

THE STUDY OF INSTRUCTIONAL DESIGN ON COURSEWARE FOR PT3
STUDENT IN HISTORY SUBJECT



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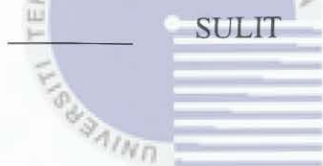
JUDUL: THE STUDY OF INSTRUCTIONAL DESIGN ON COURSEWAY FOR PT3 STUDENT IN HISTORY SUBJECT

SESI PENGAJIAN: 2015/2016

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**THE STUDY OF INSTRUCTIONAL DESIGN ON COURSEWARE FOR PT3
STUDENT IN HISTORY SUBJECT**

ATHIRAH NUR HANI BINTI AMINUDDIN



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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

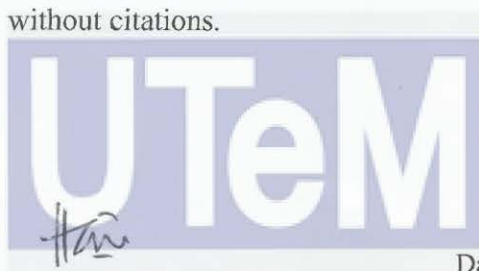
FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2016

DECLARATION

I hereby declare that this project report entitled

**THE STUDY OF INSTRUCTIONAL DESIGN ON COURSEWARE FOR PT3
STUDENT IN HISTORY SUBJECT (PT3 SEJARAH COURSEWARE)**

is written by me and is my own effort and that no part has been plagiarized
without citations.



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DEDICATION

This thesis is dedicated to my beloved parents, Mrs. Noor Aziah binti Mad Udin and Mr. Aminuddin bin Mohd Sidik for their love, endless support and encouragement in the process of development of this project.

To my supervisor who has give lot of advice and guide me with patients along the process of this project, Sir Wan Sazli Nasaruddin bin Saifuddin.

Last but not least, to all my supportive friends who always help me throughout the process of this project.

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Bismillahirrahmanirahim,

In the name of Allah, the most Merciful and the most Gracious. All praise to Allah for giving me strength, patient and guidance to complete this project.

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I would like to thank to my beloved parents and family for their endless support and encouragement throughout the development of this project. Sincere thanks to all of my friends who had given me the ideas and help me along the journey of this project until the end.

Last but not least, to whom that indirectly contributed in this project, your kindness means a lot to me.

Thank you.

ABSTRACT

PT3 Sejarah Courseware is a courseware for secondary students who are currently taking history subject in school. The research is about the instructional design in courseware for history subject. How the instructional design of content in courseware effect to the learner is the main point through the design process. The courseware is specifically covers on form 1, form 2 and form 3 chapters. This project wants to evaluate the effectiveness of courseware among students who are taking history subject. There few of educational courseware for PT3 students out there. Therefore, this courseware is build to helps student in their learning process. This courseware can be use anywhere and anytime without any internet connection. PT3 Sejarah courseware is developed by using Adobe Captivate 6. All the content topics in the courseware are obtained from textbook and reference book in the market. Some of the graphics element in the courseware is illustrate using Adobe Illustrator and Adobe Photoshop. This courseware was found to increase the interest of study in history subject among the students. As the courseware implemented in computer based, student can study together among themselves. However, the courseware still needs an improvement such as add some more interactivity features in the courseware.

ABSTRAK

Perisian kursus PT3 Sejarah ialah sebuah perisian kursus yang direka untuk pelajar-pelajar sekolah menengah rendah yang sedang mengambil subjek sejarah di sekolah mereka. Kajian ini adalah mengenai reka bentuk pengajaran dalam perisian kursus bagi matapelajaran sejarah. Cara-cara reka bentuk pengajaran terhadap kesan pembelajaran pelajar merupakan perkara utama dalam projek ini. Perisian kursus ini meliputi semua bab pembelajaran dalam subjek Sejarah tingkatan 1, 2 dan 3. Projek ini juga ingin menilai keberkesanan perisian kursus terhadap pelajar yang mengambil subjek sejarah. Terdapat banyak perisian kursus pendidikan di pasaran. Maka, perisian kursus ini dibina untuk membantu pelajar dalam proses pembelajaran mereka. Perisian kursus ini boleh digunakan pada bila-bila masa dan dimana-mana sahaja tanpa menggunakan capaian internet. Perisian kursus Sejarah dibangunkan menggunakan Adobe Captivate 6. Semua kandungan topik dalam Perisian kursus ini dirujuk pada buku teks dan buku rujukan. Beberapa grafik yang terdapat dalam perisian kursus ini dilakar menggunakan Adobe Illustrator dan Adobe Photoshop. Perisian kursus ini akan membantu dalam menambahkan minat pelajar untuk belajar matapelajaran Sejarah. Oleh kerana perisian kursus ini dibina berasaskan computer, pelajar dapat belajar bersama-sama dalam kalangan mereka. Walau bagaimanapun, perisian ini masih memerlukan penambahbaikan seperti menambah lebih banyak interaktiviti di dalam perisian ini.

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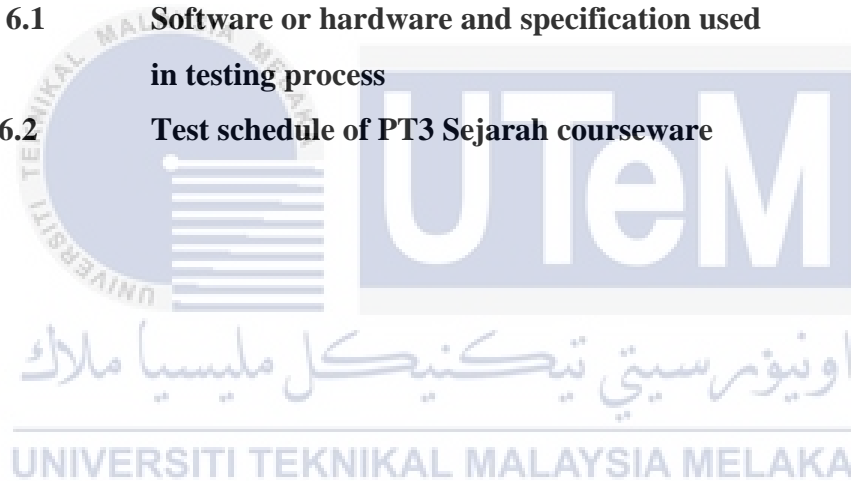
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CHAPTER I

INTRODUCTION

1.1 Project Background

In this project titled “The Study of Instructional Design on Courseware for PT3 Student in History Subject – PT3 Sejarah Courseware” study on how instructional design of content effect to the learner will be conducted.

The instructional design of the courseware was developed based on the study and will test on the effectiveness of understandable of student towards the courseware. PT3 Sejarah Courseware is designed to give the effect to the learner in their learning experience. It was a platform for student to study the subject matter and make exercises. This project wants to increase and enhance the possibility of learning in history subject by inserting multimedia elements that can attract students to study the subject more deeply.

Many students are not interested on the subject that needs a lot of reading and memorizing the facts. For this project, this courseware is going to be an alternative platform for student to study without using their textbook and increase their interest to study in a very fun and interactive way that are rich of multimedia elements. All the syllabus on the textbook will be include to this courseware. Student also can do revision by doing the exercises in that courseware.

At the end of this project, all the information gathered will be analyze and implement to a learning courseware to support the research of this project.

1.2 Problem statement

The increased use of technology is become more widely among people. Technology is also used in education which aims to convey information effectively to student. Most of the subjects in school were taught manually by using textbook provided by government. This learning process takes time for teacher to teach the student and they also need to be creative in class to attract students love the subject very much.

History subject is a subject that needs lots of reading and memorizing. Most of students are not interested to study this kind of subject compared to others. Besides, student hardly to remember all the information because of the unattractive content inside their textbook cause them to get sleepy when reading. Lack of additional resources in interactive and fun way of learning becomes a major problem for student to study this subject.

1.3 Objectives

Below are the objectives of this project of developing the PT3 Sejarah courseware:

- i) To investigate on the instructional design of a courseware for history subject
- ii) To design and develop interactive PT3 Sejarah Courseware based on recommendation instructional design
- iii) To evaluate the user acceptance of the courseware

1.4 Scopes

In this project the scope which is history subject in secondary school who are in form one (1), two (2) and three (3) will be focus on the target audience and the content.

1.4.1 Target Audience

This PT3 Sejarah courseware is targeting to secondary student in form 1, form 2 and form 3 students which are going to take the PT3 examination in history subject.

1.4.2 Content

This project was divided into three (3) parts which are three (3) menu covered the syllabus of the subject in each form “*Tingkatan 1*”, “*Tingkatan 2*” and “*Tingkatan 3*”. These three (3) menu content will provide an interactive note for the user to study the subject. The other two parts of menu are about the exercises and activity, “*Latihan*” and “*Aktiviti*” where the user can answer the question provided and play the cross word.

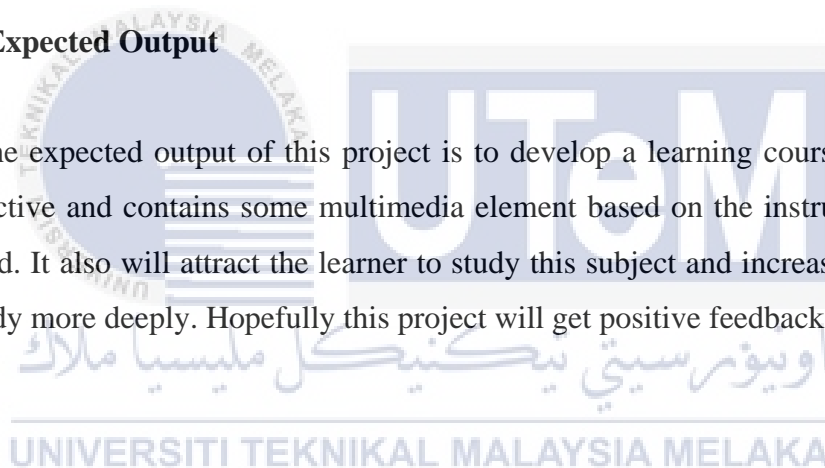
1.5 Project Significance

PT3 Sejarah courseware makes learner become more interest to study history subject and increase their understanding and memorizing time. This courseware helps to increase the learning experience and proved that the history subject will become one of the favorite subject to learner in school.

Besides, this project makes the courseware as another resource for student to study using their computer or tablet.

1.6 Expected Output

The expected output of this project is to develop a learning courseware that are interactive and contains some multimedia element based on the instructional design studied. It also will attract the learner to study this subject and increase their interest to study more deeply. Hopefully this project will get positive feedback from the user.

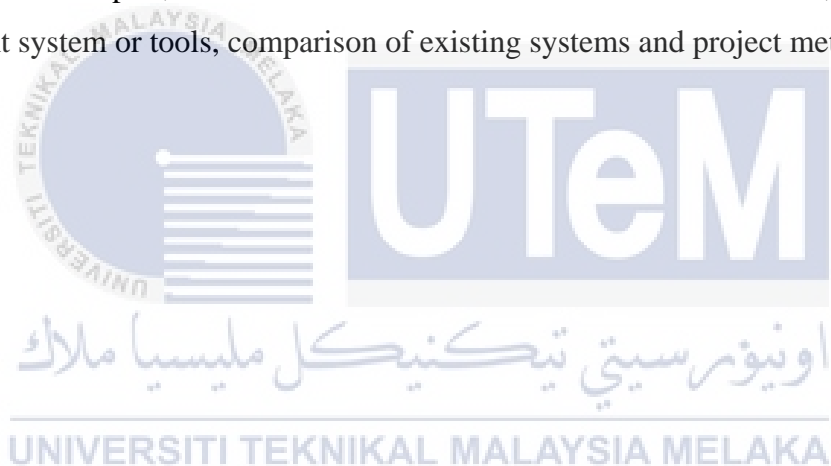


1.7 Conclusion

This chapter explains an overview of the project about the learning courseware for students who are taking the history subject in school. Explanation about the project will do and the advantage of the courseware was explained in the project background.

In the problem statement, it was stated about the problem of the users on study process in this subject and the objective of the project was found based on the problem statement findings. Next, at the scope part was discussed about the target user and the content of this project. Lastly, from all the information explained, the expected output is decided.

In the next chapter, we will discuss in detailed about literature review, area of study, current system or tools, comparison of existing systems and project methodology.



CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter explains about the literature reviews from the previous project or findings that are related with this project. A literature review is an evaluative report of information found in the literature related to the selected area study. The findings can be done through the articles researched and comparison of the case study. Beside, this chapter discusses about the project methodology being used in the project. Selected methodology is very important in helping to accomplish the project successfully. List of project and software requirement also provided in this chapter.

2.2 Area of Study

2.2.1 Instructional Design

Instructional design is a systematic design of planned learning experience. In order to develop a learning courseware for students, instructional design is important things that need to be consider. Instructional design's goal is to guarantee the quality of online or technology-based instruction (Nuttaphong & Taminee, 2006). Therefore, it should be able to facilitate, promote and inspire deep learning experience to the learners through the engaging use of educational technology such as courseware. The technology used should provide support of training and instructional design (Nuttaphong & Taminee, 2006). Besides, it is a technology for development of learning experience and environment which encourage the acquisition of specific knowledge and skill by students (Merrill, Drake, Lacy, Pratt, 1996). Based on that article, it stated that instructional design may be thought as a framework for developing modules and lesson that:

- increase and enhance the possibility of learning
- make the acquisition knowledge and skill more efficient, effective and appealing
- encourage the engagement of learners so that they learn faster and gain deeper knowledge of understanding the subject

As Burgstahler suggest, the design of instructional materials and activities should 'make the learning goals achievable by individuals with wide differences in their abilities to see, hear, speak, move, attend, organize, engage and remember' (cited in Elias, 2010). Therefore, instructional design provide framework of learning process and mediates between the educational constructs and the learners.

In line of developing an educational technology like courseware, developers need to know the method and understanding on the effect to the learners either it give the impact of learning experience or not. There are three (3) types of learning

strategies in Instructional design which are organizational, delivery and management (Reigeluth, 1983):

i. Organizational

This organizational strategy stated that the lesson may be broken down into many levels that are properly arranged and sequenced.

ii. Delivery

Delivery is means as communicating and transferring a learning process to the learners. Delivery strategy is concerned with the decisions that affect the way in which the information are delivered to the learners. The methods of delivery are:

- Social learning and social media
- Classroom
- eLearning
- Courseware
- mLearning (mobile learning)

iii. Management

A management strategy is the decision and processes that allow students to interact with the learning activities in order to enhance the learning experience, increase their knowledge and skills.

There are many types of instructional design models that can be used as a guide to develop learning application technology. The instructional design models are ADDIE Model, Gagne's Nine Events of Instruction Model and Bloom Taxonomy Model.

ADDIE Model

ADDIE model is a way that helps instructional designers, content's developer, or even teachers to create an efficient, effective teaching design of any instructional product (Nada, 2015). Figure 2.1 shows the phase that involve in ADDIE Model.

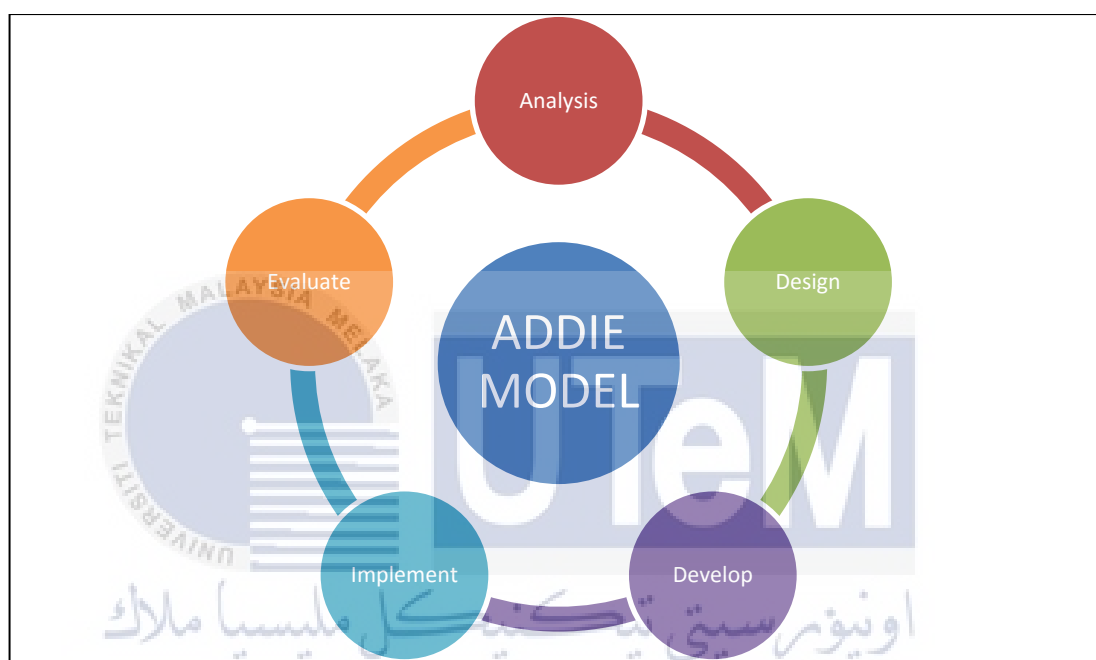


Figure 2.1: ADDIE Model phase

1. Analysis phase

This stage is the most important phase during the process. Instructional designer need to analyze four (4) things which are learner, develop instructional analysis, create instructional goals and analysis's learning objective. Designer need to identifies and study about the learner in terms of level, skills and needs. Besides, in order to develop instructional analysis, designer will start to write the important steps and details that need to achieve the goals. For example, designer need to know what is the learner going to learn in the courseware. Next is creates instructional goals. Designer needs to identify the goal for the instruction. In this part designer need to know what they want learner to learn in the course. Cleared and specific

goals help to create an effective instructional design of the courses. Analysis learning objective wants to know about learner behaviour or act toward the instructional product. Designer should identify what learner able to do after instruction finished.

2. Design phase

Design phase is about applying the instruction in the instructional product. This stage want to identify how the design can really be effective in facilitate and helps learner in using the product. All the interaction applied in the product should be understood by the learner based on the instruction provided.

3. Development phase

This stage depends on the quality of analysis and design phase. This is very important as it will make the development process easier. Developer will integrate the technology with the source or education material collected. This part involve the process of development material of courses, run through the project design and pre-test to expert on the design of the product. The pre-test result could help developer to identify the strength and weaknesses of the product and help to improve the quality of the product itself.

4. Implementation phase

Implementation process is whereby the transformation of plan into action. There are three (3) steps in this phase which are training the instructor, prepare learner and organize learner environment. For the first step, developer has to train the instructor of the product such as teachers. Teachers will be introduced about the product on materials, course objectives, activities and others. Instructor need to understand the product before it passes to the students. Next, developer need to prepare the learner of the product. Before it starts, developer should know the learners have all the material, knowledge and requirement needed by the product. Organizing the learning environment should be done in this stage. Preparation of the location and setup of the environment should be perfect in order to avoid from any issues of deliverable.

5. Evaluation phase

Evaluation is the final process in ADDIE model. It is very important to evaluate all steps to make sure the goals achieved in term of instructional design applied and the requirement needed from the learner. First strategy in evaluation part is one to one formative evaluation which is the evaluation process done after the product been tested to students. Some of the questions about the effectiveness of the product going to be ask to the learners. Second is small evaluation group, this strategy is wants to identify the effectiveness and achievement of changes made from one to one stage. This stage will be more effective if the learner know a little bit on the subject that going to be discussed with them. Evaluation has two types which is formative evaluation and summative evaluation.

Gagne's Nine Events of Instruction Model

Gagne's Nine Events of Instruction is an instructional design model proposed by Robert Gagne. This process explains about the behaviourist approach to learning, with the focus on the outcomes of instruction or training. Figure 2.2 shows the model of Gagne's Nine Events of Instruction Model:

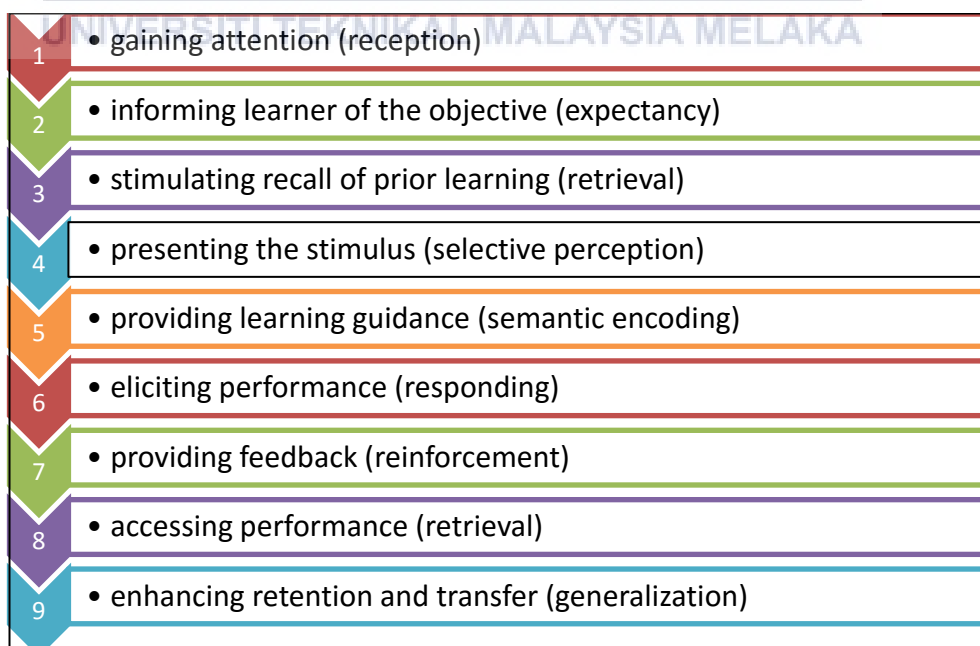


Figure 2.2: Gagne's Nine Events of Instruction Model

These events should satisfy or provide the necessary conditions for learning and serve as the basis for designing instruction and selecting appropriate media (Gagne, Briggs & Wager, 1992).

1. Gaining attention (reception)

At the beginning of learning process, this step is the important step to be made to get the students attention. For example, ice breaking session between teacher and student and introduction of a montage.

2. Informing learner of the objective (expectancy)

Letting student know the objectives of their learning session is a best way to make students focus in class. Well prepared learning objectives can assist in student performance of study and make it more organized.

3. Stimulating recall of prior learning (retrieval)

Stimulate what student had learnt or experienced before with the new information they are going to learn also can help them to recall back and increase their memory. For example, asking question about the topic discussed earlier.

4. Presenting the stimulus (selective perception)

Plan a variety of presentation style and lesson to helps the effectiveness of student learning process. Show the effective and efficient instruction in a meaningful way and also provide the example after demonstration process occur.

5. Providing learning guidance (semantic encoding)

Provide guidance to students in their learning process such as uses of analogies, graphics and pneumonic in order to help student to remember the facts. Teacher also can show demonstrations to help give real-life example to students.

6. Eliciting performance (responding)

Allow students to participate doing the experiments and activities towards the new skills that they just learn in class. This could help to confirm the understandable of the students.

7. Providing feedback (reinforcement)

Provide feedback to the learning after they had finish or submit a task. Feedback sometimes not brings happiness towards the learner. But, if it is done right it provides great learning opportunity and will increase student to learn more.

8. Accessing performance (retrieval)

Accessing performance let student know how well they have been able to achieve the objective of learning. This can be done by providing quizzes or tests.

9. Enhancing retention and transfer (generalization)

This is to help student develop expertise, student has to internalize new knowledge. Methods that can be use in this step are uses of metaphor generate example and create concept map.

Bloom Taxonomy Model

Bloom taxonomy is created to promote higher forms of thinking in education and expressing qualitatively different kinds of thinking. There are three (3) domains of learning in this model. The domains shows in the figure 2.3

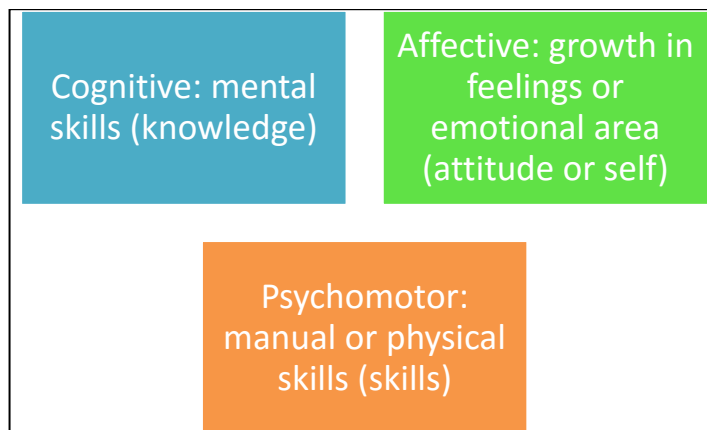


Figure 2.3: Bloom Taxonomy Model

1. Cognitive

Cognitive is defined as learner's ability to process the information in a meaningful way. The categories of this stage are shown below:

- i. Knowledge
- ii. Comprehension
- iii. Application
- iv. Analysis
- v. Synthesis
- vi. Evaluation

2. Affective

Affective is learner's attitudes and feelings that are come from the result of learning. The categories of affective are listed as below:

- i. Receiving
- ii. Responding
- iii. Valuing
- iv. Organizing
- v. Characterizing

3. Psychomotor

Psychomotor is the ability of learners to use the motor skills to learn. The categories of psychomotor are shows as below:

- i. Perception
- ii. Set
- iii. Guided response
- iv. Mechanism
- v. Complex over response
- vi. Adaptation
- vii. Origination

2.2.2 Courseware

Courseware is a computer program or educational technology designed in educational or training course. This computer program is one of the technologies that help in learning process for students instead of learning in traditional way in the classroom. Courseware can increase interest to student in their study. The design of courseware also gives the impact to the learners. According to Nuttaphong and Taminee (2006), there are eight (8) principles in designing eLearning courseware:

1. **Suitability content** - the content of the courseware are broken to smaller units, models or topic depends on the type of courses.
2. **Easy Access to the Courseware** – Learner can access the content of the courseware in each unit that has been organizing in sequence or levels in order to make their study process easily and consistent.
3. **Logical Presentation of Content** – The content is arranged from basic to advance, from simple to complex. The students could see the contents before they start their learning process.
4. **Full Multi-Media Supports** – educational technologies should include multimedia elements such as picture, audio and video to make the learning process more effective and meaningful to students.

5. **Availability of knowledge base or knowledge center** – all the knowledge based information for both instructor and students are collected in the database system for easy access.
6. **Communication channels**
7. **Provision of activities or assignment with feedback** – activities or assignment should be providing in the courseware.
8. **Provision of continuous evaluation** – the learning technologies should provide evaluation activities such as quizzes and exam.

Design of courseware need to follows some qualities to create learning efficiency and a course that is easily and efficiently delivered to learners. Therefore, the qualities that mentioned are based on the article findings. According to Elias (2010), he has identified eight (8) universal instructional design principles that apply to education:

1. **Equitable use** - useful and accessible design for people of diverse abilities and geographical habitats.
2. **Flexible use** – the learning design should be suitable for learner in a wide range of abilities, schedules and levels of accessibility.
3. **Simple and intuitive** – easily understood to the learners and easily to get the experience of learning.
4. **Perceptible information** – design features are easily communicated and understand.
5. **Tolerance for error** – ambiguity of use is minimized.
6. Low physical and technical effort – the design can be easily to understand and use.
7. **Community of learners and support** – to achieve the interaction and communication among user.
8. **Instructional climate**

2.2.3 Multimedia study in education

Multimedia is content that computer information present through combination and integration between text, graphics, sound, video and animation. In education, multimedia technology can provide effective results in teaching and learning (Mohd, Nor, Mohammad, Azlan, 2013). Therefore, the multimedia elements need to be concerned in the process of development the courseware in order to achieve the effective result in learning process.

The combination of education and multimedia can create the learning experience more engaging and meaningful to the learners. Transferring the traditional learning to an entertainment education that use educational technology also will make the learning process more fun and interesting to students.



2.3 Existing System

There is lots of educational courseware on the market now. However, each of the courseware has different functionality and design as well. Three of the courseware were chosen from the market and was analyze in order to understand the requirement of PT3 Sejarah courseware development. The chosen existing courseware were “*Sistem Pengurusan Pembelajaran*”, “iLearnAce” and “Score A Programme”. The analysis and the comparison between these three existing system will be describe deeply in the next session.

a. Sistem Pengurusan Pembelajaran - (SSP) LMS: Educational Courseware

This educational courseware can be found from the Ministry of Education Malaysia website. The presence of this courseware is to provide learning sources for students in Malaysia to get the notes of their subject in school. Student can use this

courseware for their learning purposes. They can learn each of the topics that are provided in that courseware. Student can also take an exercise after they gone through all the notes. This courseware has some weaknesses. The narrator voice was not energized and users will tend to use it just a minute because of sleepy. Besides, the interface design and the arrangement of content were not attractive and it is look too formal. Figure 2.1 shows the screenshot of “*Sistem Pengurusan Pembelajaran*” courseware.



Figure 2.4: Sistem Pengurusan Pembelajaran courseware

a. iLearnAce.com

iLearnAce is an interactive portal created specifically to help students and teachers in learning and teaching process. In addition, this interactive portal connects between students, parents and tutors in one platform. iLearnAce provide many interactive and interesting content such as notes, mind map, assignment and videos. The users are able to use this portal as their learning sources. Some of the weaknesses of this portal were identify. Students have to register as member in order to access the portal and students need to pay if the trial session has expired. Besides, students must have an internet access to access the portal. Figure 2.5 below shows the screenshot of iLearnAce portal.



Figure 2.5: iLearnAce

b. Score A Programme

Score A Programme is an interactive learning method based on output government syllabus which has been proven to help students prepare for exam and achieve A. This program helps student in their study. Students can increase their knowledge and understanding using this Score A Programme. They also can do revision through this program. This will increase their interesting on study. This interactive learning page has some weaknesses. Students have limited access to enter the portal if they are not register. Besides, students must find internet access in order to access this Score A Programme. Figure 2.6 shows the screenshot of Score A Programme portal.

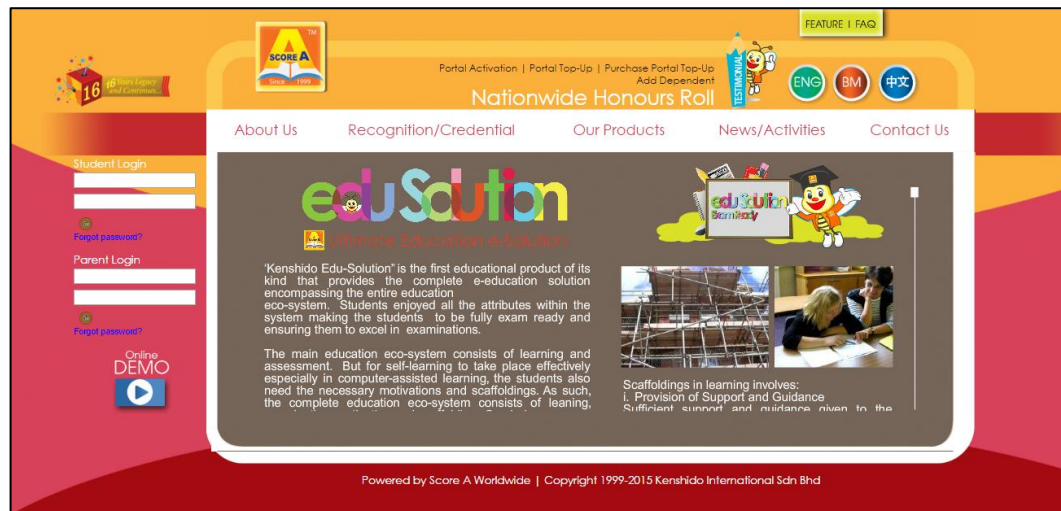


Figure 2.6: Score A Programme Portal

2.3.1 Comparison of Existing System

The purpose of the comparison between these existing systems is to analyze the differences of those systems in term of functionality, interactivity and multimedia elements that used in each website. Table below shows the comparison of existing system.

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Table 2.1: Comparison of existing system

	Sistem Pengurusan Pembelajaran	iLearnAce	Score A
Platform	Website	Website	Website
Video	Yes	Yes	Yes
Cleared sound	Yes	Yes	Yes
Attractive image	No	Yes	Yes
Attractive font and text	No	Yes	Yes
User	All Malaysian student in school	Student who enroll the subject provided	Students parents and tutor
Instruction	Yes	Yes	Yes

2.4 Project Methodology

The methodology being used for this project is SCD (Sazli Content Development). There are 5 main phases that are stated on the methodology. This methodology helps to smooth out the development process and make the project follow according to the schedule. The use of this methodology also helps developer to practice good content development methodology and minimize the problem during development process. Time taken in developing the courseware can be minimized.

2.4.1 Product Development Methodology

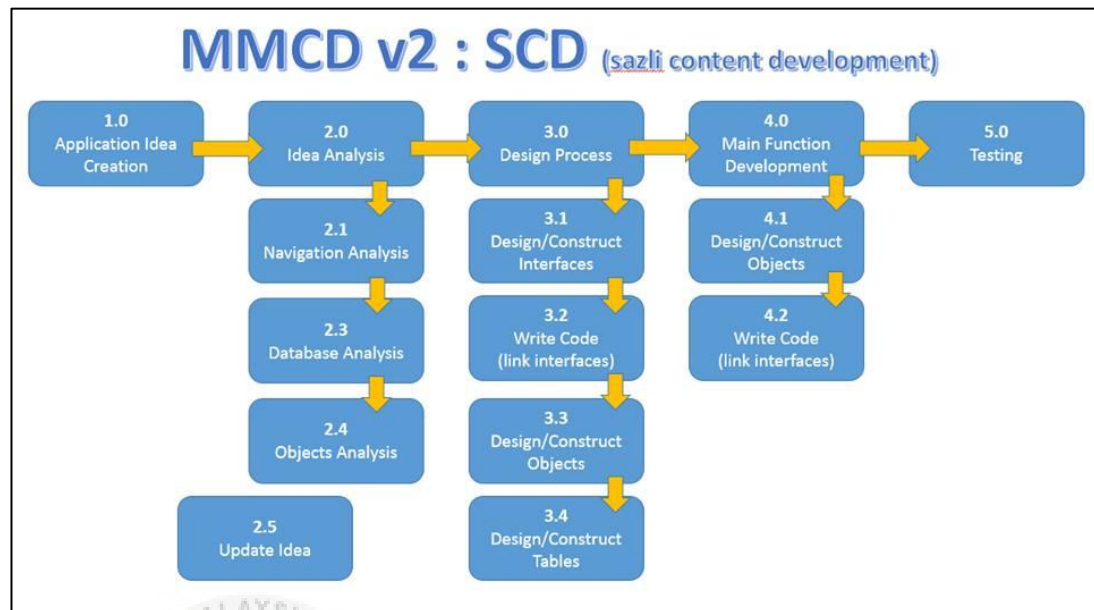


Figure 2.7: Sazli Content Development

The phases in the methodology are:

- i. Application idea creation
- ii. Idea analysis
- iii. Design process
- iv. Main function development
- v. Testing

Phase 1.0: Application idea creation

At the beginning of this project, I start design and develop my courseware by preparing a checklist as shown in the table below.

Table 2.2: Checklist

Item	Description
Type of application	Courseware: PT3 Sejarah Courseware
Target device	Computer or tablet
Target user	PT3 student (Form 1, 2, 3)
Application setting	<ul style="list-style-type: none"> • Adobe Captivate 6 • OS: Windows 10 • Resolution: 1024 x 672
GUI	<ul style="list-style-type: none"> • Tingkatan 1 button • Tingkatan 2 button • Tingkatan 3 button • Latihan button • Aktiviti button • Seterusnya button • Kembali button • Padam button • Hantar button
Image	Topics images
Video	N/A
Audio	Button clicking
Application synopsis	Learning courseware where user will use for study purpose in history subject that are in interactive and fun way.

Phase 2.0: Idea Analysis

There are 3 sub phases in the idea analysis which are navigation, database and object analysis will be include in the process of making the courseware. The idea analysis was achieved after all it subs phases are complete.

Phase 2.1: Navigation Analysis

This part defines the navigations applied in the courseware. Some interfaces of the PT3 Sejarah courseware is shown below.



Figure 2.8: Home screen

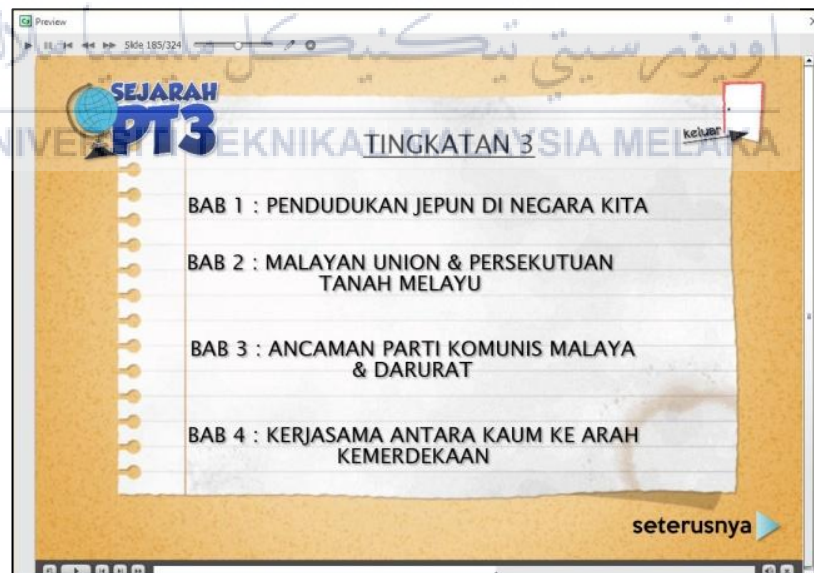


Figure 2.9: Topic page



Figure 2.10: Content page

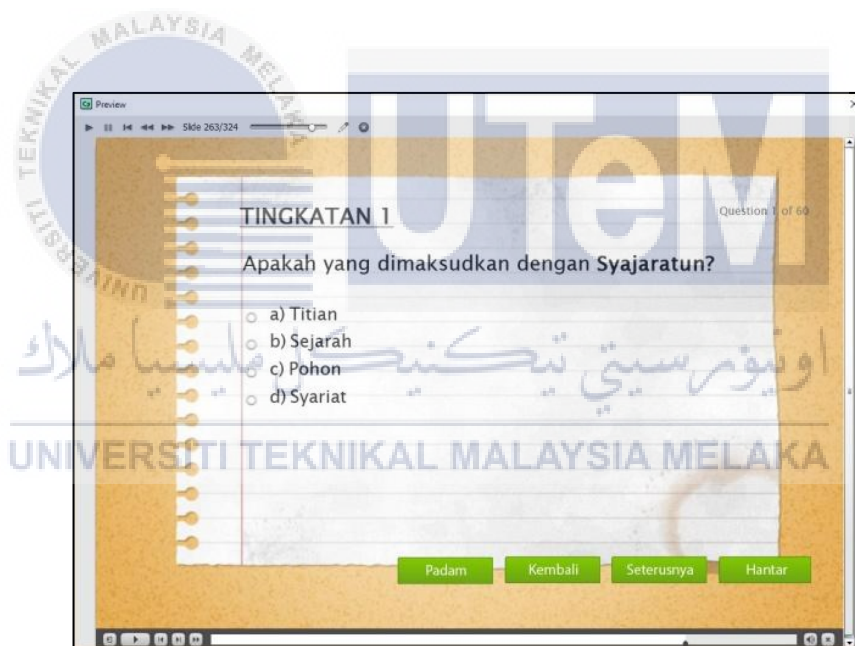


Figure 2.11: Latihan page

Phase 2.2: Database Analysis

The database analysis identifies the information that being put in the courseware.

Phase 2.3: Object Analysis

Table 2.3: Object analysis

Object	Description
	Home button
	Menu button
	Navigation button
	Submit button

Phase 3.0: Design Process

This phase describe about the design process while developing this project. Interfaces design was conducted as a layout of the courseware. There are 4 subs phase:

- i. Design or construct interfaces
- ii. Write code to link the interfaces
- iii. Design or construct object
- iv. Design or construct tables

Phase 4.0: Main Function Developments

In this courseware, the main function is applied on the navigation button that will navigate the user to the interactive learning process. The phases of inserting the function to the buttons are quite taking long time because it needs to be put on each slide that contain the button that want to be use.

Phase 5.0 Testing

The phase testing is done through the prototyping as well. Once the application completely develops, the project will exported to exe file and will be test to the target user of this project. The testing will continue until PSM 2 to improve the functionality of this project.

2.5 Project Requirement

There are several software and hardware that required in this project. This part will describe in term of software requirements and hardware requirements.

2.5.1 Software Requirement

Below are the software requirements that being used in the PT3 Sejarah courseware:

- Adobe Captivate 6
- Adobe Illustrator CS6
- Adobe Photoshop CS6
- Microsoft word 2010

2.5.2 Hardware Requirement

The hardware that is required to carry out the development process are:

Personal Laptop – ASUS A455L

Processor : Intel Core i5 2.7GHz
Memory : 4GB
Platform/OS : Windows 10
Disk : 1T

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2.6 Gantt Chart/Milestone

Gantt chart for this project will be attached at Appendix A

2.7 Conclusion

This chapter describes the findings of the literature review for this project. This part also explains about the existing system that already have in the market and the comparison between them. The methodology used for this project also was stated too. Lastly, there are part describe about software and hardware requirement for this project. In chapter 3 will describes about the analysis part. It will discuss on project requirement analysis.



CHAPTER III

ANALYSIS

3.1 Introduction

This chapter discuss about the analysis process of this project. Analysis requires the understanding of user requirements and system requirements. The analysis can be done through the observing the current system scenario or situation that occurred. The purpose of this stage is to gain more understanding in order to complete the development process of the courseware.

3.2 Requirement Analysis

3.2.1 User Analysis

To gather the data for user requirement, some of the existing system have been tested and analyzed in order to identify the elements that will be considered to put in this project. Besides, other resources from the internet and books are also be

used as a guideline to identify the element that should include to this educational courseware.

The target user for PT3 Sejarah courseware is students who are in form 1, 2 and 3 which are going to take their PT3 examination. All the elements that will be include in the courseware such as user interface, navigation button, images and sound should be suit to the target user. This interactive courseware enables student to study and enjoying the learning experience based on the created contents.

To ensure that the information are deliver effectively, the user interface design should be simple and easy to be understand among the user. Besides, some of the graphics are include to this courseware to increase students understanding of each the topics. At the end of this project, users of this PT3 Sejarah courseware are expected to get the information regarding to the history subject.

3.2.2 System Analysis

The computer or tablets are chosen to be the platform of this courseware to run. To develop this courseware, Adobe Captivate 6 as well as Adobe Illustrator and Adobe Photoshop were used. Laptop with windows 10 is needed in order to make the project successfully built and compatible with the software used.

3.2.3 Content Analysis

The courseware will begin short introduction of PT3 Sejarah courseware logo and automatically open the first screen of the product. Students need to insert their name in the input box provided. There will be a robot name, Charlie welcoming the user of at home screen. Home screen of the courseware shows user the entire main menu. User can start learning their topic by choosing the form button to start learning the topics. The buttons are “*Tingkatan 1*”, “*Tingkatan 2*” and “*Tingkatan 3*”.

Besides, each chapter has instruction that notify user what to do right after they have read the content of the page. The page will notify user at button

“*seterusnya*” which it will blink three (3) times. After gone through each of the chapter, checked image will appears to notify user that they have read the notes. Students also can take a test by clicking the “*Latihan*” button. In “*Latihan*” pages, there are a set of test that contain sixty (60) questions of all the topics. Before user start to answer the test, there will be instruction for user. Result of the exercise will be shows after student answers all questions. User can revise back all the answer from the result.

Next, if user clicks on button “*Aktiviti*”, user can plays three (3) sets of crossword puzzle. Each puzzle presents each level of study. All the questions are developed from notes provided in the courseware. So, it is important for user to go through all the notes before playing the games. All content in the courseware are developed by using Adobe Captivate, Photoshop and Illustrator.



3.3 Conclusion

This chapter analyze all the data and the information from chapter 1 and chapter 2. The current system scenario and the requirement analysis of the project provide a solution and idea to meet the PT3 Sejarah courseware objectives and create the good output of this project. In the next chapter will explain about the design phase of the project development.

CHAPTER IV

DESIGN

4.1 Introduction

This chapter will explain about the design phase of this project. Design is defined as a process developing a plan for a new product. The design of user interface plays an important role as first impressions towards the users. The preliminary design and result of the detailed design are included in this section.

4.2 Design/Product Process

Designing phase is needed before the process of implementation. This will help to smoothen the project development time. This section are describing about the design of images, icon and interface. The theme of PT3 Sejarah courseware is set close with the environment as a student which is a paper background.

4.2.1 Navigation Structure

The navigation structure of PT3 Sejarah courseware was created at the beginning of the project development in order to keep the project on track. Navigation structure ensures all the requirement of the courseware is completely identified.

The navigation starts with intro screen. After logo of the courseware appears, the courseware will assign user to the intro screen. In this part, user has to insert their name before proceed to home screen. A robot will assist you by giving instruction to insert name to input box. When user enters the home screen, a robot will welcome the user using dialog box.

This courseware contains 5 modules which cover notes (form 1, 2 and 3), exercise and activity. At the home screen, user can choose among 5 menus provided. If “*Tingkatan 1*” was selected, user will enter the page that contains the entire topic for history subject in form 1. User can choose which topic that they want to study. These steps are same if users choose the “*Tingkatan 2*” and “*Tingkatan 3*” buttons. But, the content will be different according to the topics. Next, if the “*Latihan*” button was chosen, user can take an exercise about all the topics. Users must answers all the questions and get the results.

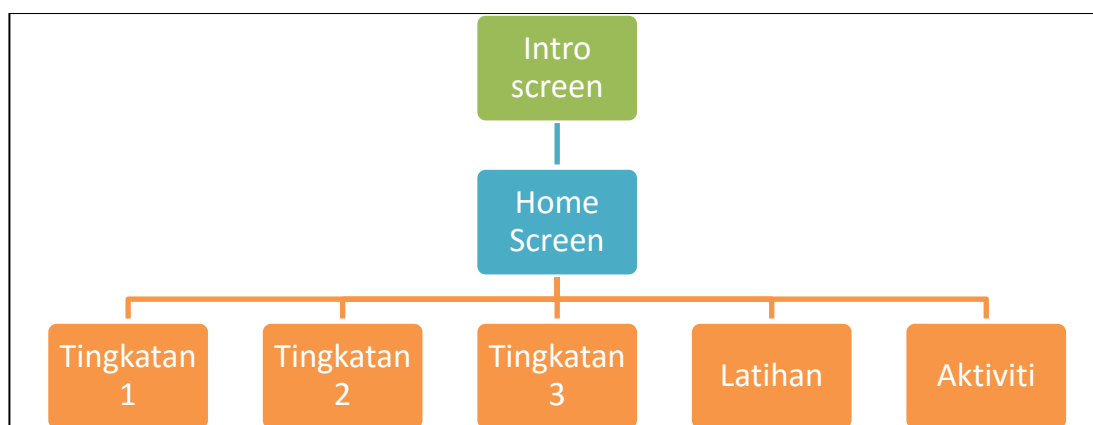


Figure 4.1: Navigation chart

4.2.2 Content Design

In development process, design phase is very important to in order to show the framework or the project. Each of the elements needs to be well designed in order to improve user experience. In this courseware, there are many object need to be design. The graphics in the courseware are illustrated and trace in Adobe Illustrator. Some of the graphics are inspired from internet and revision book. Some of the button was design too. The creation of button was done in Adobe Illustrator and other just use button provided in the Adobe Captivate itself.

The selection of the background content and colour plays important role in order to attract the interest of student to study the subject matter. The application and arrangement of wording also need to be details so that each of the pages is in consistent. A few designs and software that been use will be shown in this chapter. The elements include the images, button and icon.

Figure 4.2 until Figure 4.5 show the software used in creating graphics content of the courseware. Adobe Illustrator was used as tool to create it.

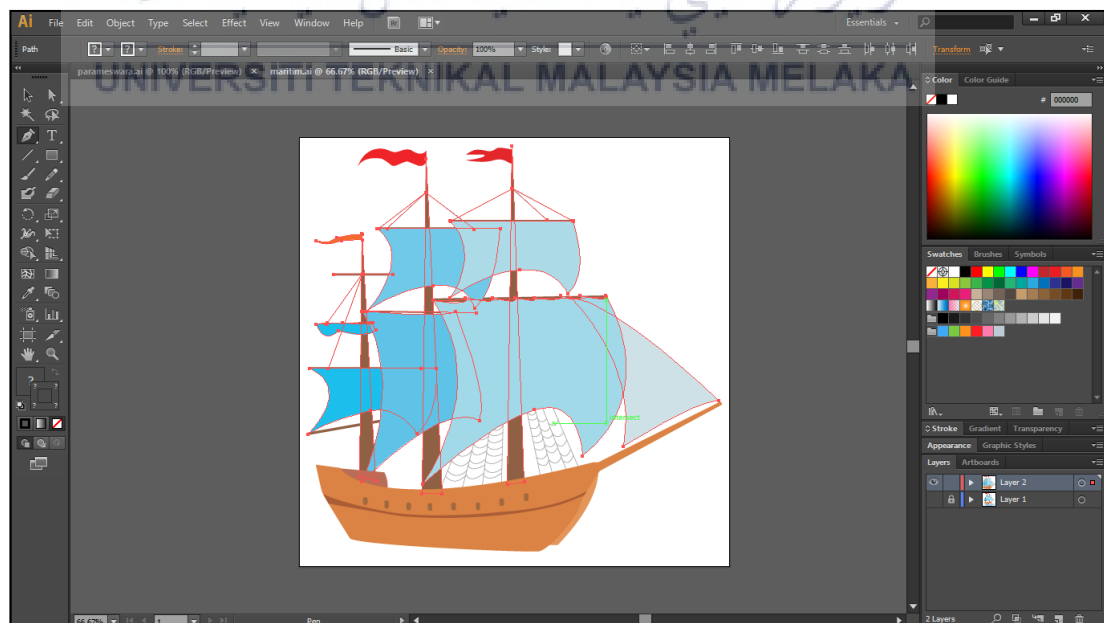


Figure 4.2: Screenshot of illustrate process of a ship

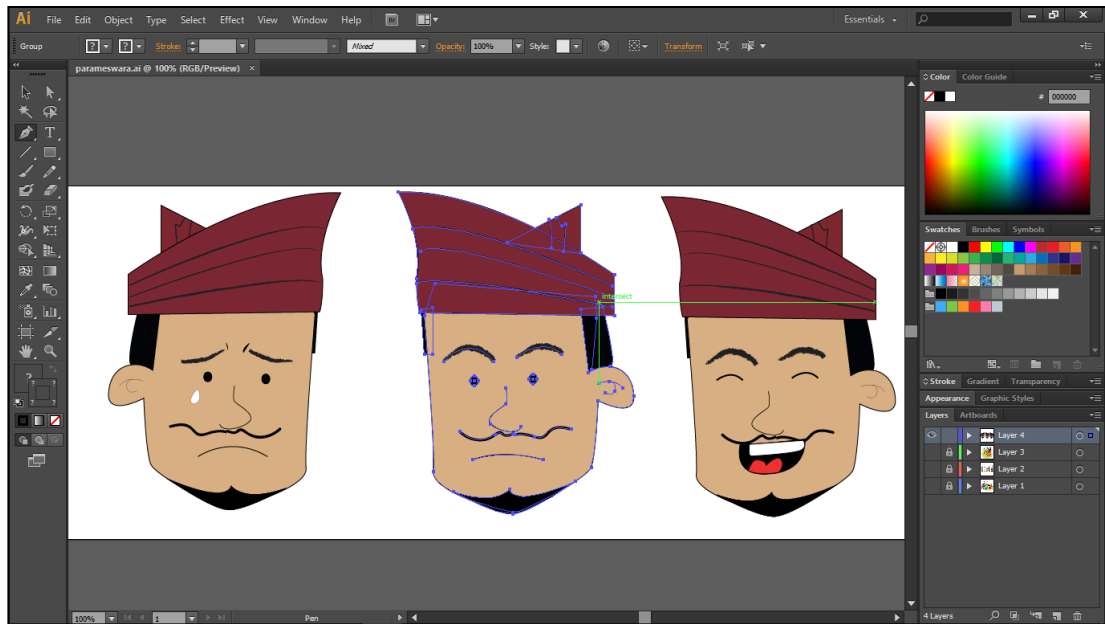


Figure 4.3: Screenshot of illustrate process of a king

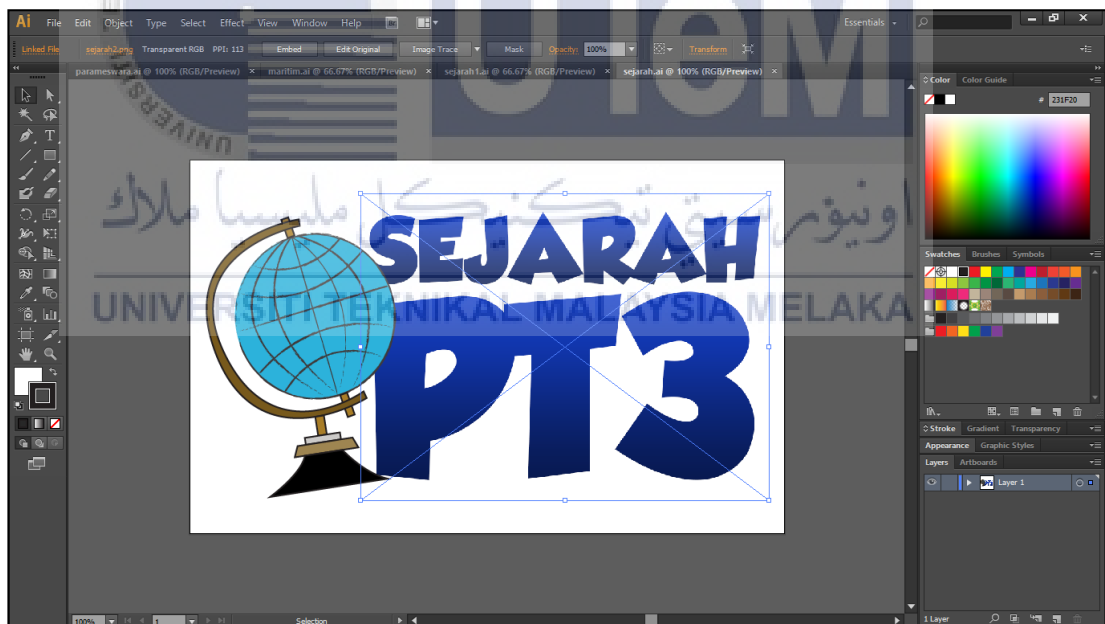


Figure 4.4: Screenshot of illustrate process of a product logo

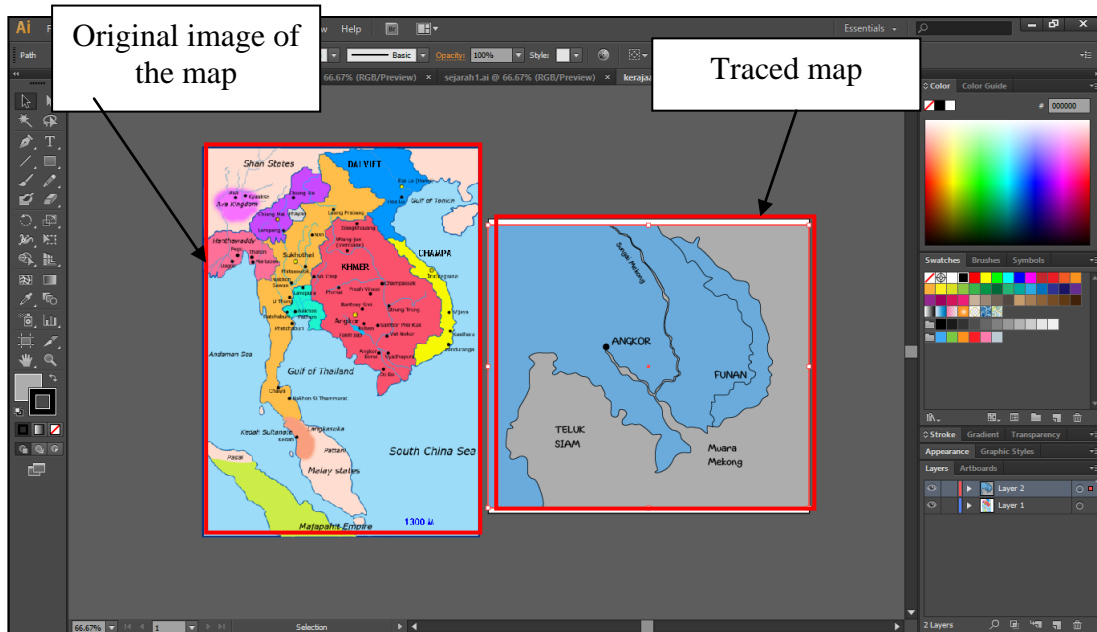


Figure 4.5: Screenshot of tracing of a map

Figure 4.6 until Figure 4.13 show the output of graphics that were illustrated in Adobe Illustrator. All the output was put in the courseware.

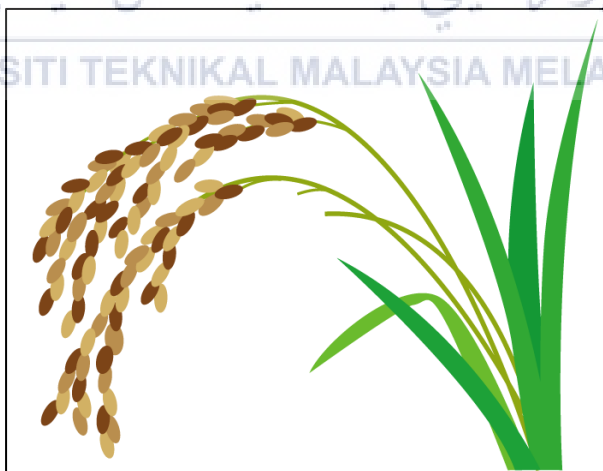


Figure 4.6: Paddy

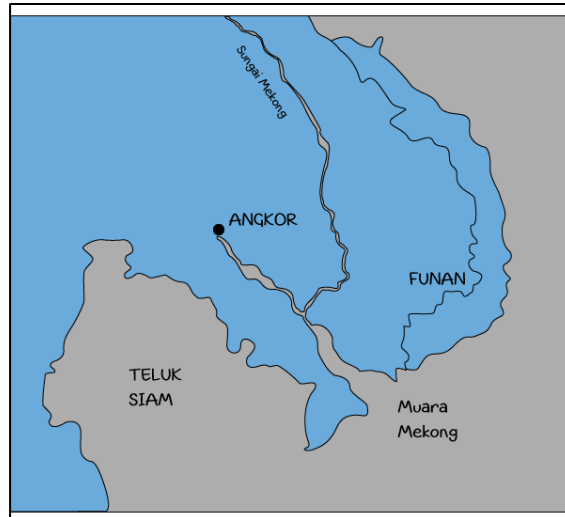


Figure 4.7: Agraria Empire

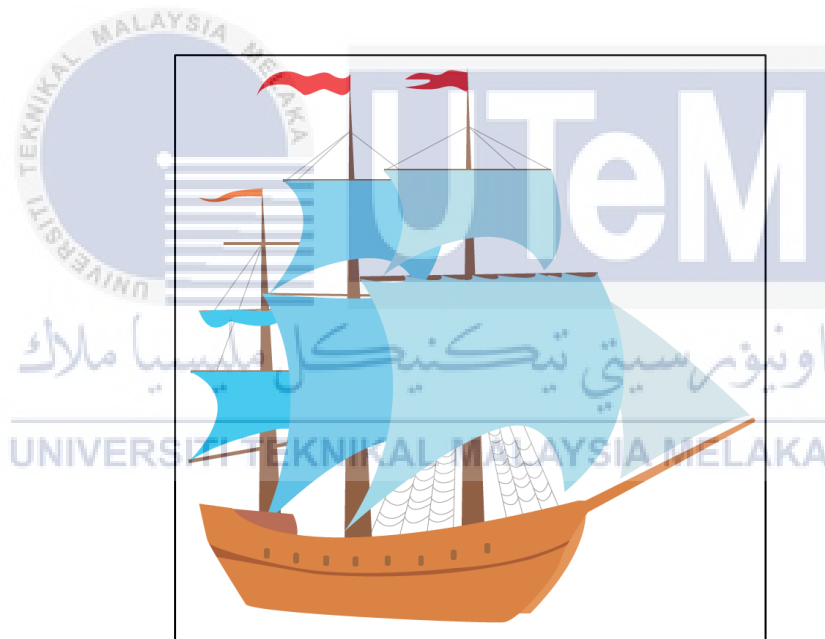


Figure 4.8: War ship

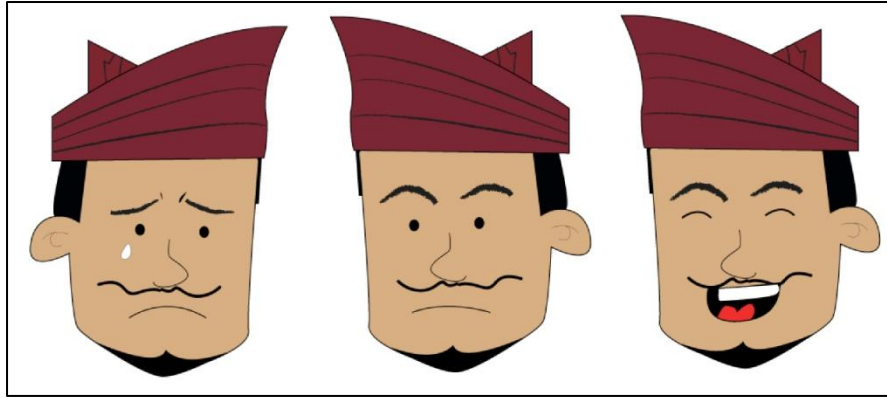


Figure 4.9: Expression of face



Figure 4.10: Layers of *Aktiviti* button

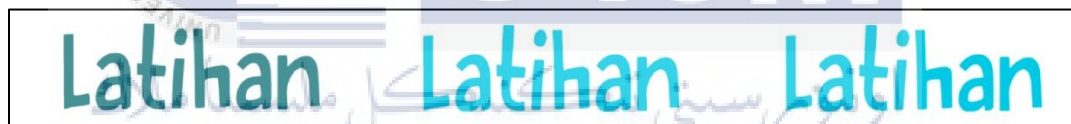


Figure 4.11: Layers of *Latihan* button

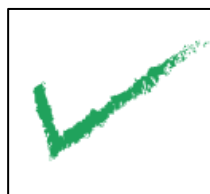


Figure 4.12: Checked button



Figure 4.13: PT3 Sejarah icon

4.3 Conclusion

This chapter has defined the process of the design phase while developing this project. The design phase starts with collection of raw multimedia elements and idea such as text, image, button and icon. The entire elements collected were integrated into Adobe Captivate which will act as the development platform for this project. Arranging the layers in the timeline was the hard parts which need high concentration and detail on it.

CHAPTER V

IMPLEMENTATION

5.1 Introduction

This chapter will discuss about the implementation of the project. This chapter provide the information about the creation of media that will be used in the project such as graphics, text and audio. Besides, the media integration will be explained in details.



5.2 Media Creation

Media creation is a production of media such as graphics, text, button and audio elements. This section explains on how each of the elements of media is created. The output of the element will be integrated to the final product of the courseware.

5.2.1 Production of Graphics

Graphics are used in this project to increase the interest of student to study the subject matter. The graphics that are included in the courseware are develop using adobe Illustrator CS6. It was inspired from internet and revision books. Some of the graphics are traced in Illustrator and others were drawn by using pen tool. The selections of colour are important to make the courseware more attractive and understandable by the user. For example, the image of king, ship and tree.

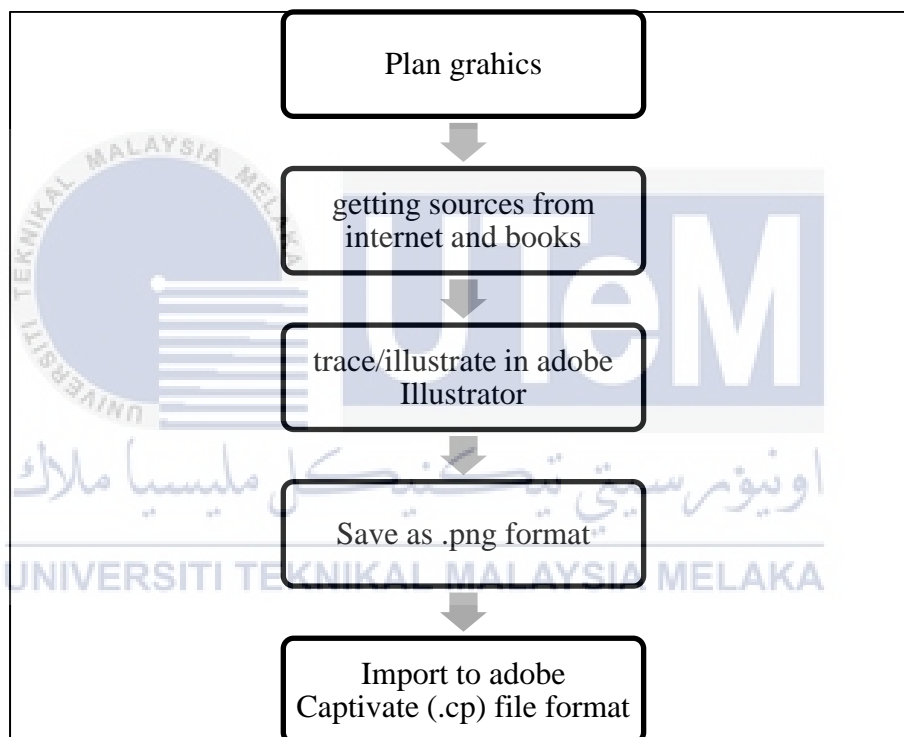


Figure 5.1: Plan of graphics production

5.2.2 Production of Text

Text is use widely in this project. This element use to deliver the information to the user. Each of the pages in the courseware includes text. This courseware use two (3) types of text which are Static Text, Dynamic text and Input Text. These types of text will be explained as below:

a) Static Text

Static text was created in adobe Captivate itself. All the information gathers was from revision book. The notes about the subject matter are delivered by text. The selection of font, sizes, colour and arrangement was decided in every pages of the courseware.

b) Dynamic Text

The used of buttons are an example of dynamic text used in this courseware. Some of the button was created from Illustrator and then import to adobe Captivate. The other button that were used in the project are provided by the adobe Captivate itself. The buttons that are created from illustrator were saved in .png format. This dynamic text is to make the project become interactive which user can click on the button to go to another page and do some other functions like submitting a test. As example, in the main page there are buttons which user can choose what they want to go through “Tingkatan 1”, “Tingkatan 2” and “Tingkatan 3”.

c) Input Text

Input text is use to capture the input text from the user. The input text that is applied to this courseware is when user has to type their names to the box given in the page. The input will be display to the next page which there is a robot calling their name. This function make user feel closer to the application that they used.

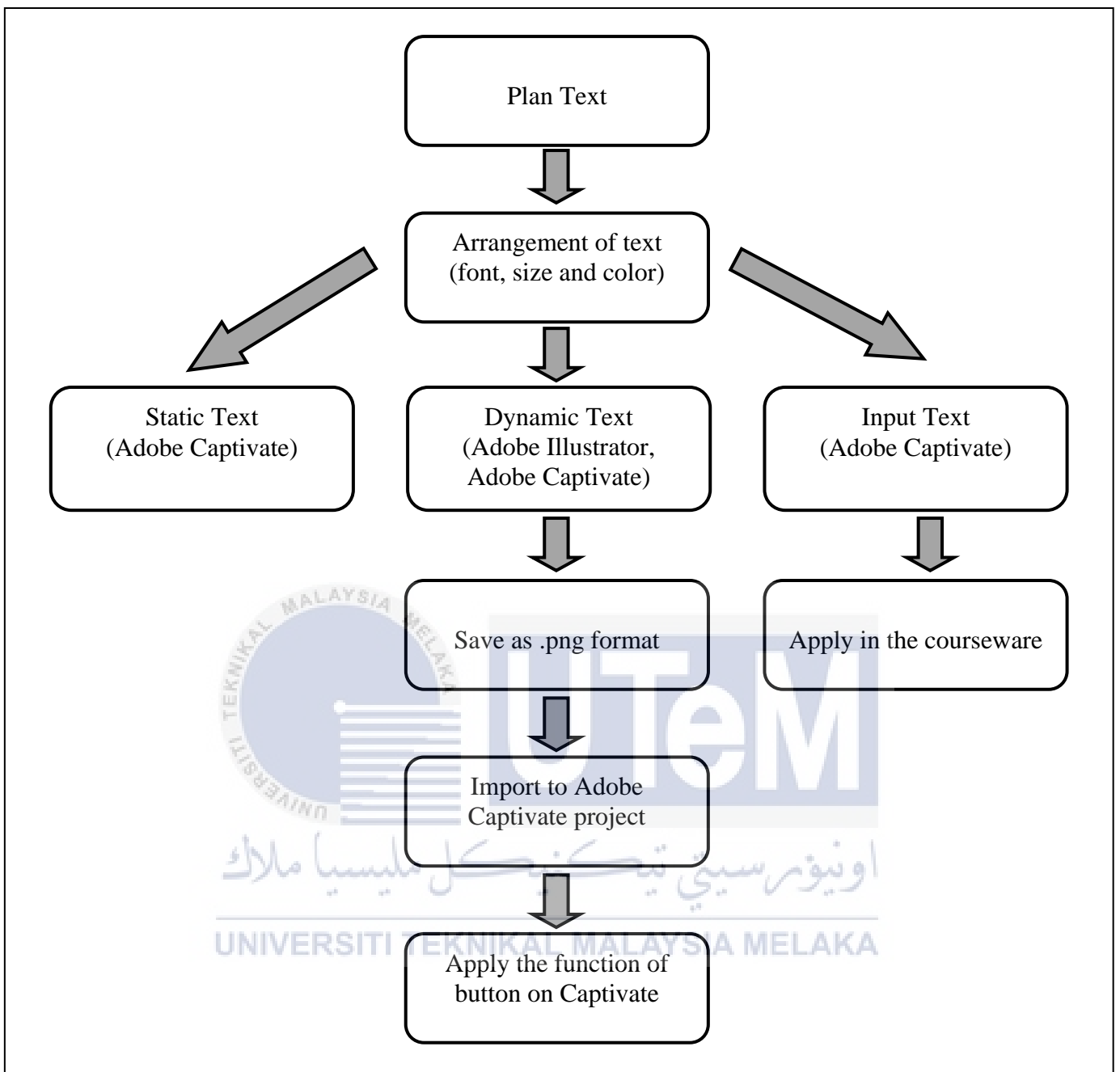


Figure 5.2: Plan of text production

5.2.3 Production of Audio

Audio was used in this courseware which are applied in introduction of the courseware and also applied to the buttons. Before the page for user to input their name displayed, the courseware will show the introduction of the logo that came in with audio. Besides, some of the buttons in the courseware contains audio if user clicks on it. All the audio can be found in Adobe Captivate itself. Adobe Captivate

provide many type of sound. The presence of audio in the courseware makes it alive and more interesting to use.

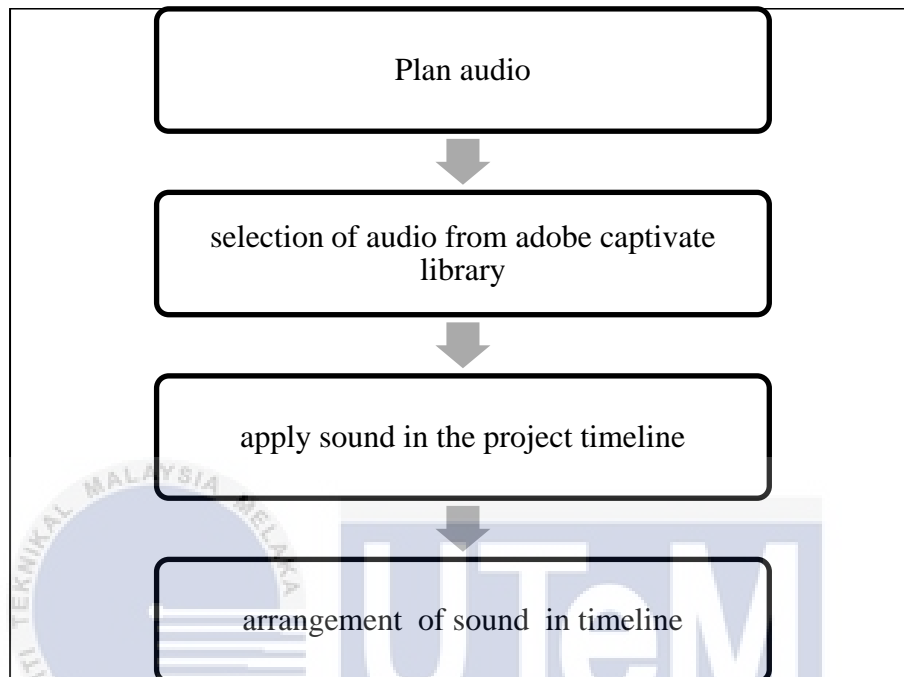


Figure 5.3: Plan of audio production

5.3 Media Integration

This part is whereby the other entire source created from other software such as adobe Illustrator, Photoshop and other were combined into one project in Adobe Captivate. The graphics that were illustrated import to adobe captivate. Arrangement of the layout of courseware is done in Adobe Captivate. Timeline is use as guide to arrange all the elements to produce an interactive courseware.

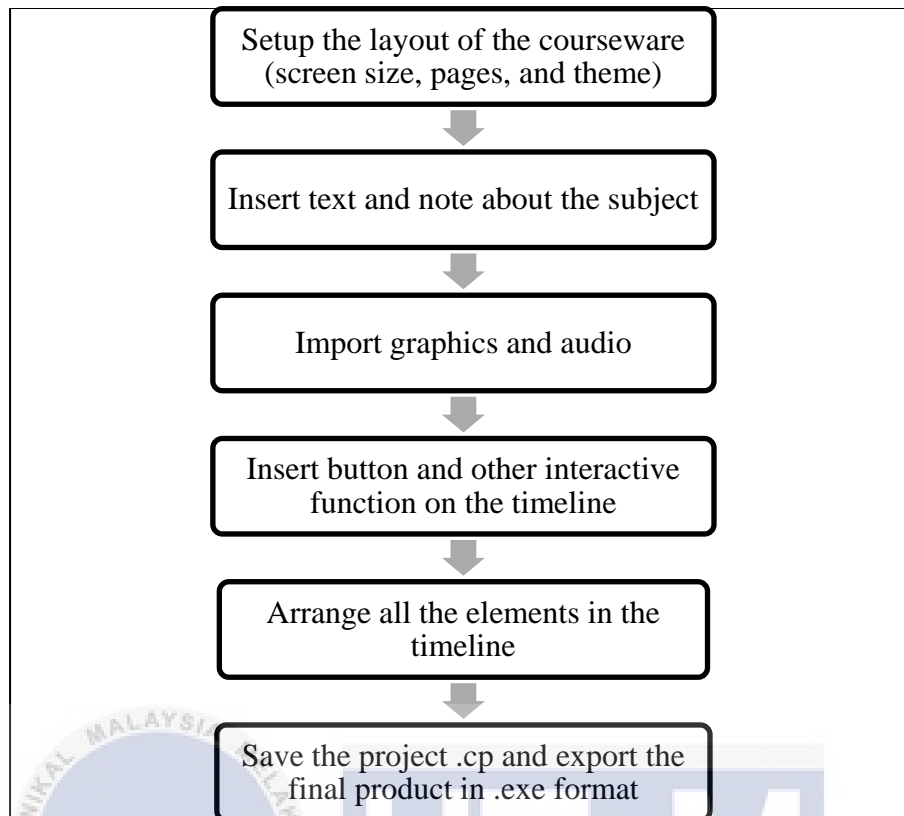


Figure 5.4: Flow of media integration process

Below are the configuration setting and the area of integration works done:

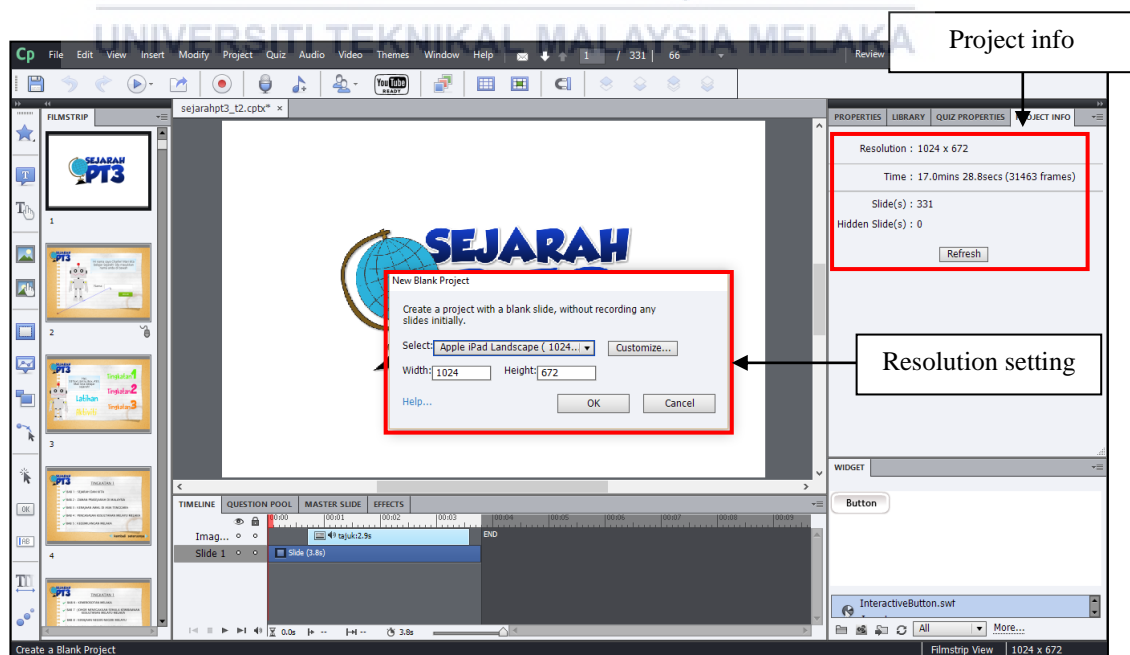


Figure 5.5: Project setting and resolution setting area

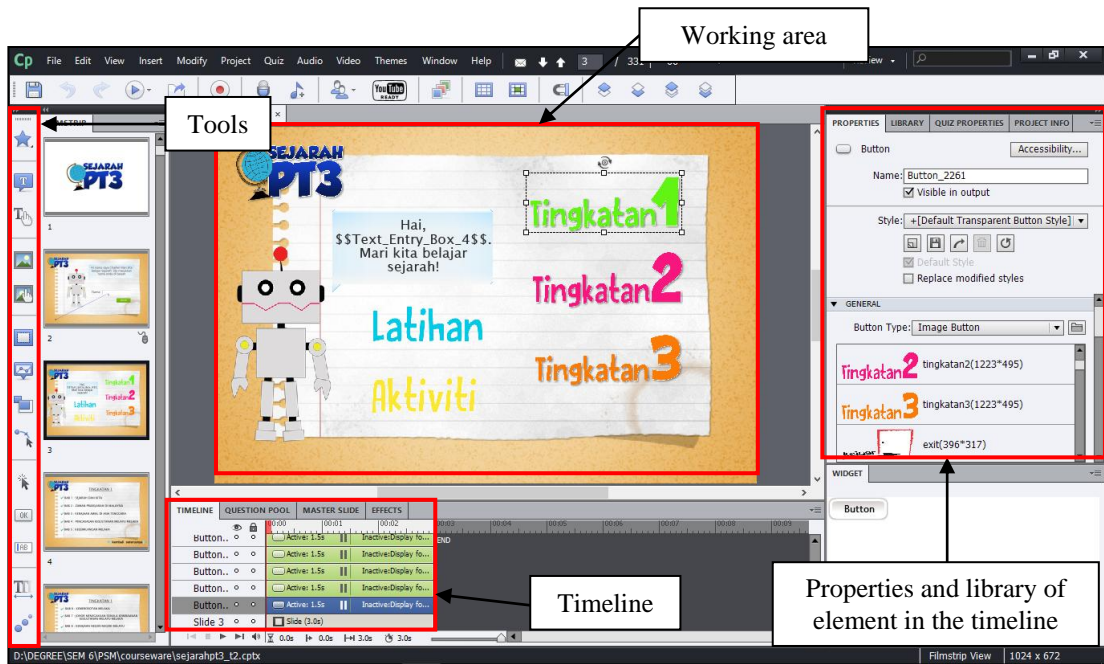


Figure 5.6: Tools, timeline, working area, properties and library of the project

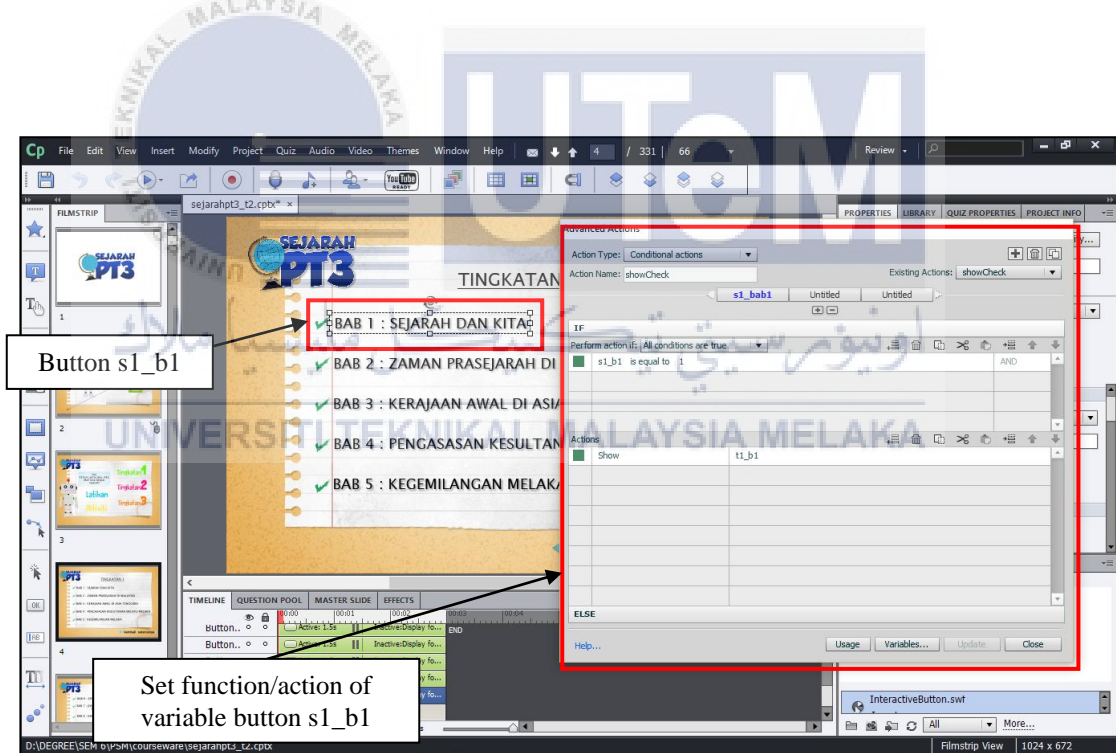


Figure 5.7: Variable setting of functionality and actions

5.4 Conclusion

This chapter has explained the implementation and integration of the project. The implementation starts from the collection of data such as notes, graphics, sound and inspiration. Most of the graphics in this project were illustrated in Adobe Illustrator. All the elements collected were import to the adobe Captivate project and combine to form a final output. Arrangements of the element in the timeline need high attention to make it synchronize with the display.



CHAPTER VI

TESTING AND EVALUATION

6.1 Introduction

This chapter will explained about the testing process towards the final output of the product. The product should be working as stated in the objective of this project. The result of testing will be evaluated and this process should pass and meet the requirement of the project. This chapter will describe in detail about test plan, test strategy, test implementation and test analysis.

6.2 Test Plan

Test plan is the most important activity for the project to ensure that the final product meet its requirements and specifications as stated in the objective of project. This part explains on test organization, test environment and test schedule.

6.2.1 Test Organization

Test organization refers to person who are involve and responsible in testing activities. The organizations are responsible to test the project function and activities. There are two (2) types of organization which are Technical Test (Alpha) and User Acceptance Test (Beta).

- **Alpha Testing (Technical)**

Alpha testing is done by the developer side organization by the tester. This part was tested to the person who had knowledge in multimedia field such as lecturers and classmates. The testing is to make sure that the courseware works well which have no error, bugs and crashes. Besides, all the function applied to the courseware should have no problem at all. Testing process is conducted using a laptop to test the functionality of the courseware.

- **Beta Testing (User Acceptance)**

Beta testing is the second phase of testing done to the target user of the project. This test is tested to the real audience of the product which are students in secondary school who are enrolling the PT3 history subject. Three (3) levels of student is selected to test the courseware which are Form one (1), Form two (2) and Form three (3). At the beginning of the testing, the students are introduced about the meaning of the courseware. Students are allowed to test the product by themselves. After they are really understands the product itself, the questionnaires are distributed among them. This activity is to get feedback about the usability of the courseware. The testing process is conducted using a laptop.

6.2.2 Test Environment

Testing environment is the start up of the testing process which is a setup of software and hardware on which of the testing is going to be run. The testing environment should be in proper and comfortable to make sure the process done well. Two (2) secondary schools are selected as the location to run the testing. The schools are Sekolah Menengah Kebangsaan Parit Bunga and Sekolah Menengah Kebangsaan Convent Teluk Intan. 10 students are selected at the first school and another 20 student from the second location to do the testing of the product.

Figure 6.1 until Figure 6.4 show the image testing process that was held in testing location.



Figure 6.1: Student from SMK Parit Bunga test the PT3 Sejarah courseware

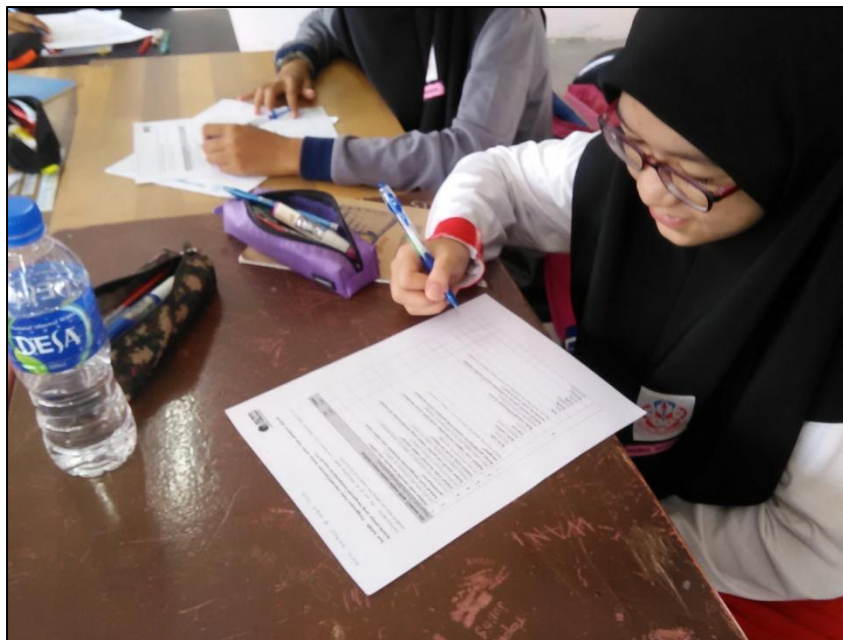


Figure 6.2: Student from SMK Parit Bunga answer the questionnaire



Figure 6.3: An Indian student of SMK Convent Teluk Intan typing her name to enter the PT3 Sejarah courseware



Figure 6.4: Students at SMK Convent Teluk Intan answer the questionnaires

Table below explains software and hardware requirement used during the testing process.

Table 6.1: Software or hardware and specification used in testing process

Software/Hardware	Specification
Laptop	Asus A455L series
Operating System	Windows 10 education
Player	Adobe flash player/ .exe file format

6.2.3 Test Schedule

Test schedule is a guideline of testing activities to ensure the testing process running according to plan. Alpha testing will be done in early stage of testing before it tested to the end user of the product. Table 6.2 shows the test schedule in Alpha Testing and Table 6.3 shows the test schedule for Beta Testing.

Table 6.2: Test schedule of PT3 Sejarah courseware

Details	Test 1	Test 2	Test 3	Test 4
User	Lecturer	Course mate and friends	Form 3 Secondary student (SMK Parit Bunga, Muar, Johor)	Form 1, 2 and 3 Secondary student (SMK Convent Teluk Intan, Perak)
Date	6 th and 8 th June 2016	9 – 10 th June 2016	20 th July 2016	1 st August 2016
Number of user	1	6	10	20
Duration	10 minutes	10 minutes	2 hours	2 hour 30 minutes
Type of testing	Alpha testing	Alpha testing	Beta testing	Beta testing

6.3 Test Strategy

Test strategy is guidelines that clarify test design and defines how the testing needs to be done. Alpha testing is done to refine the quality of the courseware and to ensure that the product works well for beta testing. At an earlier stage of the testing which is alpha testing, the process is being done by experts such as test engineers, lecturers, course mates and people who are related to the multimedia field.

Beta testing is the second phase of testing which is the product being tested to the target user. The target user for this project is students in secondary school level which are taking the PT3 History subject. For the start up of the testing process, students will be explained about the courseware itself. During the testing session, some pictures were taken as records for this project. An informal interview was done to know the students' understanding of using the product.

Lastly, questionnaires were given to the tester after they have been introduced and tested the product itself.

6.3.1 Alpha testing on Lecturer and Course Mate

This phase is done towards this project supervisor himself which is Mr. Wan Sazli Nasaruddin Bin Saifuddin and six (6) other course mates. Testers are allowed to explore the product and give comments about the product as the records to improve the quality of the product before being tested to target user. All the missing parts, lack of functionality and bad interface design were noticed by the tester. All the positive and negative feedbacks is a guideline to improve the product better.

6.3.2 Beta testing on Secondary School Student

The courseware is being tested on the target users which are in Form 1, Form 2 and Form 3 who are enrolling the PT3 history subject. Two (2) schools were selected as the location for testing. First school for testing process was held at SMK Parit Bunga, Muar, Johor and second location is located at SMK Convent Teluk

Intan, Perak. All the data from the questionnaires were recorded. Some of the students show their interest in using the product.

6.4 Test Result and Analysis

Test result and analysis is done when the data from beta testing collected. Evaluations are made from the test result. Questionnaires were given to the user during the beta testing process. Below are the questions asked in the questionnaire.

1. Do you have any computer or tablet?
2. Do you use your computer or tablet for study purposes?
3. Do you interested in history subject?
4. History subject is a boring subject in school?
5. Do you interested in reading?
6. Short notes make you more interested in reading?
7. Which learning materials that you use to make a revision? (text book, reference book, internet, interactive book/courseware)
8. Do you think that multimedia elements below help you in study? (text, graphics, audio, animation)
9. Courseware/interactive book is a computer application designed for use in an educational or training course that have an interaction between the application and users. Do you interested to use interactive book/courseware as one of the learning material?
10. Do you believe the use of an interactive book / courseware can enhance the performance of your learning?

6.4.1 Test Data from Beta Testing

There were 30 students that participated in the beta testing process. Ten (10) students were from SMK Parit Bunga and another twenty (20) students from SMK Convent Teluk intan. Set of questionnaires provided during the testing process. There are ten (10) questions need to be answered in the questionnaires. Only five (5) questions will be discussed in this chapter. The result of question will be present in form of graph or pie chart.

Question 1: Do you use your computer or tablet for study purpose?



Figure 6.5: Chart of the number of student using computer or tablet for study

Figure 6.5 shows the result of students who used computer or tablet for study purpose. This chart shows that fifty-seven (57) percent of students choose yes and another forty-three (43) percent of students choose no as their answer. Therefore, many students have their own laptop or tablet for study. This could help the usage of courseware among them as the requirement to use the product that needs a laptop or tablet.

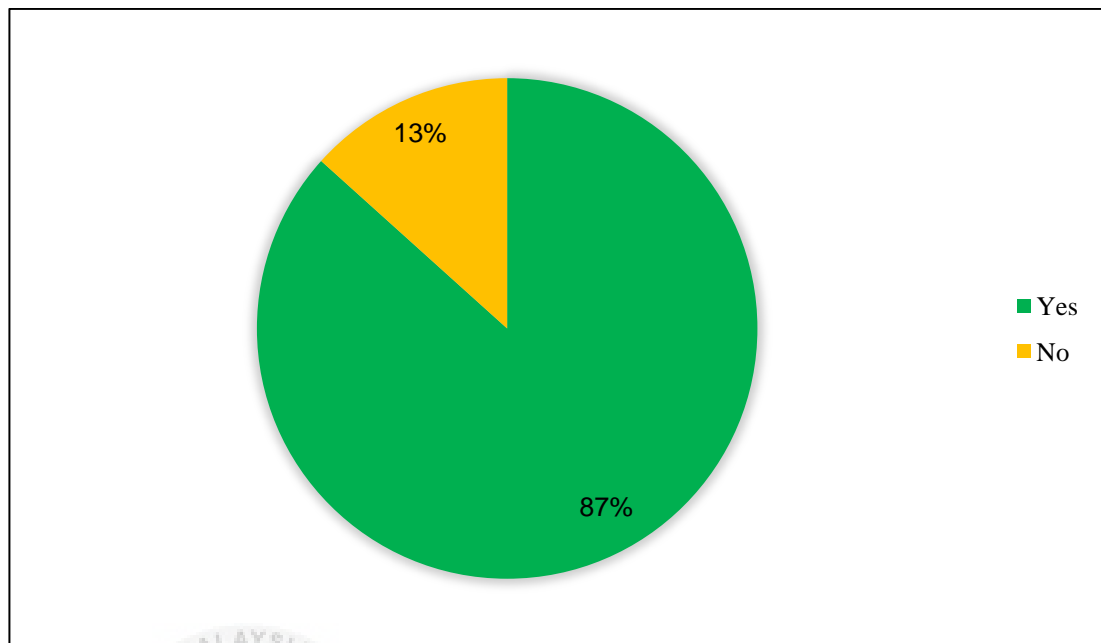
Question 2: Do short notes make you more interested in reading?

Figure 6.6: Chart of student likes to read in short notes

Figure 6.6 shows the result of students who like to read in a form of short notes. Eighty-seven (87) percent of students choose yes and another thirteen (13) percent of students choose no as their answer. This result strongly shows that student do not interesting to study the subject that need a lot of reading. PT3 Sejarah courseware are develop to increase the student to study the subject matter because it provide less text to be read compared to the textbook provided in school.

Question 3: Which learning materials that you use to make a revision?

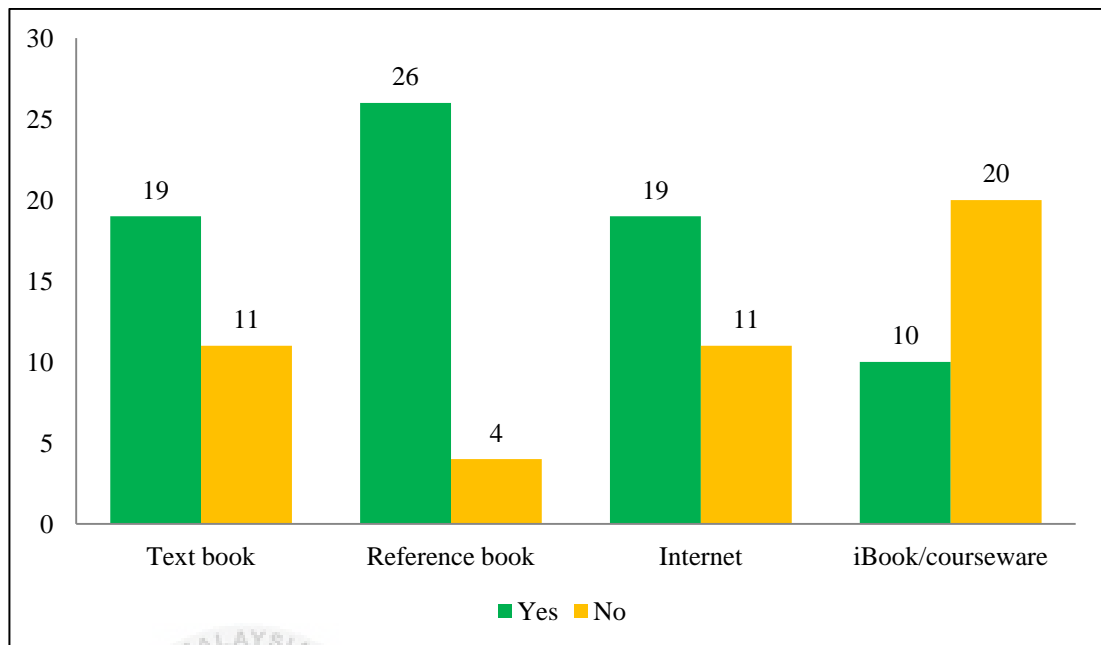
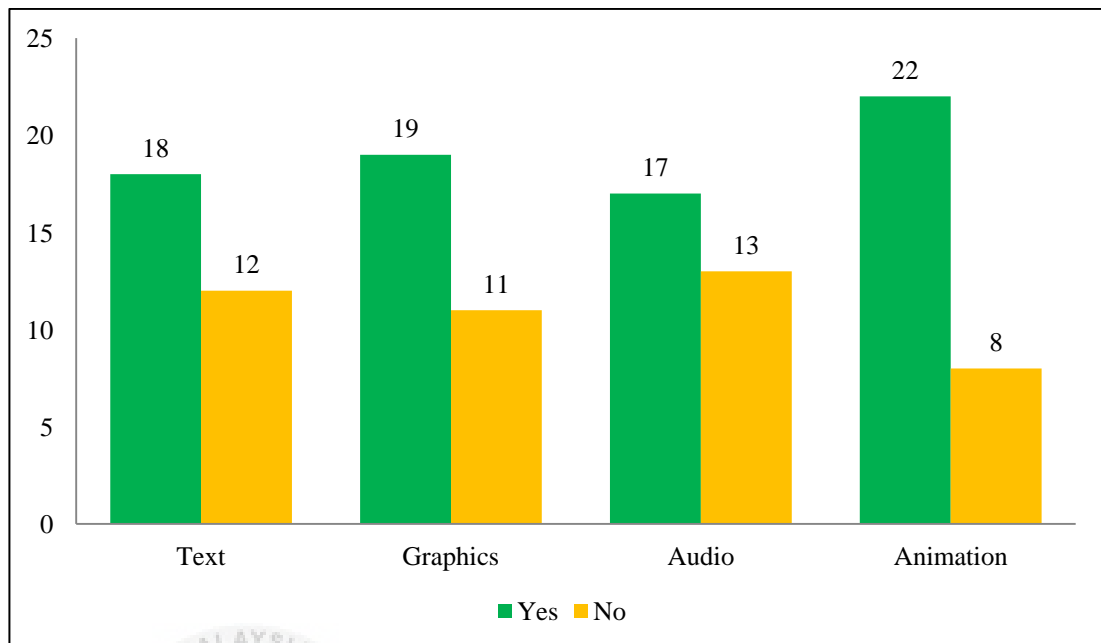


Figure 6.7: Graph of type of learning material that student use to do revision

Based on the Figure 6.7, the bar chart shows the result of type of learning materials that students use for revision. There are nineteen (19) students use textbook, twenty six (26) students use reference book, nineteen (19) students use internet and ten (10) students use interactive book or courseware as their learning material. Interactive book or courseware shows the lowest result. Many students are not known and less sources to get a courseware for study. The development of this product could increase their choice as learning material other than using textbook, reference book and internet.

Question 4: Do you think that multimedia elements below help you in study?**Figure 6.8: Graph of type of multimedia element that helps in study process**

Based on the Figure 6.8, the bar chart shows the result of multimedia elements that student think will help them in study. There are four (4) types of element were listed in the questionnaires. Eighteen (18) students choose text element, nineteen (19) students choose graphics element, seventeen (17) students choose audio element and twenty two (22) students choose animation element. All the result shows that most of the multimedia elements listed are important to them. Some of the elements were included in the courseware during the development process.

Question 5: Do you believe the use of interactive book or courseware can enhance the performance of your learning?

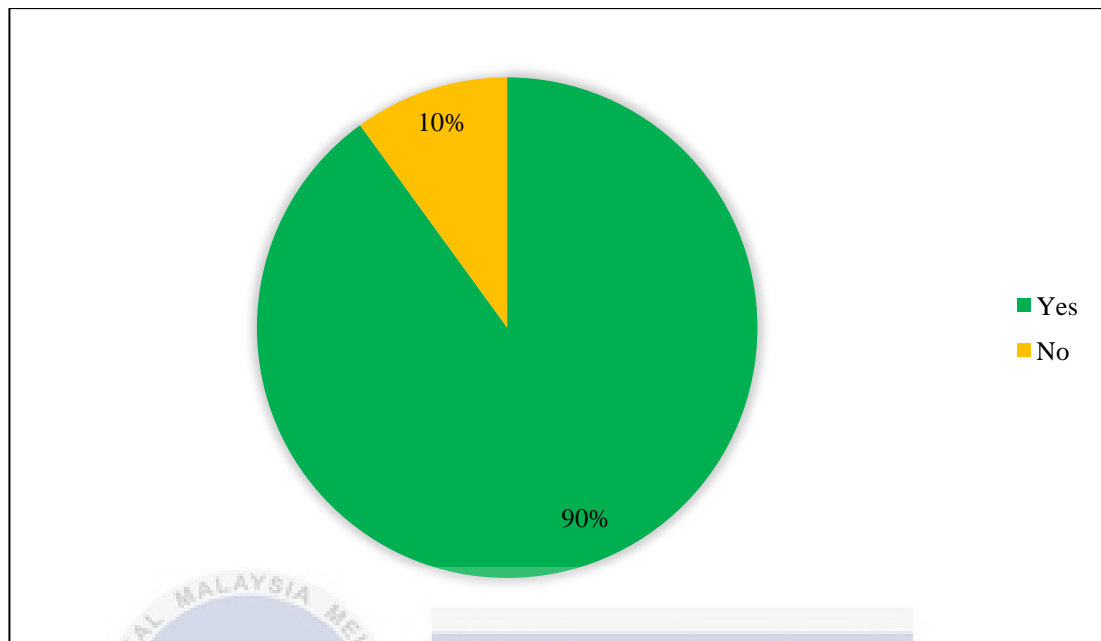


Figure 6.9: Chart of student that believe courseware could increase their performance of learning

Figure 6.9 shows the result of student that believed learning using courseware could increase their performance of learning. There are ninety (90) percent of students choose yes and another ten (10) percent of students answer no in the form. This is highly shows that the result agrees on the usage of the courseware among students. They will be more likely to study in digital form of book besides the physical textbook. The development of the product also wants to study the effectiveness of the courseware.

Furthermore, during the testing session that was held in SMK Convent Teluk Intan, there were few students asked where and what URL to get the PT3 History courseware. This is also a proof that this product gets the attention from student as they are interested to use it.

6.5 Conclusion

Testing process is to confirm that the development of the project was a success. All the requirements and the specifications of the product should meet to the product itself. PT3 Sejarah courseware is a success and good learning platform for students in school. The testing of the product should be done properly without any problem in real time environment. Based on the result collected in this chapter, developer had identified the strength and weaknesses of the courseware which will be discuss on the last chapter of the thesis.



CHAPTER VII

CONCLUSION

7.1 Introduction

This chapter will explain on weakness, strengths, proposition for improvement and contribution parts. All the process of the project will be conclude in this chapter. This PT3 Sejarah courseware is now finally has its conclusion after all the phase of all the process done.



7.2 Observation on Weaknesses and Strenghts

PT3 Sejarah courseware is developed for Projek Sarjana Muda 1 and 2. Observation of the project was done smoothly to identify the weaknesses and strengths of the product. The main strength of the product is the content. The content of the courseware provide less text to be read and put more graphics. The animated graphics on the courseware is to increase the level of interest among the students to study using gadget compare to use the textbook in school. The other strength of this product is students can answer a set of test and play crossword provided in the courseware that is related to the subject matter. Besides, other interactive function

were provided in the product which are students can insert their name at the beginning of learning and there are some picture where student need an interaction of mouse hove over on the picture to show its information.

However, there are some weaknesses on this product. The weaknesses were detected in the alpha testing. There is lack of instructional design that applied to the courseware. No instruction to the user to perform next task. This makes user take times to understand what the courseware wants to deliver. Beside the interactive function in the courseware there is still have the weakness which user not provided with instruction for student to move around the mouse to the picture to get the information. User also cannot answer the test more than one (1) per session. User need to reopen the application to perform it again. Nevertheless, the courseware can function well and all the notes about history subject were provided in the courseware.



7.3 Proposition for Improvement

The preposition for improvement for this project is to put other multimedia elements that is in line with the times such as 3D animation or augmented reality technology in the product to make it more attractive and fun. Besides, it will be more engaging if more sound effect in the courseware. The research and finding should be study more details to make sure its parallel with the development of the product. All the improvement discussed in this part surely will give a greater impact to the user.

7.4 Contribution

PT3 Sejarah courseware is built to help increase the interest among student to study the subject of history in digital technology instead of studying using text book. The interface design and the element of multimedia in the courseware are suitable with the target user. PT3 Sejarah courseware could increase the interest of reading among the students. Besides, teacher also can use this product as their teaching tool in class. Student can bring their laptop or tablet anywhere and use the courseware to study. It has no limitation for student to study the subject matter. Finally, after some of the improvement before beta testing was done, the objective of the project had achieved and the product was developed followed as stated in plan.

7.5 Conclusion

The development of PT3 Sejarah courseware had come to an end. PT3 Sejarah courseware has been developed and meets its objectives which are to investigate the instructional design of courseware for history subject, to design and develop interactive PT3 Sejarah courseware based on the recommendation instructional design and to evaluate the effectiveness of the courseware. The product can be used attract student interest to study the subject matter especially to those who are not like in readings.

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LIST OF APPENDICES

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GANTT CHART/MILESTONE PSM 1

Task	Week														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Proposal PSM : Submission & Presentation															
Proposal assessment and verification															
Chapter 1 Proposal Correction/Improvement															
List of supervisor/title															
Chapter 1 (System Development Begin)															
Chapter 1 & Chapter 2															
Chapter 2															
Chapter 2 & Chapter 3															
Project Demo & Chapter 3 & Chapter 4															
Project Demo & Chapter 4															
Project Demo & Chapter 4															
Project Demo															
Project Demo & PSM Report															
Project Demo & PSM Report															
Presentation Schedule															
Project Demo & PSM Report															
Final Presentation															
Submission overall marks to PSM/PD committee.															

Appendix 1 : Gantt Chart/Milestone PSM 1

GANTT CHART/MILESTONE PSM 2

WEEK	ACTIVITY	NOTES
1 (27 th June – 1 st July 2016)	Chapter 4: Design Chapter 5: Implementation	Deliverable – Chapter 4 Action – Student
2 (11 th – 15 th July 2016)	Chapter 5: Implementation Supervisor evaluation process with student	Deliverable – Presentation Progress 1 Action – Supervisor, evaluator, student
3 (18 th – 22 nd July 2016)	Chapter 5: Implementation Chapter 6: Testing	Deliverable – Chapter 5 Action – Student
4 (25 th – 29 th July 2016)	Chapter 6: Testing Supervisor evaluation with student	Deliverable – Presentation Progress 2 Action – Supervisor and student
5 (1 st – 5 th August 2016)	Chapter 6: Testing Chapter 7: Conclusion Presentation Schedule	Deliverable – Chapter 6 Action – Student, PSM Committee
6 (8 th – 12 th August 2016)	Chapter 7: Conclusion Draft full thesis PSM Student status	Deliverable – Chapter 7 Action – Supervisor, student
7 (15 th – 19 th August 2016)	Final Presentation	Deliverable – Final Draft Thesis PSM
8 (22 nd – 26 th August 2016)	Correction draft thesis PSM Mark delivery	PSM Committee, Supervisor
9 (29 th – 2 nd September 2016)	Upload log book and final thesis with signature, project source into system	Deliverable – Thesis PSM, log book, project source Action – supervisor, student

Appendix 2: Gantt Chart/Milestone PSM 2

SAMPLE QUESTIONNAIRE

Soal Selidik - Penggunaan buku interaktif/perisian kursus untuk mata pelajaran sejarah kepada pelajar yang mengambil matapelajaran sejarah PT3.

Questionnaires - the use of an interactive book / courseware for historical subjects to students who are taking the subjects of history PT3

Sila tanda(/) pada soalan-soalan antara berikut. <i>Please tick (/) to the following questions.</i>		YA <i>YES</i>	TIDAK <i>NO</i>
1.	Adakan anda memiliki komputer atau tablet? <i>Do you have any computer or tablet?</i>		
2.	Adakah anda menggunakan komputer atau tablet untuk pembelajaran? <i>Do you use your computer or tablet for study purposes?</i>		
3.	Adakah anda meminati subjek sejarah? <i>Do you interested in history subject?</i>		
4.	Subjek sejarah merupakan subjek yang membosankan di sekolah? <i>History subject is a boring subject in school?</i>		
5.	Adakah anda minat membaca? <i>Do you interested in reading?</i>		
6.	Adakah nota ringkas membuatkan anda lebih minat membaca? <i>Short notes make you more interested in reading?</i>		
7.	Bahan pembelajaran apakah anda gunakan untuk membuat ulangkaji? <i>Which learning materials that you use to make a revision?</i>		
	Buku teks Text book		

	Buku rujukan <i>Reference book</i>		
	Internet <i>Internet</i>		
	Buku interaktif/Perisian kursus <i>Interactive book/courseware</i>		
8.	Adakah elemen-elemen multimedia seperti berikut mampu membantu anda untuk belajar? <i>Do you think that multimedia elements below help you in study?</i>		
	Teks Text		
	Grafik Graphics		
	Audio Audio		
	Animasi Animation		
9.	Perisian kursus/buku interaktif ialah sebuah aplikasi komputer yang direka bentuk dalam pendidikan atau latihan yang mempunyai interaksi antara pengguna dan aplikasi tersebut <i>Courseware/interactive book is a computer application designed for use in an educational or training course that have an interaction between the application and users</i> Adakah anda berminat untuk menggunakan buku interaktif/perisian kursus sebagai salah satu bahan pembelajaran? <i>Do you interested to use interactive book/courseware as one of the learning material?</i>		
10.	Adakah anda percaya penggunaan buku interaktif/perisian kursus dapat meningkatkan prestasi pembelajaran anda? <i>Do you believe the use of an interactive book / courseware can enhance the performance of your learning?</i>		

Appendix 3: Sample Questionnaire