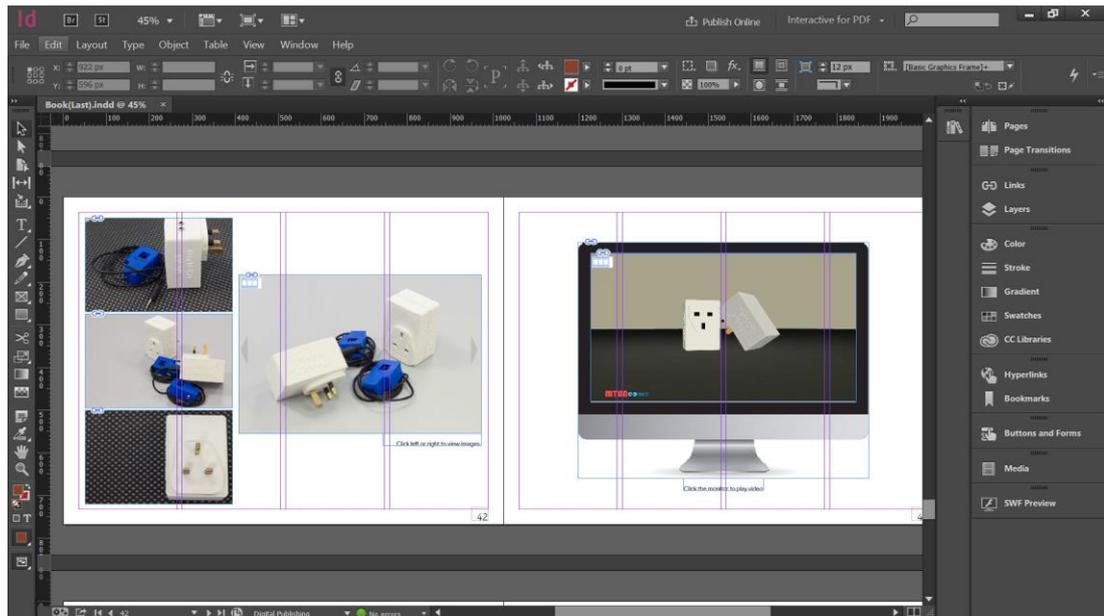


Figure 5.8: Media Integration with Adobe InDesign CS6

5.4 Product Configuration Management

Adobe InDesign CS6 is an application used to developed the e-Book. The product will be in platform of Adobe PDF Interactive. The e-Book can be viewed using any device that have latest Adobe Acrobat Pro or Adobe Reader. The software version must be later than Adobe Acrobat 9 or Adobe Reader 9 upwards. It will be great to have the latest version of the software.

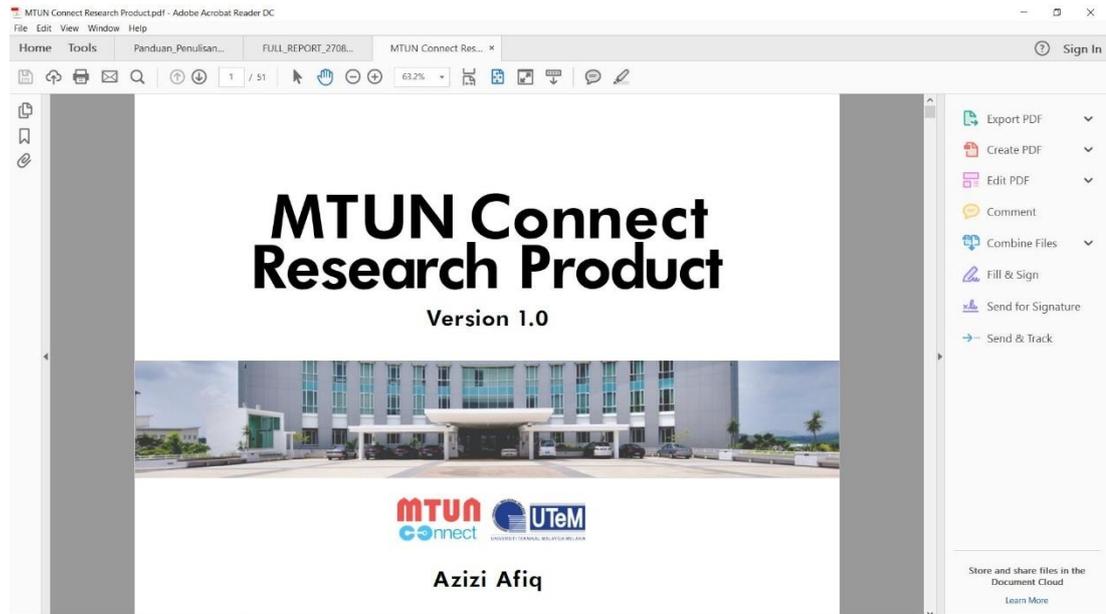


Figure 5.9: The environment of Adobe Acrobat Reader DC

5.5 Conclusion

This chapter contains implementation processes that include the entire crucial step to develop the electronic book. This phase is very important because it explains about the process involved throughout the development of e-Book that is divided into two parts which are Product Development Process and Product Configuration Management.

CHAPTER VI

TESTING

6.1 Introduction

In this chapter, some process has been conducted to analyze out either the product is successful or otherwise. Testing is a process to analyze and judge whether the final product meets all the requirements and fulfill the project objective. The testing process must be done with suitable target user. The end product of this project is a content development work that could improve the understanding of the current user using this product.

Test plan, test organization, test environment, test strategy, test implantation process and analysis will be carried through this chapter. All the result will be collected and analyses to check whether it achieved the target or not.

6.2 Test Plan

Test plan describing the target user that will test the product. The test can be divided into two part, first the developer tests the product by his own and second is a part where the developer asks other person to test the product. Test plan process for implementation also will be specified. Developer need to determine the category of test to be conducted, the total of time required and objectives of each test. The objectives and scope of the testing part are clarified and the identified methodology will be used to handle the tests.

The error that have been found through the first part of testing, which is the test from the developer. The problem obtained is hard to read some text. This is because the text position is on certain area which have quite complicated background. As you can see in the Figure below, the image before quite hard to read with the complicated background. The image after is better to read. The problem of quite hard to read is already solved by increase the opacity of the box layout behind the text.



Figure 6.1: Text layout

Next error that have been faced is the confusing to read the body paragraph. This confusing occurred because the gap between the body paragraph is close between each column. In order to solve this problem, the gap between the column must be widened some more compare to the previous one. Refer to Figure 6.2.



Figure 6.2: The gutter (gap) between columns

Last error that have been found is the note for the user to aware there is a video provided in a graphic which is the monitor screen. In order to solve this problem, a simple note have been provided to let user know there is a video provided that can be played. Refer to Figure 6.3.



Figure 6.3: The note to aware user

6.2.1 Test User

The testing of this project conducted for 31 users including the content expert and user that have been identified through the user target scope. Some users consist of students and random people. 60% of the respondents are female and 40% of them are male. 83.3% ages around 21-23 years old while the balance of the respondents are 24 years old and above.

Gender (30 responses)

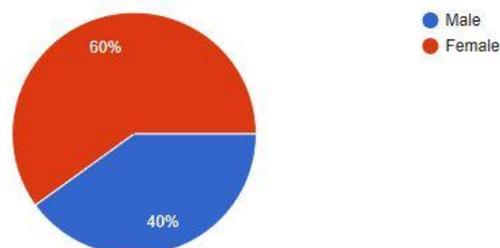


Figure 6.4: Respondents gender percentage

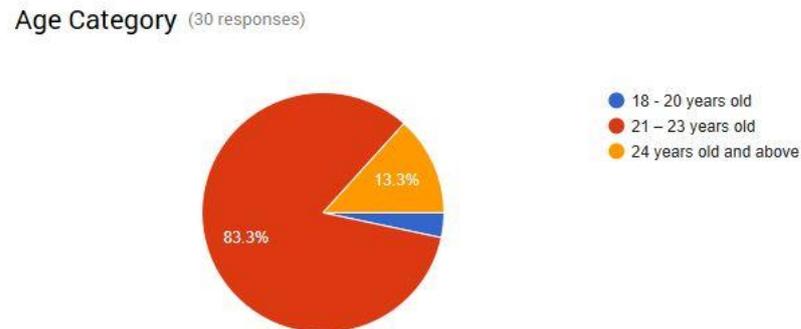


Figure 6.5: Respondents age's category

6.2.2 Test Environment

Test environment explains the location of the testing process conducted and the software and hardware requirement involved in the test. The compatible hardware and software must be prepared to be used in the testing. This step will make sure the testing process running well without problem related to software and hardware. Table 6.1 shows the software and hardware needed to run the product.

Table 6.1: Software and hardware for test environment

Software and Hardware	Description
Adobe Acrobat Reader DC	Adobe Acrobat Reader is necessary because the product will be displayed using this application. This application is also free.
Web Browser	The file also can be displayed through web browser with the link that I provided.
Laptop	Any laptop and device can support this file, based on its format. In this testing, I will use to display the product through laptop.

6.2.3 Test Schedule

Test schedule is crucial to handle the length of time for the user to go through the process of testing. In this project testing, users are provided with the link of the product to be viewed through their own device whether it laptop or their smartphone. The suggestion time to test the e-Book is 15 minutes.

Table 6.2: Test schedule information

	Stage 1	Stage 2
Tester	Content Expert	General Public including students
Number of Testers	1	30
Duration	15 Minutes	15 Minutes
Date	August 2016	August 2016

6.3 Test Strategy

Test strategy was to allow the testers to experience and try the product. Then the user was provided with a questionnaire that cover strength and weakness of the product which was enhanced next after the feedback been collected from the testers. Testers understanding may be different with the developer. Along the testing strategy, it is compulsory to confirm that users are understood about the module. Duration that has been given is 15 minutes for them to go through the entire module of “MTUN Connect Research Product” using web browser and laptop.

Testing with the content expert was done professionally with person to person style. 30 general public include students were involved in this test. This test is based on the products content, interface, functionality, learnability, effectiveness and ease of use which related with my objectives that can be refer in Chapter 1.

6.4 Test Implementation

Test implementation contain a text description of how the test is completed and the data tested, the collections of data acquire from the tested result. Besides, the appropriate questions will be created and the testing strategy process can identify whether the content of the module is interesting or quite complicated for user to understand.

6.4.1 Test Description

Testing process was conducted through internet where user tested it with their own device which may be laptop or smartphone. The module for MTUN Connect Research Product is in Adobe Acrobat Reader DC, and this e-Book can be executed in a wide platform as long as the device have latest Adobe Acrobat Reader. For the first step, the questionnaire was distributed to the tester in order to collect the data from the user, where along this process, the tester experienced while using this product by themselves.

The whole questionnaire made based on some category related to aspect between user and the system. The questionnaire covered about interface design, learnability testing and effectiveness test.

After finished testing the product, the user answered on questionnaire form that cover three aspects which are design, learnability testing and effectiveness test. It has two section which are A and B. For section B, each of the question had a range between 1 to 5 that was chose from the tester based on what they already experienced during the testing product phase.

6.4.2 Test Data

Test data is the result gained through the testing conducted towards the selected participants for this project. Whole test data should be analyzed by the developer to examine the project effectiveness towards the user.

One content expert and thirty general public including students were involved along this testing. This step been taken to check whether the product is good or not. Table 6.4 shows the information of the content expert involves in the product testing.

Table 6.3: Content Expert information

No.	Name	Position	Company
1	En Muhammad Helmy Bin Emran	Lecturer / Professional Photographer	UTeM

The testing criteria will be cover three aspects:

- a. Design
 - To identified how attractive, the layout of text and graphics in among the audience.
- b. Learnability Testing
 - To identified how easy, the content to be read and understood by the audience.
- c. Effectiveness Test
 - To make sure the product is functioning well.

The content expert gave a really good input and feedback to enhance the e-book from the aspect of design, learnability testing and effectiveness test. The content expert advice to maintain the style of the layout for every pages to avoid the user from confusing while reading the e-book. The layout behind the text also ease the user to read the content easily. Sometime, the background may have a bad contrast with the text, so the layout behind the text could overcome this problem. Refer Figure 6.5.



Figure 6.6: Layout of text

Next, instead of using pure black colour text, the content expert suggested to use different dark colour for example dark blue or dark red which it help the user eyes to feel more alive while reading the content. The pure black colour tend to illustrate as 'dead' colour. Refer Figure 6.6 for example of good usage of text colour.



Figure 6.7: Good colour of text

Last aspect touch by the content expert was the background image of each pages may come up with different kind of view if it was stretched full to whole page. My current style of background image is in centre of each page and there are white spaces left around the background. Refer to Figure 6.7 for clear explanation.



Figure 6.8: Background image style for each page

6.5 Test Results and Analysis

Design

Question 1

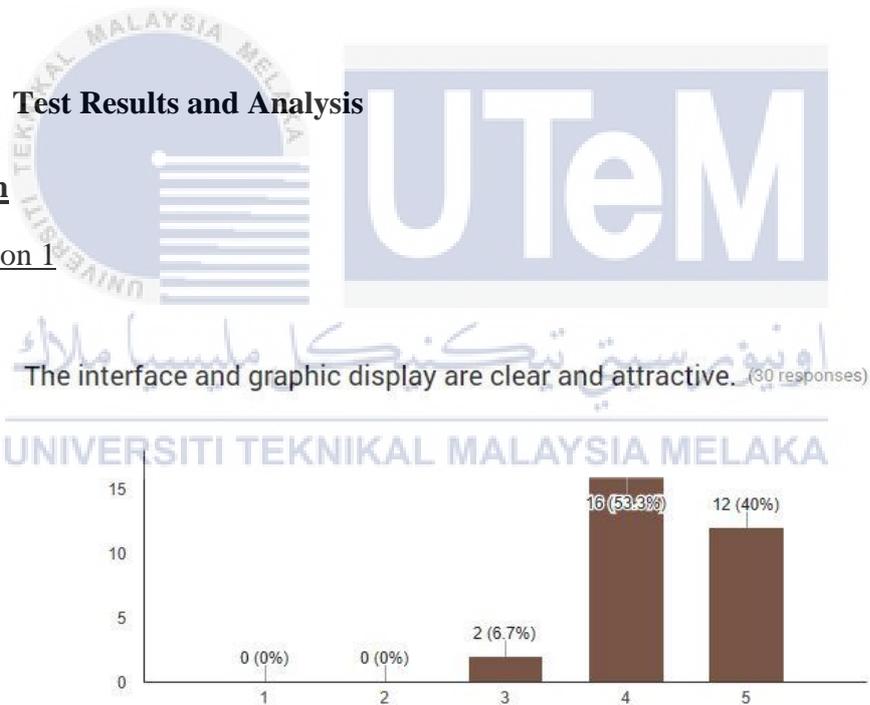


Figure 6.9: Bar chart for Question 1 (Part A)

From the bar graph, it shows that 12 people strongly agree, 16 people totally agree while 2 persons either agree or disagree.

Question 2

The fonts used are easy to read and clear. (30 responses)

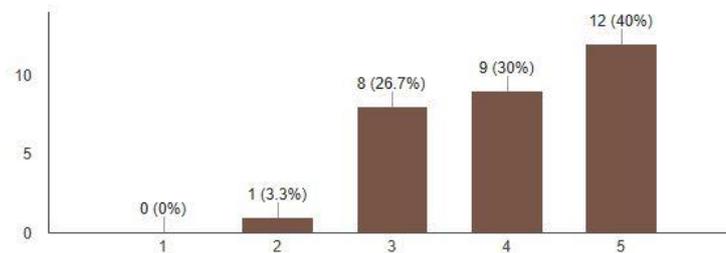


Figure 6.10: Bar chart for Question 2 (Part A)

From the bar graph, it shows that 12 people strongly agree, 9 people totally agree, 3 people either agree or disagree and 1 of them totally disagree.

Question 8

The layout of the content suit well with the clear spaces of the photos. (30 responses)

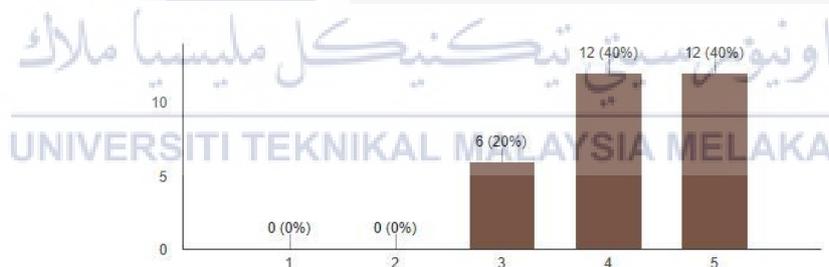


Figure 6.11: Bar chart for Question 8 (Part A)

From the bar graph, it shows that 12 people strongly agree, 12 people totally agree and 6 people either agree or disagree.

Learnability Testing

Question 1

How do you rate about this electronic book? (30 responses)

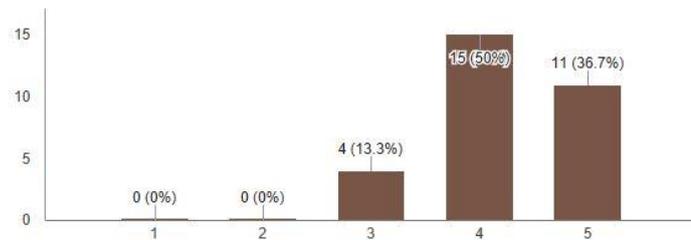


Figure 6.12: Bar chart for Question 1 (Part B)

From the bar graph, it shows that 11 people strongly agree, 15 people totally agree and 4 people either agree or disagree.

Question 4

All the photos make me feel very interested on the research product. (30 responses)



Figure 6.13: Bar chart for Question 4 (Part B)

From the bar graph, it shows that 15 people strongly agree, 8 people totally agree and 7 people either agree or disagree.

Question 6

The photos are very nice to see in terms of the lighting, not too dark and not too bright.

(30 responses)

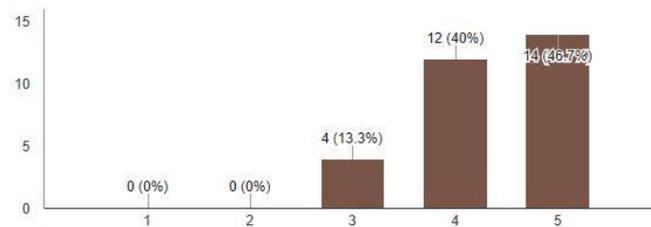


Figure 6.14: Bar chart for Question 6 (Part B)

From the bar graph, it shows that 12 people strongly agree, 12 people totally agree and 6 people either agree or disagree.

Effectiveness Test

Question 2

The photography technique applied in this book can lift the value of the research product.

(30 responses)

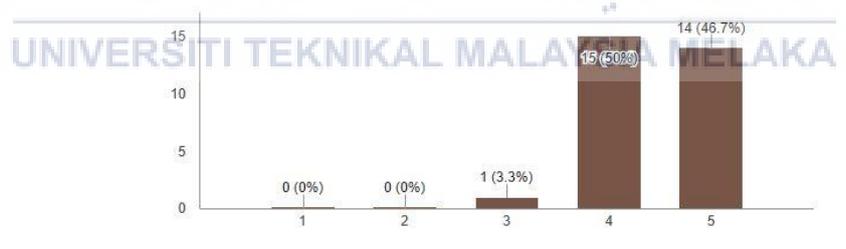


Figure 6.15: Bar chart for Question 2 (Part C)

From the bar graph, it shows that 14 people strongly agree, 15 people totally agree and 1 people either agree or disagree.

Question 5

This book has a potential to lift the value of the research products.
(30 responses)

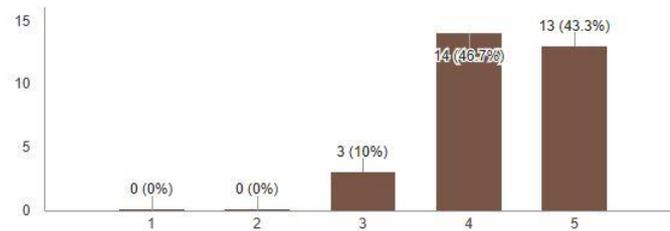


Figure 6.16: Bar chart for Question 5 (Part C)

From the bar graph, it shows that 13 people strongly agree, 14 people totally agree and 3 people either agree or disagree.

Question 6

Right photography technique is another way to enhance and promote a research product.
(30 responses)

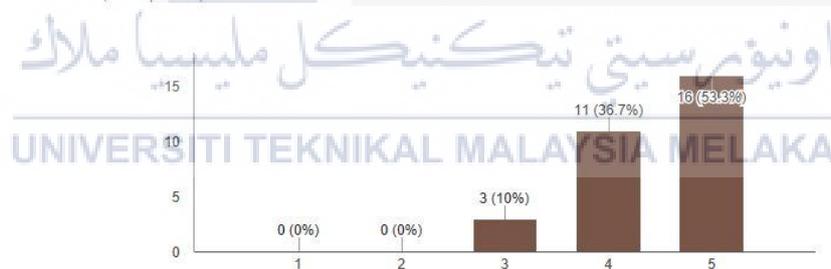


Figure 6.17: Bar chart for Question 6 (Part C)

From the bar graph, it shows that 16 people strongly agree, 11 people totally agree and 3 people either agree or disagree.

6.6 Analysis Testing

The test result and analysis is done after the Content Expert and general public finished the questionnaire. From the analysis, the project will be checked whether it reach the objectives of the requirements.

6.6.1 Overall Analysis Test

After whole the required testing data is collected and the analysis has been done, the feedback from the user is positive for this testing project. The overall analysis tests show that most of the general public tend to agree in aspects of design, the content and the usage of the book. Only some of the tester do not agree that font can be read very easy and clear. However, most of the answer show positive response and there is still a space for an improvement towards the quality of this project.

6.7 Conclusion

To conclude this chapter, the testing went well. A well planned testing is crucial in any content development project. From the testing data collected and evaluated the result of the testing accomplished the project objectives. This allows the project to proceed to the phase of summarizing the project.

Next chapter, the project will be summarized and conclude.

CHAPTER VII

CONCLUSION

7.0 Introduction

This chapter will conclude all the result that we obtained from the projects. The purpose of this project is to developed a content development for MTUN Connect. By doing these projects, all the projects progression and experience gain will be included in this chapter.

The conclusion is made based on the Strength and Weakness, Proposition Improvement and Contribution of this prototype electronic book (e-Book) also known as Adobe PDF Interactive.

7.1 Observation on Weaknesses and Strengths

The development of this e-Book for MTUN Connect content has its own strength and weakness. Below are the observations of the advantages and disadvantages of this product.

7.1.1 Product Advantages

Content expert and general public can view the right techniques for photography on research products. The content of the information of the research product are being organized well in order to keep the momentum for the user to enjoy reading it. Furthermore, there are also some image slide which include simple interactive between user and the book. Plus, a video also been embedded at the last of each topic in order to rise the understanding of the user after reading the content.

7.1.2 Product Disadvantages

Some weakness of this product is few of the text was quite hard to read and not very clear due to some complicated background used in the e-Book. Besides, some of the images can still be improved where few of principal images are not in a correct point of focus. Plus, some research product images can be shoot with a 3-point light setting environment to achieve more quality research product images.

7.2 Propositions for Improvement

In the future, perhaps other researcher can make this module MTUN Connect Research Product as the reference. Plus, hope Adobe InDesign will be used widely to make lot of interactive document which can be used as an education slide, as a business and others. Last but not least, hope this module MTUN Connect Research Product can be improved in terms of fonts layout, design and images.

7.3 Project Contribution

This module helps all the researcher about how to lift the market value of their research product. Thus, this module can assist users to understand better about how the right technique of photography can help them to market their products. For e-Book that uses Adobe PDF Interactive platform, it is now can be executed in wide range of

platform. Plus, it also can be publishing online after the development has been done. Adobe InDesign is an independent application to develop an electronic book.

7.4 Conclusion

In conclusion, the advantages obtained were more than disadvantages through the development of MTUN Connect Research Product. Although this project has some flaws, but the early objectives for this project has been achieved. This final product does have weaknesses however the product also has its strength and benefits that allow to fulfill the project requirements. Well planning before developing a project is crucial to have a well-organized development progression. This e-Book has weaknesses, but in a future it can be more interesting and better than this. Plus, having people who have same interest in the multimedia assists the development progression in the matter of time and quality.



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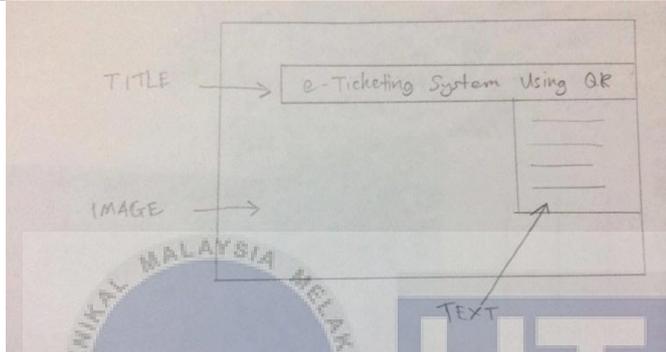
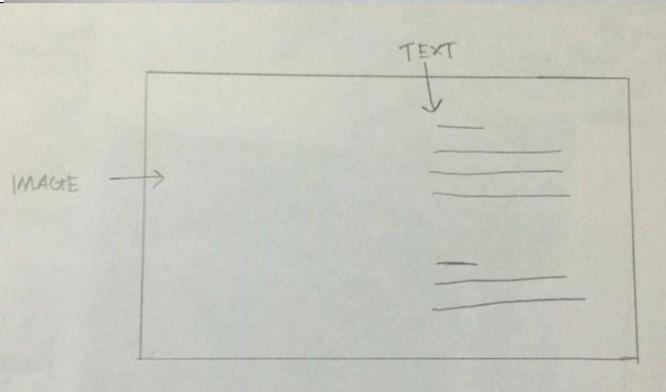
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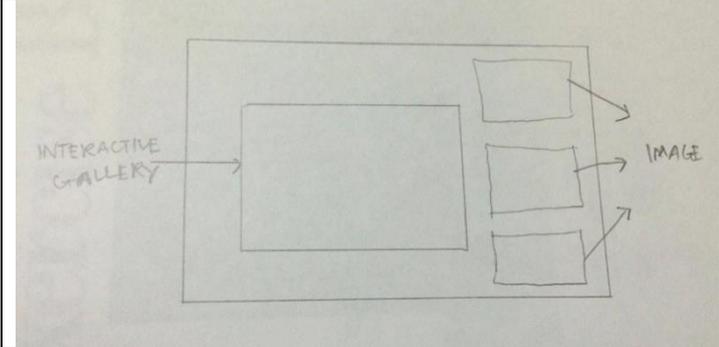
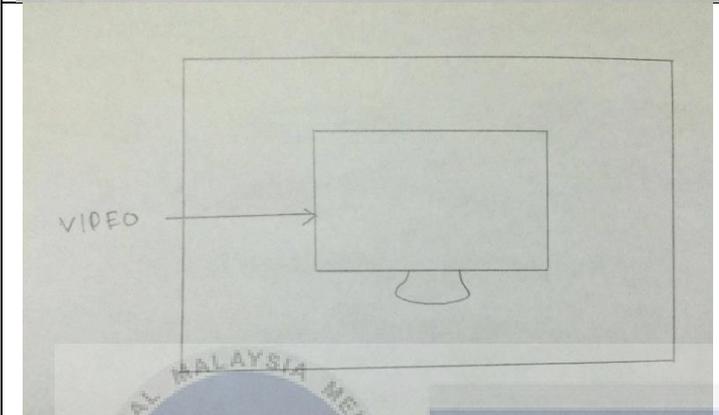


APPENDICES

APPENDIX A

Storyboard

Sketching	Explanation
	<p>This is the sketch for the first page of each chapter. Each chapter use same design, only the number, title, text and image will be change for other chapter.</p>
	<p>This interface of e-Book is consisting of image, title and text.</p>
	<p>This interface of e-Book is consisting of image and text.</p>

 <p>A hand-drawn diagram on a piece of paper. It features a large outer rectangle. Inside, on the left, is a smaller rectangle labeled 'INTERACTIVE GALLERY' with an arrow pointing to it. On the right side of the large rectangle, there are three smaller rectangles stacked vertically, each labeled 'IMAGE' with an arrow pointing to it.</p>	<p>This interface of e-Book consists of interactive gallery and images.</p>
 <p>A hand-drawn diagram on a piece of paper. It shows a large rectangle representing a screen. Inside the screen is a smaller rectangle representing a video player. An arrow labeled 'VIDEO' points from the left towards the video player.</p>	<p>This interface of e-Book consists of video.</p>



UTeM

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

APPENDIX B

Questionnaire Form

SECTION A

Title: MTUN Connect Research Product e-Book

For question 1- 4, please mark (✓) at the space provided.

1. Gender

- i. Male
- ii. Female

2. Age Category

- i. 18 – 20 years old
- ii. 21 – 23 years old
- iii. 24 years old and above

3. Do you know anything about photography?

- i. Yes
- ii. No

4. Do you agree right photography techniques can lift the market value of a research product?

- i. Yes, I agree
- ii. No, I do not agree

SECTION B

Instruction: Based on scale from 1 to 5, please mark (/) on one answer only. Please make sure you answer all the question.

1	Strongly Disagree
2	Disagree
3	Neither Agree or Disagree
4	Agree
5	Strongly Agree

A. Design

No.	Question	1	2	3	4	5
1.	The interface and graphic display are clear and attractive.					
2.	The fonts used are easy to read and clear.					
2.	The colour schemes used are suitable and ease my ease to read through.					
3.	The images help to enhance the research products.					
4.	These electronic book are user friendly and easy to use.					
5.	Every page is simple and tidy.					
6.	I feel interested on the research product.					
7.	The layout of the content suit well with the clear spaces of the photos.					

B. Learnability Testing

No.	Question	1	2	3	4	5
1.	How do you rate about this electronic book?					
2.	I can use this electronic book without any problem.					
3.	After I read all the content, I understand better than before.					
4.	All the photos make me feel very interested on the research product.					

5.	This electronic book is easy to understand and simple to use.					
6.	The photos are very nice to see in terms of the lighting, not too dark and not too bright.					

C. Effectiveness Test

No.	Question	1	2	3	4	5
1.	All photos provided coincide with the topic.					
2.	The photography technique applied in this book can lift the value of the research product.					
3.	The technique of photography presented make the product look outstanding.					
4.	Easy to read and enjoy all the photos provided in the book.					
5.	This book has a potential to lift the value of the research products.					
6.	Right photography technique is another way to enhance and promote a research product.					