THE DEVELOPMENT OF MASSIVE OPEN ONLINE COURSES (MOOCs)

CONTENT FOR MULTIMEDIA SYSTEM

NURUL ALFAH BINTI AHMAD

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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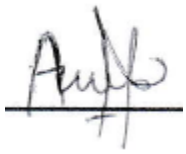

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Tarikh : 22 AUGUST 2016	Tarikh : 22 AUGUST 2016

DECLARATION

I hereby declare that this project report entitled

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Is written by me and is my own effort and that no part has been plagiarized

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STUDENT : _____ Date: 22 AUGUST 2016

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SUPERVISOR : _____Date: 22 AUGUST 2016

DR.SITI NURUL MAHFUZAH BINTI MOHAMAD)

DEDICATION

I'm honoured to gradually a very much of thank you and appreciation to those person who are always support me in a way to finish this final year project

Firstly, to my parents and my siblings, thank you for your supports and encouragements that you give me during my hard time.

Secondly, to my supervisor, Dr.Siti Nurul Mahfuzah Mohamad, thank you for your guidance and encouragement that you have given to me as long this project is conducted.

To my evaluator, Madam.Norazlin Mohamad, thank you for providing advice during presentation and evaluating my Final Year Project.

To my friends who always give me a support and together we can pursue a broad knowledge.

.

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This Final Year Project is the end of my journey in pursuing my degree in Universiti Teknikal Malaysia Melaka. This project has been completed on time with the support of great people including my supervisor, my friends and my family. At the end of my Final Year Project, I would like to take this opportunity to say thank you to all those people who are willing to lend their hands for me. Without them, this Final Year Project would not be finished on time.

First and foremost, I would like to express my deepest obligation to my supervisor, Dr.Siti Nurul Mahfuzah Mohamad, who has supported and guidance me throughout the progress of Final Year Project with her knowledge and patient. Without her help, this report and product would not have been completed on time.

Thus, I would like to thanks my parents who have always supported and encouraged me when I encountered obstacle during the progress of Final Year Project. Without their support, I would not have the motivation to continue my project.

ABSTRACT

In this study, I developed a project title " The Development of Massive Open Online Courses (MOOCs) Content For Multimedia System. This project is proposed due to problem statements of the development of MOOCs by itself. The problem statements of this MOOCs is based on a few research that has been done. The problem statements of this project will be explained on a table listed at below. Next, the main objectives of this research are to identify the elements of multimedia in MOOCs. Secondly, to design the content of course learning in MOOCs. Thirdly, to develop and evaluate the effectiveness of MOOCs at the end of the development of this project.

In order to carried out this MOOCs, I also have determined the target user for this project which is the First Year of Interactive Media students that taking Multimedia System subject at this semester. Besides, the learning content are adapted from seven chapters of Multimedia System subject fully covered with the teaching planning and learning objectives of the subject. Apart from that, before the development of the MOOCs, I have to understand first the MOOCs by itself.

A few literature review about MOOCs has been referred about MOOCs in Malaysia Education and from the abroad. Besides, the potential of MOOCs in education in the future. This MOOCs project involved five elements of multimedia including text, graphic, audio, video and animation. Hence, the design of the MOOCs must be prepared according to the ability of the user to attract with these five elements. According the project methodology, ADDIE Model has been chose as the suitable instructional design to develop this MOOCs which including Analysis, Design, Development, Implementation and Evaluation phase. This model will be explained more in the project methodology part. Meanwhile, the design of the MOOCs layout is based on the storyboard that has been prepared. The software that has been used to support this project are using Adobe Photoshop CS5, Adobe Illustrator CS5, Adobe Premiere Pro CS5, Adobe After Effect, GoAnimate,Powtoon and others. Lastly, the expected result from this project is to provide an effective and interactive learning through online. The advantages more towards the student to enable them to learn through the web at anytime and anywhere.

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MOOCs	-	Massive Open Online Courses (MOOCs)
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CHAPTER I

INTRODUCTION

1.1 Project Background

Everyone knows that education is very important in live as to guarantee their future. By having an education, the knowledge can be shared and spread over the world. Moreover, the scenario of education in Malaysia today has gradually changes. Everything can be learn on your fingertips. It seem easy and everybody can learn at anytime and anywhere. Hence, a Massive Open Online courses (MOOCs) has been introduced in education area todays especially for university education area because the target area to use this platform are students and the range of the user are large.

A new platform of open learning has been introduced to the education area today which is Massive Open Online Courses (MOOCs) that engage anyone who seeks in learning to be able learn online at anytime and anywhere. It is an open platform learning for the students, job seekers and professionals to achieve their learning objectives. Hence, after looking at the all specifications that MOOCs offered for the development of educational area today. A project named “The development of Massive Open Online Courses (MOOCs) content for Multimedia System” has been constructed for this final year project. This is as a sign to answer the MOOCs development in today education scenario.

The development of Massive Open Online Courses (MOOCs) content for Multimedia System is a project about the development of content learning for Multimedia System. In more details, Multimedia system subject has been chosen to be developed for this open learning platform. This project focuses in the development of Multimedia System which is a very interesting subject in education which contains five multimedia elements of text, image, audio, video and animation. Hence, this project is design and develops to engage the students to learn in an open platform and in an open access. So, the students can learn at anytime and anywhere.

One of the purpose of this project is to engage the students to study in an open platform in which the students can learn via online and in other way, is to increase their understanding more about the subjects because of the interactive environment of education learning as an open learning. Beside that, the content development of this subject is also create in another interactive way which the students tend to change their perspective of learning compared with the traditional way of education style which based on slides and hands-on activities. But, with this open learning, the students could engage with the activities via online and more fun.

1.2 Problem Statement

There are a few problem statements listed by the researchers on the development of MOOCs.

Table 1.2.i Problem Statements

Author(s)	Issues/Problems/Discussion
1) Koller et al., 2013	**The traditional way of education** before has disadvantages to the learner's as they cannot be able to understand the way of the actual way of the education is held.
2) Nordin et al., 2015	By having MOOCs, the students could lead their self confidence in themselves as there is a way for them to learn in an open platform that connected to the outside world without **feels anxiety and worried about their personality.**
3) Douglas & Belkin, 2014	The **limitations of the financial problems** that happened to the learners are become big issues to them as they cannot go to the class and having a formal class. But, by using an open learning, the learners can gain as much knowledge they seek.

1.3 Objectives

There are three objectives of the development of MOOCs Content for Multimedia System.

i. To identify the engagements of multimedia in Massive Open Online Courses (MOOCs).
ii. To develop the content of course learning in Massive Open Online Courses (MOOCs).
iii. To evaluate the effectiveness of content developed in Massive Open Online Courses (MOOCs).

1.4 Project Scope

This project is based on the selected of the content chapter that has been cover for Multimedia System subject. There are 11 chapters in this subject. But, the covered topic for this project are involve about 6 chapters only. The chapters that has to be covered are:

Table 1.4 Project Scope

WEEK / CHAPTER	TOPIC
2	The Multimedia Technology
4 and 5	Images
8 and 9	Animation
11	The Multimedia Team

Table 1.4 shows the topics of the Multimedia System that has to be covered for the development of the content in MOOCs.

Next, the target group of the user for this project is Faculty of information and Technology and students. The students are from the First Year of Interactive Media course (BITM) students. After that, for a time being of this development of this project, the target group will be open for any students who are taking Multimedia System subject.

1.5 Project Significant

The developments of Massive Open Online Courses (MOOCs) contents are focused on the Multimedia System subject. The target group are students. The benefit is beneficial for the students to do a revision of the chapter, access at anytime and anywhere, be more prepared before a lecture and they could engage the learning through an open learning with anybody, anytime and anywhere. Besides that, the multimedia elements which are included of text, graphics, audio, video and animation are also involves on the development of this project. The involvement of these five elements will bring the differences compared to the other MOOCs project. Here, we want to show how the multimedia elements could attract people's attention and how their minds react with the elements.

Expected output

The expected output of this project is an interactive content developed for Multimedia System subject. The user can view the content from chapter by chapter. The user can get an output from the content learning and increase their understanding.

Besides that, the user engagements can be created from time to time as they go through the content. The user ability to go through the content makes them easier to finding information in an access via online. The benefit of this project can save their learning time and be more applicable through this content which they can interact with the activities that has been provided, go through the video slides and the others learning aid.

At the end of this project, the content develop will be successful and can be publish to those user who are really need it. The user can access the content via online at anywhere and anytime. Hopefully, the respond from the user are good and the project can be improved from time to time.

1.7 Conclusion

In another words, Massive Open Online Courses (MOOCs) has many benefits purposes in the learning area sector. It is new and everybody can access the information unlimitedly.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In this chapter, a literature review and project methodology for the development of the content would be discussed. The usage of the literature review is to support the research that has been done about the topic and it has big role when we are going to start a project. The literature review that contains in this project contains a few research from the reading sources such as articles, journals, reference books and also internet which including a phase of gathering, analysing and conducting the reading about the related topics of the project that implemented. The literature review will be done by searching articles about the implementation of the MOOCs, the definition of the MOOCs by itself, the framework model of the MOOCs and 9 Gagnes's Events of Instruction related on how the MOOCs is construct the learning of the course in order to engage the attention of the students in learning.

The project methodology that used to develop the content of learning is by using an ADDIE Model. Project methodology is also important in order to guide the development of the project step by step. Every phase will be discussed which including Analysis, Design, Development, Implementation and Evaluation. Besides that, software and hardware requirements are listed and functionality of each of the software and hardware requirements will be explained in detail.

2.2 Domain

Domain for this project is content development for e-learning platform which is for Open Learning, Massive Open Online Courses (MOOCs).The content development is for Multimedia System subject.

2.2.1 Overview Massive Open Online Courses (MOOCs).

Massive Open Online Courses (MOOCs) are a new platform of open learning education that engages anyone to learn online anytime and anywhere. It's open for everyone, especially students and including job seekers and professionals to achieve their learning objectives.

Open learning has a potential to be a great platform in educational area in one fine day as it very interesting and wonderful for the students to learn anything, said Mushtak Al-Atabi, Dean of Engineering Taylor's University School. Besides, the tools are intuitive, easy to use and encourage participation among students. In addition, the support team is very helpful and Open Learning is becoming addictive and would change your perspective dimension about them. Open learning (2016).

On the other hand, the definition of the MOOCs is defined personally by a few of national researchers. MOOCs are an open learning platform which web based online courses for a wide range of user which consist of students, job seekers and other experts who were offered their expertise in create a new course and teaching the course that they offered in an open platform and can be join by anybody. By referring to the following of the term of MOOCs by itself, which are ("massive") is refer to a wide range of user in large number, open accessibility refers to ("open"), all digital production refers to ("online") via the internet comprises the learning aid, teaching session, social activity among the users. Lastly, didactical concept refers to ("course") which is the teaching method and the learning session of knowledge follows a pre-defined objective of the learning or lesson outcomes.

Meanwhile, in another perspective of information research, MOOCs is defined to represent a new way of pioneering the other web-based business model which consist of funding, designing and educational services provisioning.
Due to the increasing of the digital production and restructuring of services and suppoted by the Internet economy laws, the cost margin tend to become zero because of the occurrence of network and long-term effects) could lead to open more higher educational platform. Thus, a great possible effectiveness and and efficiency in education and challenges (e.g., new competitors) will transform the wave of academic institutions and the others educational sectors.

In other words, a MOOC brings together people who are interested in education. Social networking has provided a connectivity of a set of freely accessive of online resources which provide content learning and another materials learning aid. Everything seems easier and there is no more reason for everyone having a chance to learn. As an example"Connectivism and Connective Knowledge", an online course offered through the Learning Technologies Centre and Extended Education at the University of Manitoba and facilitated by George Siemens and Stephen Downes (Downes,2008) is considered the first MOOC that discussing aspects of the MOOC in different spaces and use micro blogs such as Twitter to express themselves. Thus, the students should grab this chance to learn.

2.2.2 Definition of Massive Open Online Courses (MOOCs).

Table 2.0 MOOCs Definition

	Definition
1) **M**: Massive	Massive is referring to number of the user or course that has been offered in a large scale of capacity of the courses to be enrolled by the users. It is including large in term of capacity of the user, course that can be offered, size of the class and how many instructor that can be in participated in this open learning platform.
2) **O**: Open	Open access, Open Content and Open Platform. Open licensing is needed to create an open content rely on the Open Educational Resources (OER). At the end of the output, the content are able to be access by the user at anytime, anywhere and anybody to be downloaded, use, share it in the social media and match up with their own material as a guidance and information. In order to access this MOOC, it should be in an open platform to easily accessible to more people.
3) **O**: Online	The platform of this open learning is web-based learning education. An "online" word should be referring to via an internet and open accessibility. By then, everything of the content should be access via internet and from that the learning session are not limitedly with the traditional way of the education before.
4) **C**: Courses	Courses is referring to the subject matter that has been offered by the instructor and the expertise and also lecturer. The course that has been offered could share the knowledge to the participants in wide area of knowledge and provide them with the engaging activities towards them. .

2.2.3 Gagne's Events of Instruction

The following 9 Gagne's Events of Instruction are proposed by Robert Gagne in order to design a systematic instructional design process that share the behaviourist approach to the learning. The usage of the Gagne's Nine events is to design an engaging and meaningful instruction in learning. Below are the explanations which highlighted the implementation of the events in your own instruction.

i. Gain attention among the student.It is to make sure the student are ready to study and to gain their focus by involving the student in activation.
ii. Inform students the objectives, this to create an understanding of the students about the outcomes during the course.
iii. Stimulate recall of previous learning, it is enable student to create a sense of the new information about something they have already experience or something that they never been experienced before.
iv. The content presentationto provide more efficient and effective instructions.The content must be organized and divide them in a significant way.
v. Provide learning guidance, in which try to advise the students and help them in learning skill and provide them with the available resources.
vi. Try to gain an attention of the students to help them analysing them a new skill and knowledge, to make the visual associated the images visually and metaphor used to make the learning lesson become more effective.
vii. Provide feedback. Give an immediate feedback from the students performance to assess and adopted with learning facilitate.
viii. Assess performance, evaluate the effectiveness of the instructional events, test the expected learning outcomes that have to be achieved by referring back to the previously learning objectives.
ix. Enhance bases and transfer to the job. To help learners to develop expertise, they must internalize new knowledge.

2.3 Existing System

The emergence of massive open online courses (MOOCs) is main trigger of education innovation. It's the one of popular system that uses revolution of the open access learning. The MOOCs acronym was created by Dave Cormier and Bryan Alexander in 2008 after Stephen Downes and George Siemens introduce the incepted Connectivism and Connective Knowledge course that spread the learning theory of Connectivism. From that, it is recommended as a learning theory for the digital age. In Malaysia, MOOCs has received increasing attraction among the secondary school and universities are jumping into a creation of their home grown.

In March 2013, MOOC offering the first Malaysian higher education institutions announced the pilot. In 2014, five more higher education institutions which four of them are public universities and one i.e Open University Malaysia (OUM), a private open and distance learning (ODL) institutions. At the moment, these initiatives represent a preliminary phase in MOOCs, where Malaysia's approach can be described as exploratory, focusing less on reaching the widest possible audience, making a significant mark globally.

Currently, MOOCs adoption in Malaysia is developing in tandem with several important national plans, e.g the upcoming 11th Malaysia Plan (2016-2020), the National Economic Model, Economic Transformation Programme and the anticipated Malaysian Education Blueprint for Higher Education; the last of which has specifically addressed MOOCs in its preliminary discussion document. Online learning, as an essential component of the delivery mechanism in MOOCs, is also addressed in the soon-to-be Blueprint.

Below are the existing MOOCs that has been developed in the higher education of Malaysia institutions and over the world.

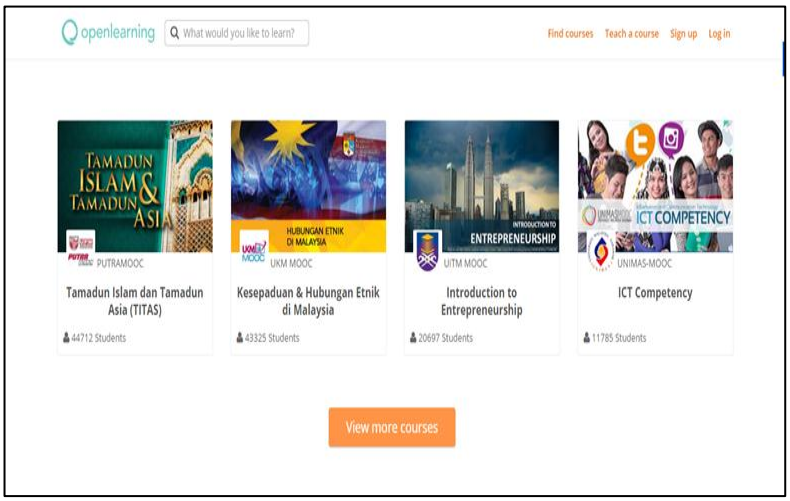


Figure 2.3.i

The figure 2.3.i shows the implementation of the available MOOCs system in Malaysia education.

Figure 2.3.ii

The figure 2.3.ii shows the implementation of the available courses of MOOCs in over the world which are almost 1477 courses from around the world.

2.3.1 Techniques

There are a few techniques listed by the researchers in order to design the MOOCs.

Table 2.3.1.i

Author(s)	Techniques	Explanation
1) **Stephen Downes**	Classify and designed from two perspectives of xMOOCs and cMOOCs	It shares the several features in term of multimedia resources.
2) **Conole, 2013**	Classifications according to twelve dimensions.	Conole classifies MOOCs according twelve dimensions: 'degree of openness,the scale of participation, the amount of use multimedia, the amount of communication, the extent to which collaboration is included, the type of learner pathway, the level of quality assurance, the extent to which reflection is encouraged, the level of assessment, how informal and formal it is, autonomy and diversity '
3) **Conole and Mullohand, 2007**	Identify learning designs	Conole and Mullohand already identified that learning designs can be seen from three layers: the educational layer, technological layer describes technology to be used and logistical layer.

2.4 Project Methodology

There are a few of instructional designs that can be used as a project methodology to developed MOOCs. It depends on the suitability and functionality of the instructional designs for the learning content. Instructional design as a process is defined as the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction [Berger and Kam]. It includes development and evaluation of instructional materials and activities. Various models for such a systematic design have been proposed, but most are suitable of ADDIE model, which maybe is a commonly used approach and is an acronym referring to the five major process.

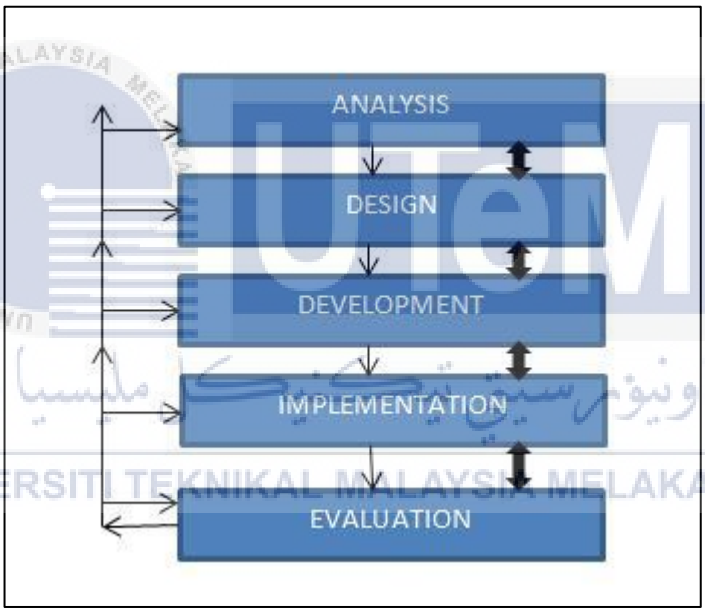


Figure 2.4.i

Figure 2.4.i shows the ADDIE Model that has been chosen as the project methodology of the development of MOOCs content for Multimedia System.

2.4.1 ADDIE model

Table 2.4.i

PHASE	DESCRIPTION
Analysis	The Analysis phase is the process of defining what is to learn and is the foundation for all the other phases of instructional design
Design	The Design phase is the process of specifying how it is to be learned. This phase is to plan a strategy for developing the instruction and to outline how to reach the instructional goals.
Development	The Development phase is the process of authoring and producing the materials. This phase is to generate the lesson plans and lesson materials.
Implementation	The Implementation phase is the process of installing project in the real world context.
Evaluation	The Evaluation phase is the process of determining the adequacy of the instruction. This phase measures the effectiveness and efficiency of the instruction.

Table 2.4.i shows the description for each of the phase in the ADDIE Model

For the purpose of e-learning, many international specifications are proposed.

Among various kinds of standards, SCORM might be the most widely accepted model of multimedia e-learning today. The model has three main parts: the "Content Aggregation Model (CAM)", "Run-time Environment(RTE)" and "Sequencing and Navigation (SN)".Moreover, the SCORM focuses on several major issues in particular. First, it defines a model for packaging multimedia learning contents to facilitate content delivery [Dodds, P., et al. (Ed.)., 2007].

Second, it defines as standard way for e-learning systems to communicate between each others.

Third, it requires the inclusion of metadata for describing the course content. Such arrangement facilitaters users of e-learning systems to be able to identify appropriate multimedia materials in an efficient and effective way.

Apart from that, Dick and Carey model can also be considered as an instructional design. The Dick and Carey Model includes the 9 step process.

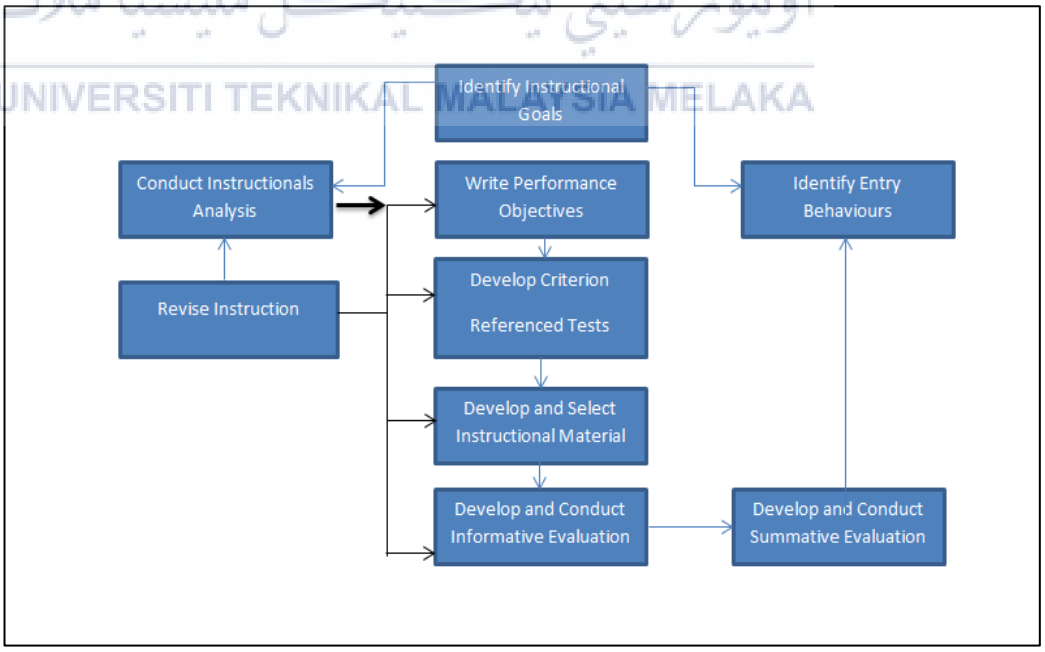


Figure 2.4.ii

Figure 2.4.ii shows the Dick and Carey Instructional Design.

Stage1: Identify Instructional Goals

Stage2: Conduct Instructional Analysis

Stage3: Identify Entry Behaviours and Learner Characteristics

Stage4: Write Performance Objectives

Stage5: Develop Criterion –Referenced Test Items

Stage6: Develop Instructional Strategy

Stage7: Develop and Select Instructional Materials

Stage8: Develop and Conduct Formative Evaluation

Stage9: Develop and Conduct Summative Evaluation

2.5 Project Requirement

Project requirements are discussed about software and hardware requirements that used for developing the application.

2.5.1 Software Requirement

Software requirement is divided into two categories which are development and documentation tools. There are a few software used in order to develop the content of Multimedia System for MOOCs.

Table 2.5.1.i

SOFTWARE	DESCRIPTION
Adobe Photoshop CS5	To design an image and editing the graphics
Adobe Illustrator CS5	To illustrate and trace the vector images and use it as source.
Adobe After Effect CS5	Design and develop video promo.
iStudio	For lecture video shooting.
Moovly Web 2.0 Tool	As a variety of software to create an animation of the videoslides.
Powtoon	To create a videoslides.
iSpring	To create slides.
Articulate	To create slides.
Power Point	To create slides.
Audacity	To edit sound and audio source.

Table 2.5.i shows the software tools that has been used in the development of MOOCs content for Multimedia System.

2.5.2 Hardware Requirement

There are a few hardware used in order to produce the content of Multimedia System for MOOCs.

i. iStudio

ii. Manufacturer: Lenovo
Processor: Intel®Core(TM)i3-3110M CPU@2.40GHz 2.40 GHz
Memory: 4.00 GB
System type: 64-bit Operating System.
Windows edition: Windows 7 Ultimate

2.5.3 Other Requirements

i. Content slides for chapters Multimedia System from the SME (Subject Matter Experts)

ii. Hard disk

iii. Printer

2.6 Project Schedules and Milestones

Project schedule includes the tasks that needed to do and to be done within a certain time period. The existence of the project schedule is to ensure that the process of developing the product is work according to the time that planned and to make sure the product is completed in time. It plays important roles in developing of a system or product.

ID	Task Name	Start	Finish	Duration
1	**Week 1**	**22/02/2016**	**26/02/2016**	**5d**
2	Proposal PSM : Submission & Presentation	22/02/2016	23/02/2016	2d
3	Proposal assessment and verification	24/02/2016	26/02/2016	3d
4	**Week 2**	**29/02/2016**	**04/03/2016**	**5d**
5	Proposal Correction/Improvement Chapter 1	29/02/2016	01/03/2016	2d
6	List of supervisor/title	02/03/2016	04/03/2016	3d
7	**Week 3**	**07/03/2016**	**11/03/2016**	**5d**
8	Chapter 1 (System Development Begins)	07/03/2016	11/03/2016	5d
9	**Week 4**	**14/03/2016**	**18/03/2016**	**5d**
10	Chapter 1 & Chapter 2	14/03/2016	18/03/2016	5d
11	**Week 5**	**21/03/2016**	**25/03/2016**	**5d**
12	Chapter 2	21/03/2016	25/03/2016	5d
13	**Week 6**	**24/03/2016**	**01/04/2016**	**7d**
14	Chapter 2 & Chapter 3	24/03/2016	01/04/2016	7d
15	**Week 7**	**04/04/2016**	**08/04/2016**	**5d**
16	Project Demo & Chapter 3 & Chapter 4	04/04/2016	08/04/2016	5d
17	**Week 8**	**11/04/2016**	**18/04/2016**	**6d**
18	MID SEMESTER BREAK	11/04/2016	18/04/2016	6d
19	**Week 9**	**18/04/2016**	**22/04/2016**	**5d**
20	Project Demo & Chapter 4	18/04/2016	22/04/2016	5d
21	**Week 10**	**25/04/2016**	**29/04/2016**	**5d**
22	Project Demo & Chapter 4	25/04/2016	29/04/2016	5d
23	**Week 11**	**02/05/2016**	**06/05/2016**	**5d**
24	Project Demo	02/05/2016	06/05/2016	5d
25	**Week 12**	**09/05/2016**	**13/05/2016**	**5d**
26	Project Demo & PSM Report	09/05/2016	13/05/2016	5d
27	**Week 13**	**16/05/2016**	**20/05/2016**	**5d**
28	Project Demo & PSM Report	16/05/2016	19/05/2016	4d
29	Presentation Schedule	20/05/2016	20/05/2016	1d
30	**Week 14**	**23/05/2016**	**27/05/2016**	**5d**
31	Project Demo & PSM Report	23/05/2016	27/05/2016	5d
32	**Week 15**	**30/05/2016**	**03/06/2016**	**5d**
33	FINAL PRESENTATION	30/05/2016	03/06/2016	5d

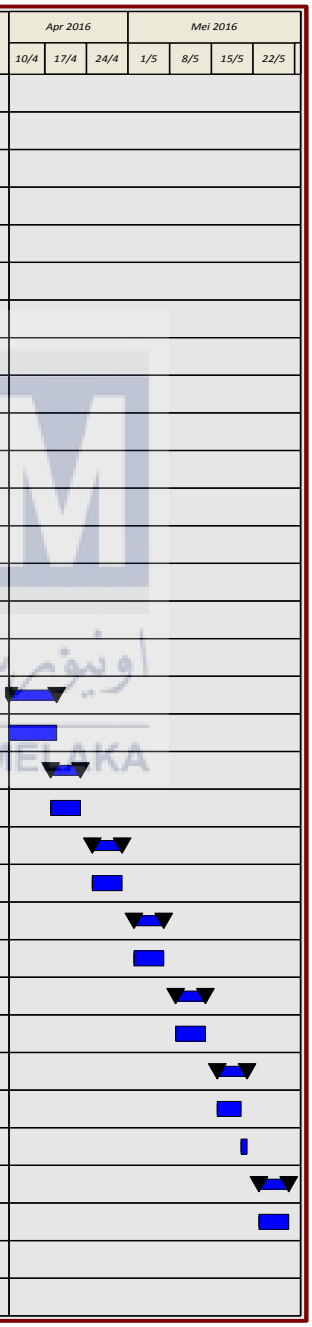


Figure 2.6.i Project and Milestones of the development of MOOCs content for Multimedia System.

2.7 Conclusion

This chapter explains about the finding including all of the review of existing system or application, literature and other source either from printed materials or internet that related to this project. Chapter 3 will discuss about analysis phase and how it would be develop.

CHAPTER III

ANALYSIS

3.1 Introduction

This chapter will explain more details about the current scenario and the requirement analysis. Analysis is a technique of studying the nature of something or of determining important features and their relations. It is also will help us to look over and decide whether something is good or bad and to describe something about what developer analyst.

This chapter also discuss the effectiveness of having interactivity between the user and the notes in order to capture user interest and increase their engagement with the subject. It will also tell about the system flow or navigation flow, system requirement analysis such as project analysis of learning content. During analysis phase, information that was composed from chapter one and two will be explained more details.

3.2 Current Scenario Analysis

Massive Open Online Courses (MOOCs) in Malaysia education are very recent development. At the moment, MOOCs was introduced to represent a preliminary phase in MOOCs, where Malaysia's approach can be described as exploratory, focusing less on reaching the widest possible audience, making a significance mark globally or competing with established providers like Coursera, edX and Udacity, but more learning to use web-based technology to complement current educational delivery systems at the higher education level and introducing MOOCs to the Malaysians.

In higher education institutions, MOOCs could achieve the widest possible audience through these factors. First, MOOCs is expect to provide quality education for everyone who seeks for a knowledge. In other words, MOOCs could experiences democratizing education. Next, it becomes one reason in promoting an institutions brand. Whereas, it could attracting new learners to enroll at an institutions. Besides, it has a potential for collaborating with other institutions and has potential for research and development in online education and be able transforming traditional teaching and learning approaches.

MOOCs in Malaysia are likely to see various developments in the next several years, as we can get ahead greater involvement from higher education institutions. However, the observation that has been made, the most importantly, MOOCs in Malaysia has prompted higher education institutions to acknowledge that age-old, traditional approaches to teaching and learning need to be evaluated and revitalized to respond to fast-paced, connected, technologically-driven environment of the 21st century.

Due to the recent introduction and exploratory nature of the MOOCs initiative in Malaysia, it is clear that there are many issues to identify and gaps to close if Malaysia is to seriously consider online learning as a viable, large-scale approach to higher education. Additionally, the current MOOCs offering need to be objectively reviewed to ensure that they are relevant not only to Malaysian higher education, but to other aspects of learning, including lifelong learning and professional training and development in order to maximize the gains of this innovation.

The potentially significant role of MOOCs can play should be acknowledged in the larger context of lifelong learning. Malaysia has declared lifelong learning as the third pillar in human capital development: an educational agenda equally important to the school and higher education systems and one that emphasizes the creation of learning opportunities for the entire population, whether for formal, non-formal, or informal learning interest. We believe that MOOCs may produce an intensifying lifelong learning efforts and we hope this scenario of new education will go beyond in order to see the future of higher education and university students.

3.3 Requirement Analysis

In this area, project analysis is divided into several categories which are need analysis, user analysis, technical analysis, resource analysis and requirement gathering.

3.3.1 Data Requirement

This section briefly describes the various analysis to develop the content of MOOCs for Multimedia System subject including the requirement gathering.

3.3.2 Project Analysis.

Requirement analysis is an important process to understand user requirement. It also is a process to analysis the product need to be develop and how the interactive book could be modified. This is to help to achieve the objective with easily.

Need Analysis.

The main reason of developing this MOOCs for Multimedia System subject is because to increase the engagements of the students to learn in variety ways of modern technology education. Compared with the traditional way, the way of the students engage with the learning are lack of interactivity which is only focus on the lecturer teaching infront of the lecture hall whereas the students are listening towards the lecture until the end. By using this MOOCs, the students can prepare early about the subjects anytime, anywhere they want. Whereas, there is a lot of activity engagement provide towards the course that they already enrolled. The way of teaching looks more sophisticated where there are video lectures that the students can go through before they enter the class. Besides, there are also slides of content subject and activities provided. Hence, there are no more reason for the students to not be able taking a lesson because everything seems easier through this development of MOOCs.

User Analysis.

To engage the attention of the students in learning are difficult because the needs of the students they tend to capture the content with the interactivity and the success of delivery of the content which is easy to understand and be able to learn by the students. The students seems bored and lack of interest with the subject as the content are complex and too many words. In many situation, the normal printed note is quite bored and lack of interactivity. Hence, the students loss of their focus during learning and the learning become effectiveless.

Technical Analysis

The technical analysis involves the type of multimedia elements used including five elements of multimedia including the images, audio, text, videos and animation. Meanwhile, in the development of MOOCs content, the requirements of the multimedia elements are including of video lecture, slides content, activities, quizzes and comments. In this MOOCs, the developer creates that elements to give an easier way to students to understand about the topics covered. Not only that, to make sure the deliverables of the content to the students, the slides has been approved and prepared by the subject matter expert.

Resource Analysis

For Multimedia System subject, the topics that has been covered in this development of MOOCs content as 7 subjects. It covered from topic 2: Multimedia Technology, topic 4 & 5: Images, topic 8 & 9: Animation and topic 13: Multimedia Development Team. As from each topic are divided into 3 subtopic and there are a few activities involved the students and related to each topic. Nevertheless, all contents are supported and approved by the subject matter expert which involved the Multimedia System lecturers.

Requirement Gathering

For Multimedia System subject, the content are given by the Subject Matter Expert (SME) from the lecturer of Multimedia System which involved Dr.Siti Nurul Mahfuzah Mohamad, Dr. Mohd Hafiz Zakaria, Mr.Ahmad Shaarizan Shaarani, Ass.Prof Dr.Faaizah Shahbodin, Ass.Prof.Dr Norasiken Abu Bakar and Mdm.Tarisa Makina. The content of learning are gathering from the slides that has been provided by the SME.

3.4 Conclusion

In conclusion, by doing analysis, the problems of the existing system can be identified and will determined the solution on the problems that relate with this project. Other than that, analysis phase is very important to get the data requirement for the output, besides the developer can generate idea to make the improvement for the project. In this chapter also discussed about the software and hardware requirements to develop the application prototype.

For the next chapter, the activities that will be developed are design phase. Design phase is related to the architecture and flow of the web portal. Other than that, the user interface design of the web portal will also be included in the next chapter.

CHAPTER IV

DESIGN

4.1 Introduction

This is the fourth phase of the development phase and the designs of the interfaces of the MOOCs for Multimedia System subject will be shown in this phase. In this chapter, it will define the results of the analysis of the preliminary design and the results of the detailed design.

4.2 Scene Sequence Diagram

Scene Sequence Diagram is needed to show the linear sequence of the scenes that described in details against time to illustrate the scene arrangement of the video or animation that has been created. In this development of MOOC content, scene sequence diagram are used to produce a video slides that adopted from the subject slides content.

Every video slides that are produce take a time about 3 – 5 minutes per video. For each scene of the video slides shows a part of introduction, content lesson and an activities like Q&A session to engage the attention of the user. However, the activities are depend on the video slides content.

Below is the diagram for the video slides to show the arrangement of the scene sequence of the video slides.

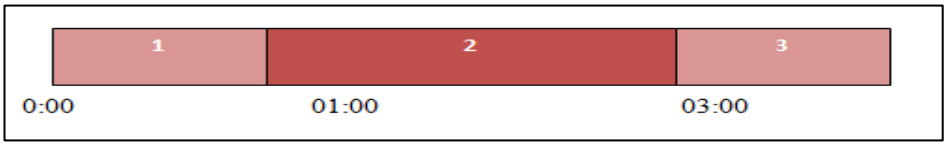


Figure 4.2.i Scene Sequence Diagram

No. Segment	Video Segment
1	Introduction
2	Content lesson
3	Activities

Figure 4.2.ii Explanation of the Scene Sequence diagram

Sequence Scene Diagram is important in order to illustrate the content of the video to be produce. It also creates a balance content of a video to guide the information to be created in the videos. By illustrating this sequence scene diagram, it allows the user to design and let the video become powerful with the unlimited information.

4.3 Preliminary Design

Preliminary Design is a design phase between schematics and constructions documents. This phase will describe more how the contents of the MOOC and illustrate it by using the storyboard.

Pre- Production Documentation.

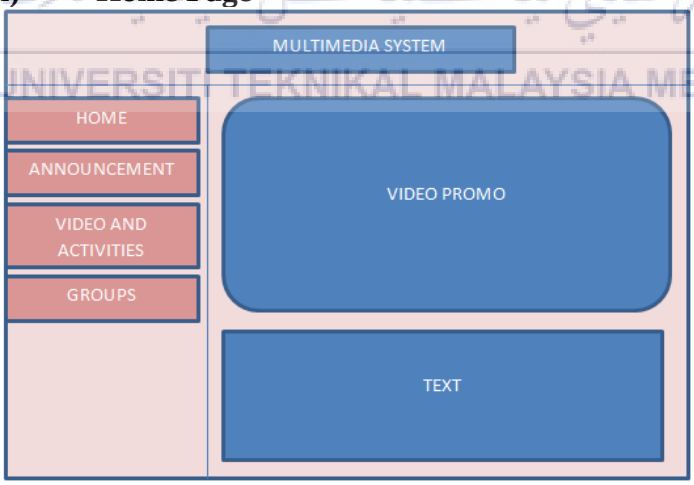
In order to avoid a technically problems before the producing of the videos, it is necessary to illustrate and plan what is required to produce a good video. This stage is important in order to begin the phase of production of the video which is involved in the pre-production phase.

Hence, the first stage that are necessary to be taken in order to produce a good video is to design a storyboard.

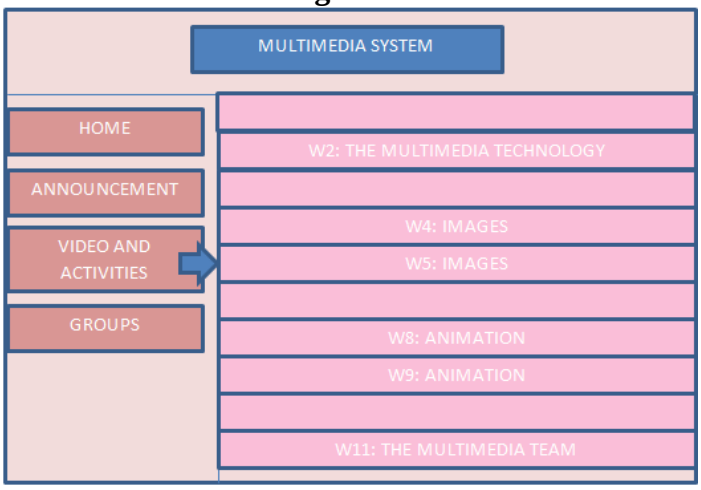
4.3.1 Storyboard Design.

Storyboard is to show the design of the system and also describe the content of the product.

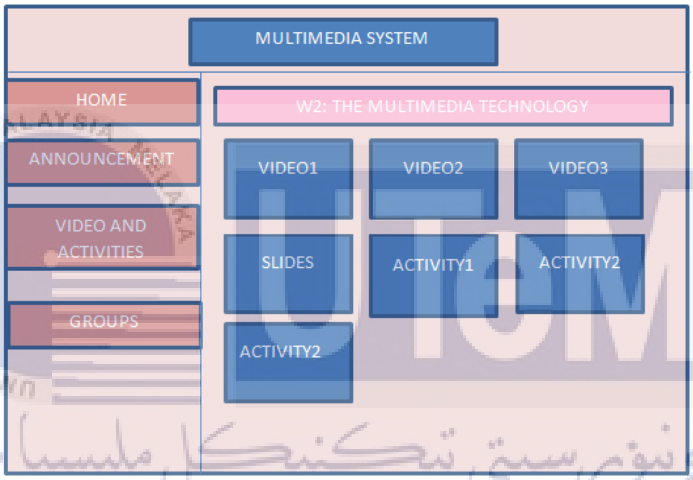
i) Home Page



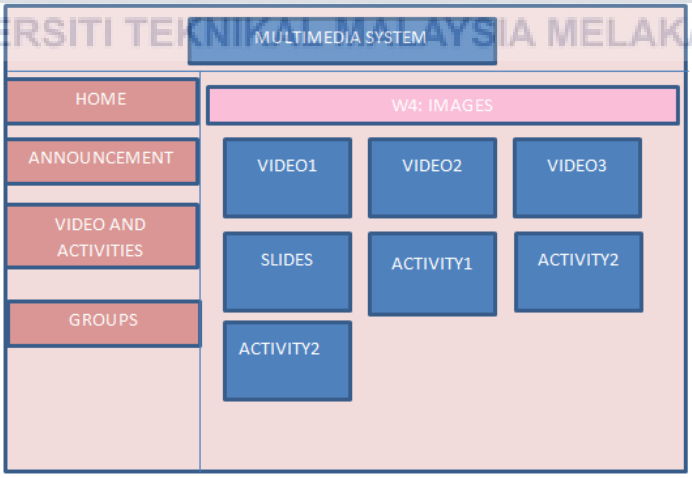
ii) Video and activities Page



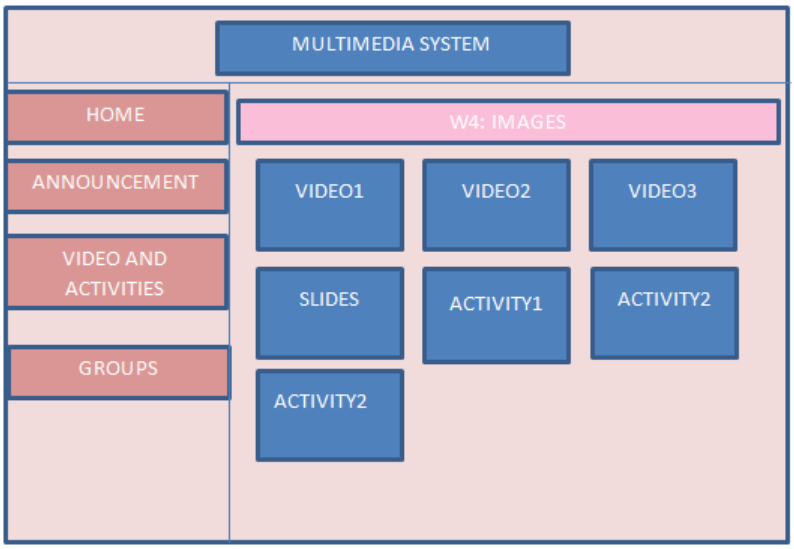
iii) Week 2: Multimedia Technology Page



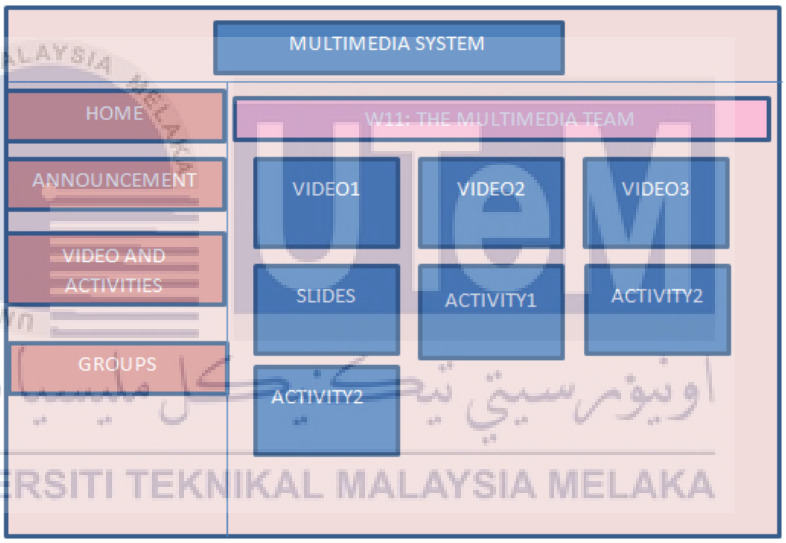
iv) Week 4 and 5: Images



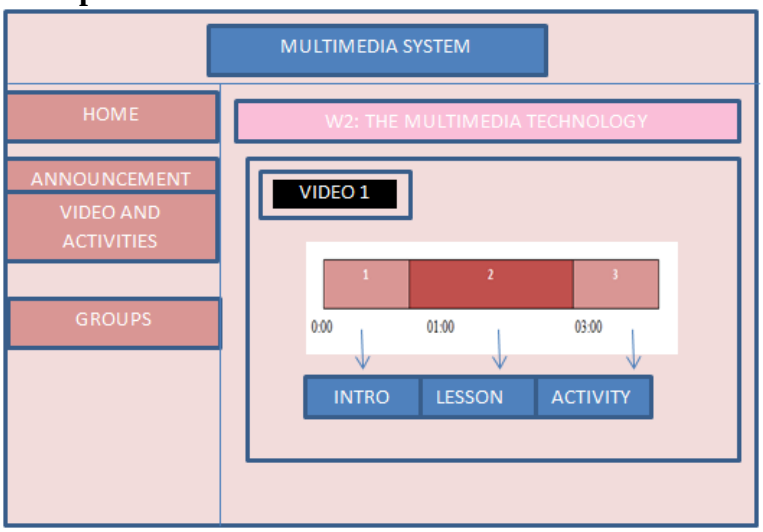
v) Week 8 and 9: Animation



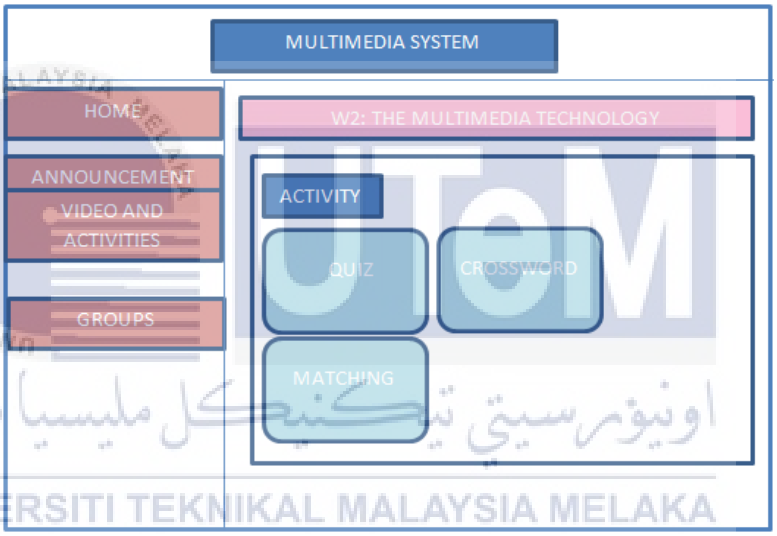
vi) Week 11: The Multimedia Team



vii) Example of video content



viii) Example of activity content page.



4.4 User Interface Design

User Interface is design to attract the attention of the user to use the system. It enables the user to interact with the system with the multifunctionalities of the graphic user interface that are included in the system. User interface is design based on the requirement of the user to be engaging with the system. Hence, to engage the attention of the user to join the course, a video promo has been design and create to be publish later in this course.

i) Navigation Design

The navigation of design in this MOOCs content is the page where the user can navigate to go through the content at the page that has been provided as they join the course and are able to view and go through the videoslides, play the activities and download the slides.

ii) Input Design

The input design is where the design of the content of the videoslides as from the slides of powerpoint. We create and design the content of the development to become a videoslide as to make it more interactive and easy to be learn.

i) Output Design

The output design are created as the videoslides, activities and other reference are publish and can be view by the user

.

Screenshot of the system design.

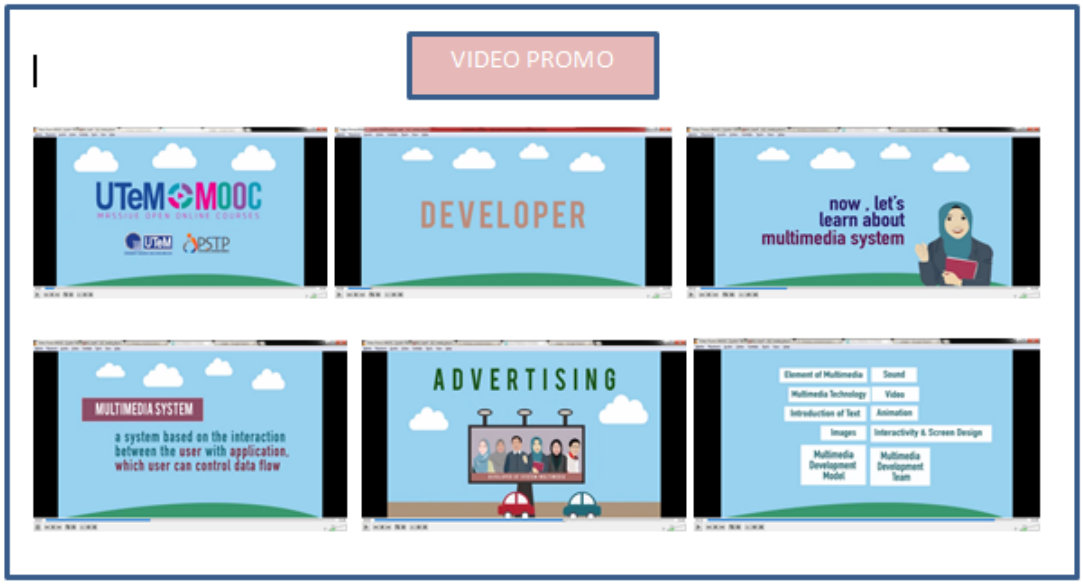


Figure 4.4.1 Video Promo

Figure 4.4.2 Multimedia System Course in MOOC Platform.

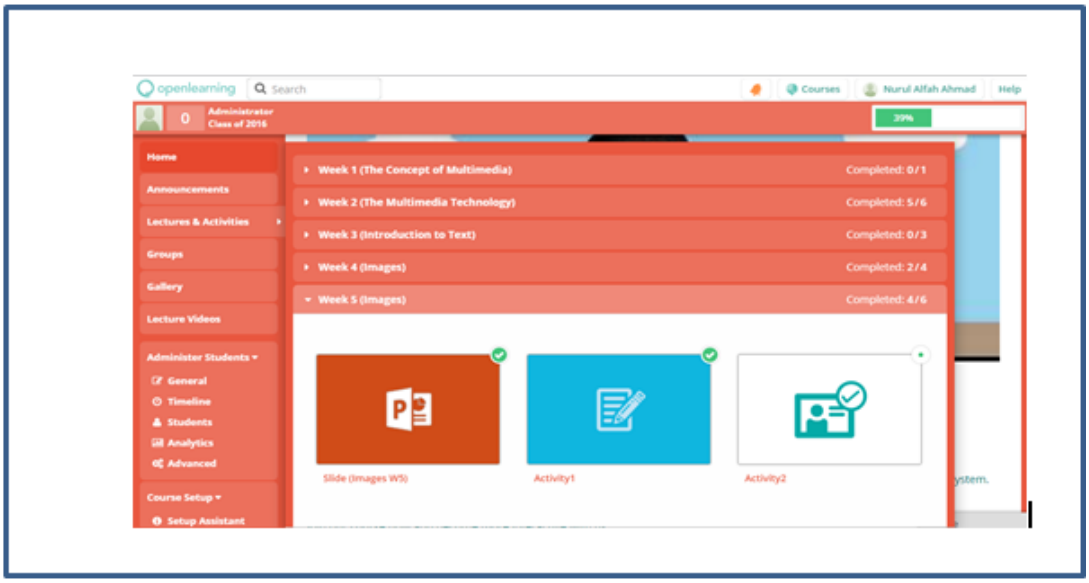


Figure 4.4.3 Learning Content and Activities in Multimedia System.

Figure 4.4.4 Example of activity in Week 4: Images.

4.5 Conclusion

The conclusion that would be made in this chapter, the most important thing during modelling is list out of all the requirement need for this application. This requirement list are important because, would manage the developer to do the job and to make sure every single of the work is completely finish.

In the next chapter would be the implementation of this chapter, where the editing video will be done. The implementation stages of the project that involve the production stages of the project.

CHAPTER V

IMPLEMENTATION

5.1 Introduction

In implementation stage, it deals with matter of quality of the media creation. The tasks that will include in this chapter are the media creation, media integration, product configuration management as well as the implementation status. Media creation is all about the content creation for the system and media integration is determine the process of integrating the created content. Furthermore, product configuration management will discuss about the configuration setup of the system and lastly describe the progress of the development status of the system.

5.2 Media Creation

There are a five type of multimedia elements that has been use in this interactive book. These multimedia elements was produce to make the interactive book more effective while use it. This is also to attract user use the product. Below is the type of multimedia elements that has been use while developing the product.

- Production of text
- Production of images
- Production of animation
- Production of video

5.2.1 Production of Text

Text is a crucial element to provide a way to let users understand the information in this web application. A consistent of the font family, font color and font size will let users feel comfortable to read. Thus, production of text plays important roles when developing this web application. This is because the target user of this web application is youths. The selection of text must easier to read. Table 5.1 shows the details of the production of text.

. **Table 5.2.1 Production of text**

Font	Format	Description
Arial,	72pt, 18pt, 24Bold	The text was used for the main title and for the header.
Cartoonist Hand	60pt, Bold	The text was used for the information of the content chapters.
Arial, Baskerville Old Face	36pt, 40pt Bold	The text was used for the header and second header.

5.2.2 Production of Images

In this project, vector and bitmap graphic is used to store all the images that needed.For example, image from google. Thus, Adobe Photoshop CS6 is used to edit the images to make it clearer. All of the images are saving in JPG format.

Next, images of the lecturers are drawn and made by editing it using Adobe Illustrator CS6 and Adobe Photoshop CS6. After that the images is exported to .png file format.

Beside that, there are also images that need to be trace using Adobe Illustrator (AI) and Abode Photoshop CS5 and save it as .png or .tiff.

5.3 Media Integration

Media integration is the process that integrates all the media creation such as texts and graphic and all multimedia components or elements that are produce under the software that has been used.In this section, it will explain on how to integrate all components of this web application. For the content development, a few software has been used to design the content of the topic.

In this project, Web based 2.0 tool, Moovly is using to design the content of the chapter by chapter need to be cover. It is an open source Web-based 2.0 tool that is free but need to sign up first.

i) Integration graphics inside the Moovly

There are a few steps taken to integrate the element of multimedia in the project.

Step1: sign up for the Moovly account

Step2: To insert the graphics or images, click the camera icon to import all the images that you want into the library.

Step3: The inserted images will be displayed on the library.

ii) Integration animation inside the Moovly

There are many transitions and animation contains in the Moovly. To integrate the element animation in the project, you need to follow a few steps:

Step1: insert the images into the stage screen

Step2: click the image and right click, you can choode a few transitions that you like.

Step3: After that, drag the timeline and setting the timer about how long the transitions or animation that you like to be appear on the screen.

5.4 Implementation Status

In this implementation status, the progress of the development for each of the chapter of the content are based on the Gant Chart. The status of the implementation are on week-15 it must be done on product and report based on the schedule and milestones that has to be followed.To ensure this project are on time, the planning must be earlier and the project could be done on time

5.5 Conclusion

As a conclusion, the implementation phase is the crucial phase which is the the real environment of the project done must be match and suitable with the real world. It briefly describe the media creation and integration after all carried task have to be done on as for 15 weeks. Besides that, the graphic production has been state I order to avoid a copyright issue. The others elements are also been stated in order to create and design an interactive content learning.

CHAPTER V1

TESTING

6.1 Introduction

In this chapter, the discussion is focus on the test plan, implementation of testing process, testing result and data gathering of the result. The purpose of this chapter is to test the effectiveness of the content developed in the development of Massive Open Online Courses (MOOCs). This testing is also to gather the feedback from the user on how the development of the MOOCs is being done. Besides, this testing is to evaluate the credibility and readiness of this project before being publish into next stage.

Other than that, there are several techniques have been conducted in order to get responses from the user. The testing result will be discussed further to evaluate the response towards the development of this project. The response and data will support the objective or denied of the application which will prove the succeed of this project to further to the next level.

6.2 Test Plan

This section will describe on target user and a several testing type that carried out for the final testing of the development of the project.

6.2.1 Test User

Before a testing being done, the important aspects required is to know and identified the target user for this project. The target user for the development of this project is First Year BITM students. However, for the testing that has being done, the test user are from UTeM students, course in BITM and there are also from the others course which is for this test, the test user are not specific and open public to the general user. Hence, the response that are given from them will further the plan to release this project on this coming September and promote this subject to the real target user which are for first year BITM students.

6.2.2 Test Environment

Test environment states the location where the testing is conducted and the hardware and software environment in which the test will be run. Table 6.2.2 below showing the place for the testing to be done and a few step or requirements during the testing is being done.

Table 6.2.2 shows the environment during the testing are being done.

Place:	**Universiti Teknikal Malaysia Melaka (UTeM)**
Respondent:	Students from BITM course
Platform:	Open Learning Multimedia System course.
Number of respondent	30

6.2.3 Test Schedule

Test schedule is organized the duration and timeline of testing to be conducted as shown in Table 6.2.3. This testing schedule follow the procedure of the testing is being done.While the testing, the respondents have to answer 3 part of questionnaire which is containing Pre-Test, Post-Test and Survey Questionnaire. Hence, to enable the respondents to answer the questionnaire, the questionnaire are divide into 3 section which are Pre-Test Questionnaire in the Notes Chapter 2 Multimedia Technology, Post-Test Questionnaire in the Videos Chapter 2 Multimedia Technology and the Survey Questionnaire can be answered at the bottom of the Chapter 2 Multimedia Technology. This is to ensure the respondents to go through the notes, videos and give their feedback about the course.

The testing is conducted through online through the MOOCs platform. A step by step procedure to join the course has been guide the students to do the testing. Below is a instruction of step by step to do the testing:

Assalamualaikum and a very good morning to all students. Here is a testing that I have to conduct for my final year project titled: Massive Open Online Courses (MOOCs) Content For Multimedia System subject. Before you do the testing, you are required to join this course first on the below linked:
https://www.openlearning.com/courses/multimedia-system.

After that, the students are required to answer the testing questionnaire on the Week 2: The Multimedia Technology. The students are reminds that all testing questionnaires are done in the Week 2: The Multimedia Technology only.

Step 1: You are required to go through the slides in the NOTES section. After done, you are told to answer the pre-test questionnaire after you are done go through the slides.

Step 2: You are required to watch the video lecture in the VIDEO section. After done, you are told to answer the post-test questionnaire after you are done watch the videos.

Step 3: You are required to answer the survey questionnaires for overall opinion for this MOOCs Multimedia System.

6.3 Test Strategy

This strategy of the testing is to test the effectiveness of the development of Massive Open Online Courses (MOOCs) for Multimedia System subjects. To ensure the students be able to learn, MOOCs is a new platform for them to learn. Students are seeking the new era of learning. There are a two basic testing are choosing in this test strategy that are suitable for MOOCs learning which is Alpha testing and Beta testing.

Alpha Testing

Alpha testing is the first phase of the development testing in a software process. The phase is including unit testing and system testing. In the unit testing is to tests the functionality of the system. For the MOOCs platform, this type of tests are conducted by developers which consists of Subject Matter Experts (SMEs) to ensure that the contents of learning and the functionality of MOOCs content meets its requirements.

Beta Testing

Beta testing is conducted when the system features are ready for user's feedback. Beta testing is focusing on the usability testing which is to ensure the ease of use of the user consist of a few components which are learnability, efficiency, usefulness and interactivity of the MOOCs contents. Here, the population of the students are from 30 students.

By doing this testing, the response we gather are obviously show they are really need something interesting for them to learn. The feedback that we collect from the questionnaire test how this platform be able to bring them learn but in new dimension of education not anymore in conventional way.

Other than that, throughout this testing strategy, it is important to expose to the students about the MOOCs platform and how they be able to learn from there. Hence, by doing this testing, the students at least know about the platform and they can explored it by themselves. Moreover, it looks like the students get to know more and learn more about the subject they have joined and they have fun while learning. So, the testing strategy is focusing on the usage of MOOCs to the students, the course content and activities and their opinion about the MOOCs and what makes MOOCs differ from the others platforms.

6.4 Test Implementation

Test implementations is based on the questionnaire that created using a Google form. The testing is done through the MOOCs platform Multimedia System subject. There are three method of questionnaire has been created which containing Pre-Test, Post-Test and Survey Questionnaire.

The implementation of this test is containing a questionnaire about the topics to be covered in the Chapter 2. The students have to answer based on the notes and lectures that they have to be learn first from the topics. The questionnaire are containing text description, 10 questions for each pre and post test and also for the survey questionnaire.The suitable questionnaire has been created to enable the students to answer the questionnaire. Besides that, the content containing in the topics will ensure the students to get the answer correctly. The response which has been submitted will be recorded and analyse.

This part will discuss more about the description of the test and test data.

6.4.1 Test Description

For this testing description, it more focusing on functional, usability and TAM Model testing. This is to ensure that the project is meet the requirements and are useful for the user. In other hand, this test is to gather the opinion from the user to improve their learnability.

Functionability testing.

Functionality testing is important to ensure that the system can work and function properly without error. Other than that, it is to access the system are running as planned before. Functionality testing is required to focus on the function of the project and the understanding of the user to use the system. This testing gather the understand of the user when they using MOOCs platform.

Usability testing.

Usability testing is a technique to ensure that the users are be able to using the systems. It is intended the users about the system to carry out a few intended tasks including the learnability, interactivity, efficiency and effective of the system. In other aspects, the usability testing is to test the effectiveness, efficiency and the user satisfaction when they using the sytems. Hence, the usability testing is required to determine whether the systems developed are meet their requirements or not.

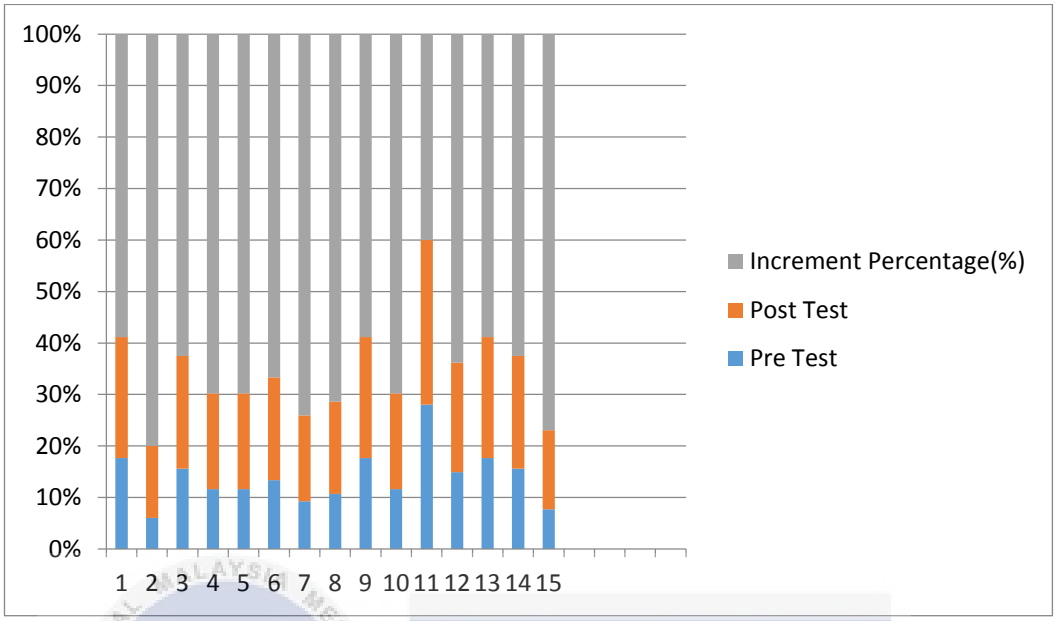
6.4.2 Test Data

Test data is the result that obtained through the testing conducted towards the selected participants for this projects. All the data are analysed by the developer to test the effectiveness of the project that has been developed. The testing are divided into three testing which are consist of Pre-Test, Post-Test and Survey Questionnaire. The target respondents for the Pre and Post Test are only 15 persons. Meanwhile the target persons for Survey Questionnaire are 30 persons. The test data results will be explained more on Analysis Data which shows the result obtained from the survey conducted.

Table 6.4.2.1

Respondent	Pre-Test Results	Post-Test Results	Incremental Percentage (%)
1	6	8	20
2	3	7	40
3	5	7	20
4	5	8	30
5	5	8	30
6	6	9	30
7	5	9	40
8	6	10	40
9	6	8	20
10	5	8	30
11	7	8	10
12	7	10	30
13	6	8	20
14	5	7	20
15	5	10	50

Table 6.4.2.1 shows the results of respondents while testing for the pre and post test. The result shows the incremental percentage change from pre to post test.



Graph 6.4.2.1 The incremental changes of percentage from pre test to post test.

Based on the graph 6.4.2.1, the graph shows the incremental changes of percentage from pre test to post test testing that has been conducted on 15 students. From the graph, we can see that the biggest incremental changes from pre test to post test. This prove that there is an increment from the the pre test which refer to traditional way to post test which refer to MOOCs.

Hence, we can conclude that there is an improvement using MOOCs compared with traditional way.

6.5 Test Results and Analysis

Example of Questionnaires

i) Pre-Test Questionnaire

Q1: Please choose the right Multimedia Hardware.

Q2: Choose the right statement related Mother Board.

Q3: Choose the level of Multimedia PC.

Q4: Adobe Photoshop is used to create, edit and color graphic images that can be used for another applications.

Q5: What is offers an interface and superb editing tools for video, multimedia or the web.

Q6: What is Multimedia Delivery System ?

Q7: Choose the right statement of Internet.

Q8: Choose the right storage tools.

Q9: Windows Platform was introduced on Jan 24, 1984 and produced by Microsoft Company.

Q10: Macintosh was marketed by Apple inc company and first commercial successful personal computer to feature a mouse and GUI.

(Full Questionnaire are as shown in the Appendix)

ii) Post-Test Questionnaire.

Q1: Monitor is to display and enlarge an images. (Answer True or False)

Q2: _____ to make data or images appear on the screen and monitor.

Q3: How scanner is function ?

Q4: The MPMC comprised companies including (Multiple Answer)

Q5: Which one is the best level of Multimedia PC ?

Q6: Choose the right Multimedia Delivery Tools (Multiple Answer)

Q7: What is the use of Asynchronous Digital Subscribe Line (ADSL) ?

Q8: USB is a short for Universal Serial Bus. USB supports Plug-In-Play installation and hot-plugging.(True or False)

Q9: Microsoft Windows is a series of software operating system and graphical user interface that produces by Microsoft. (True or False)

Q10: Macintosh was the first commercial successful personal computer to feature a keyboard and command-line interface.

(Full Questionnaire are as shown in the Appendix)

iii) Survey Questionnaire.

There are five parts for the survey questionnaire. This survey questionnaire is to gather the response of the students towards the MOOCs and also subject that has been offer to them which is Multimedia System. In this questionnaire, the suitable questions are created to evaluate their understanding and interesting towards this platform. Hence, there are four parts that the students have to answer the questionnaire which consist of:

Part A: Demography

Part B: The Use of Massive Open Online Courses.

Part C: Course Content and Activities

Part D: Overall.

Part A: Demography

Gender: ( ) Male ( ) Female

Age: ( ) 18-20 ( ) 21-25 ( ) 26-30

Race: ( ) Malay ( ) Chinese ( ) Indian ( ) Others

Course: ( ) BITM ( ) Others.

Year/Sem:

Part B: The Use of Massive Open Online Courses (MOOCs). (Perceived of Usefulness)

1. Strongly Disagree 2. Disagree 3. Agree 4. Very Agree 5. Strongly Agree

1. I have known what it is Massive Open Online Courses (MOOCs).	1	2	3	4	5
2. I found MOOCs is easy to use.	1	2	3	4	5
3. I found that MOOCs is interactive and friendly user.	1	2	3	4	5
4. My interactions with MOOCs platform was understandable.	1	2	3	4	5
5. Using MOOCs would improve my course performance.	1	2	3	4	5

Part C: Course Content and Activities. (Ease of Use)

1. Strongly Disagree 2. Disagree 3. Agree 4. Very Agree 5. Strongly Agree

1. The learning material were clear.	1	2	3	4	5
2. The materials were acceptable.	1	2	3	4	5
3. The materials were interesting.	1	2	3	4	5
4. The reference material were useful.	1	2	3	4	5
5. The content were accurate.	1	2	3	4	5
6. The course activities helped me learned.	1	2	3	4	5
7. The activities were realistic	1	2	3	4	5
8. The course activities help me to apply what I have learned.	1	2	3	4	5
9. The course activities improved my social skills.	1	2	3	4	5
10. The course activities are engaging.	1	2	3	4	5

Part D: Overall

1. Strongly Disagree 2. Disagree 3. Agree 4. Very Agree 5. Strongly Agree

1. The course content met my personal target goals of learning.	1	2	3	4	5
2. The quality of the course met my expextations.	1	2	3	4	5
3. The course objectives, content and assessments were consistent.	1	2	3	4	5
4. I would recommend this course to a colleague or friend.	1	2	3	4	5
5. What aspects of this course were most useful or valuable ?					
6. How would you improve this course ?					

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6.6 Analysis Testing

Pre-Test Data

Pre-Test Questionnaire.

There are 10 question that has to be answer by the student. The questionnaire are given based on the notes Chapter 2 Multimedia the topics using notes and slides.The questions are consists of:

Q1: Please choose the right Multimedia Hardware.

Q2: Choose the right statement related Mother Board.

Q3: Choose the level of Multimedia PC.

Q4: Adobe Photoshop is used to create, edit and color graphic images that can be used for another applications.

Q5: What is offers an interface and superb editing tools for video, multimedia or the web.

Q6: What is Multimedia Delivery System ?

Q7: Choose the right statement of Internet.

Q8: Choose the right storage tools.

Q9: Windows Platform was introduced on Jan 24, 1984 and produced by Microsoft Company.

Q10: Macintosh was marketed by Apple inc company and first commercial successful personal computer to feature a mouse and GUI.

(Full Questionnaire are as shown in the Appendix)

Figure below is the result of the respondents for Pre-Test Questionnaire.

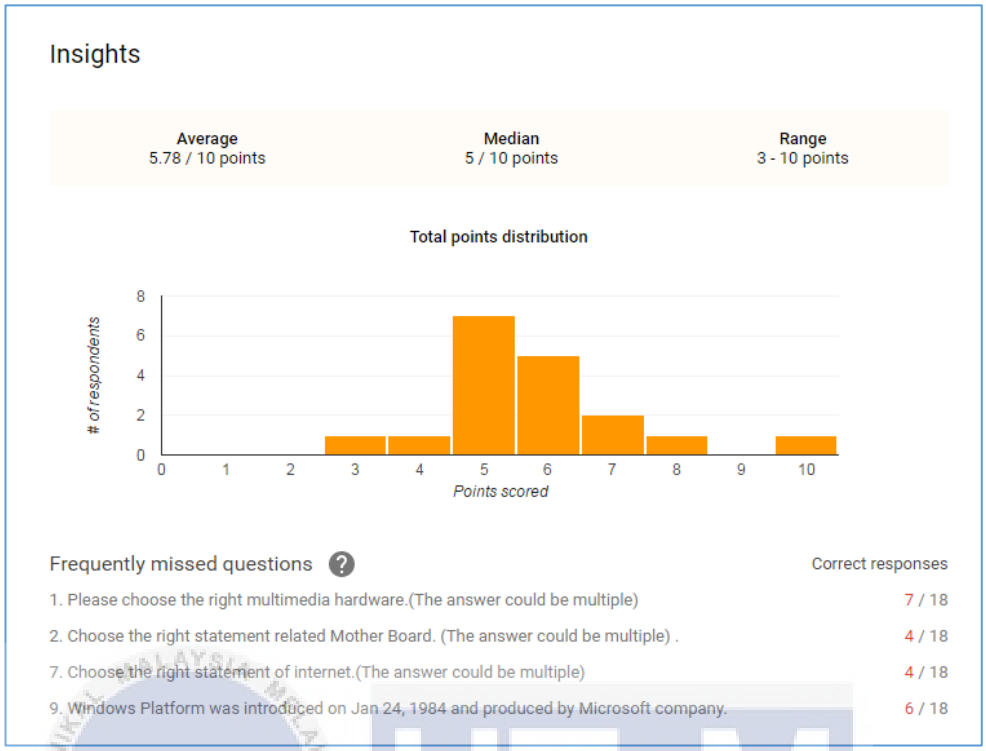

Figure 6.6.i

Qn: Question number

The figure 6.6.i shows the number of respondents with their points scored. The data shows the average of students with point score are 5.78/ 10, median with 5/10 and the range are about 3-10 points. From the graph, we can see the lowest mark that the students achieved is 3 and the highest mark is 10. However, we can see that, the points scored that most of the respondents can achieved are 5/10. There are also stated there the frequently missed questions which are Q1, Q2,Q7 and Q9. Hence, this pre-test showing the students cannot get answer correctly eventhough they have refer the notes.

Post-Test Data

Post-Test Questionnaire

There are 10 question that has to be answer by the student. The questionnaire are given based on the videos Chapter 2 Multimedia Technology. The data are gathered to show the understanding of the students about the topics using videos.

The questions are consists of:

Q1: Monitor is to display and enlarge an images. (Answer True or False)

Q2: _____ to make data or images appear on the screen or monitor.

Q3: How scanner is function ?

Q4: The MPMC comprised companies including (Multiple Answer)

Q5: Which one is the best level of Multimedia PC ?

Q6: Choose the right Multimedia Delivery Tools. (Multiple Answer)

Q7: What is the use of Asynchronous Digital Subscriber Line (ADSL)?

Q8: USB is a short for Universal Serial Bus. USB supports Plug-In-Play installation and hot plugging.

Q9: Microsoft Windows is a series of software operating system and graphical user interfaces produces by Microsoft. (True or False)

Q10: Macintosh was first commercially successful personal computer to feature a keyboard and command-line interfaces.(True or False)

(Full Questionnaire are as shown in the Appendix)

Figure below is the result of the respondents for Post-Test Questionnaire.

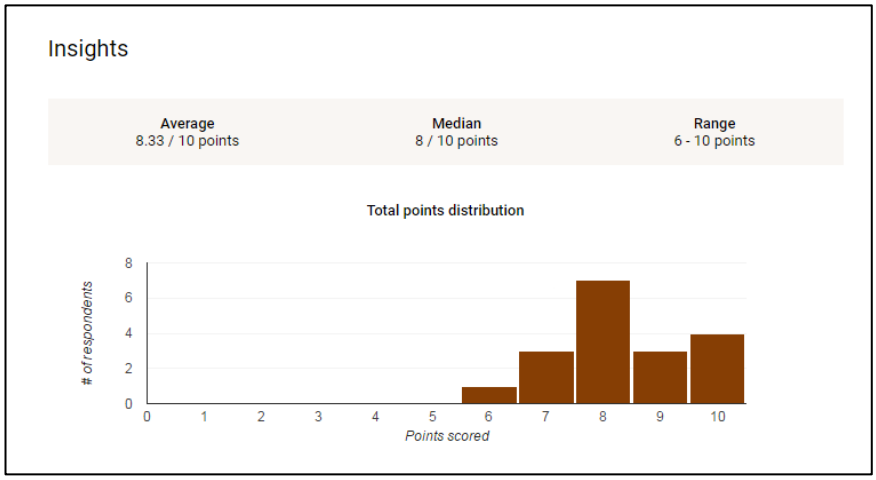

Figure 6.6.ii

The figure 6.6.ii shows the number of respondents with their points scored. The data shows the average of students with point score are 8/ 10, median with 8/10 and the average points scored is 8.33/10. From the graph, we can see the lowest mark that the students achieved is 6 and the highest mark is 10. However, we can see that, the points scored that most of the respondents can achieved are 8/10. Hence, this post-test showing the increase in points scored after they study using the video compared with the pre-test before.

Survey Questionnaire Data

There are five parts for the survey questionnaire. This survey questionnaire is to gather the response of the students towards the MOOCs and also subject that has been offer to them which is Multimedia System. In this questionnaire, the suitable questions are created to evaluate their understanding and interesting towards this platform. Hence, there are four parts that the students have to answer the questionnaire which consist of:

Part A: Demography

Part B: The Use of Massive Open Online Courses.

Part C: Course Content and Activities

Part D: Overall.

The data gathered are being shown below.

Part A: Demography.

Demography is explain about the rationality, gender, age and the course of the students. The number of respondents required are 30 persons.

1. Gender

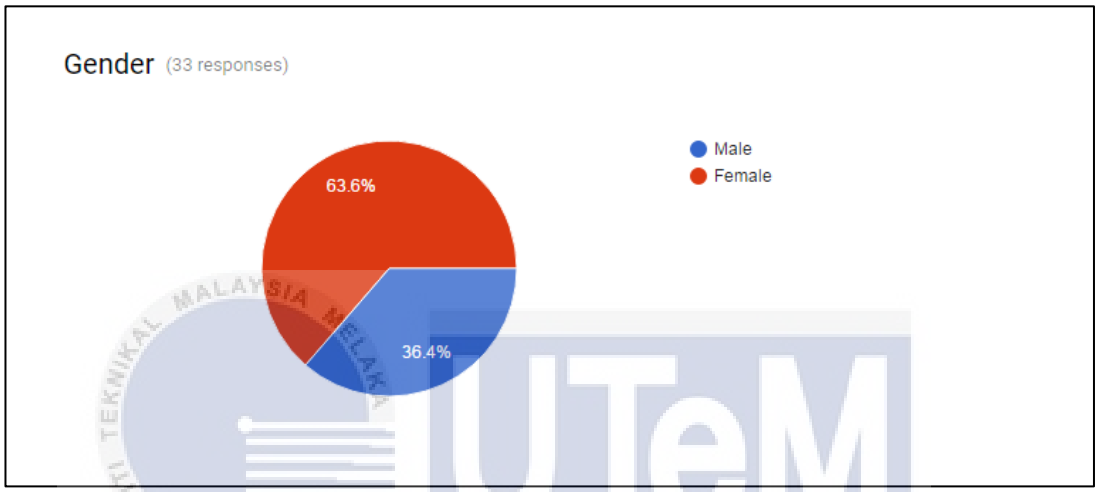

Figure 6.6.iii

From the figure 6.6.iii , the chart shown the respondents are 33. Most of the respondents are female with percentage 63.6% and the rest are male.

2. Age

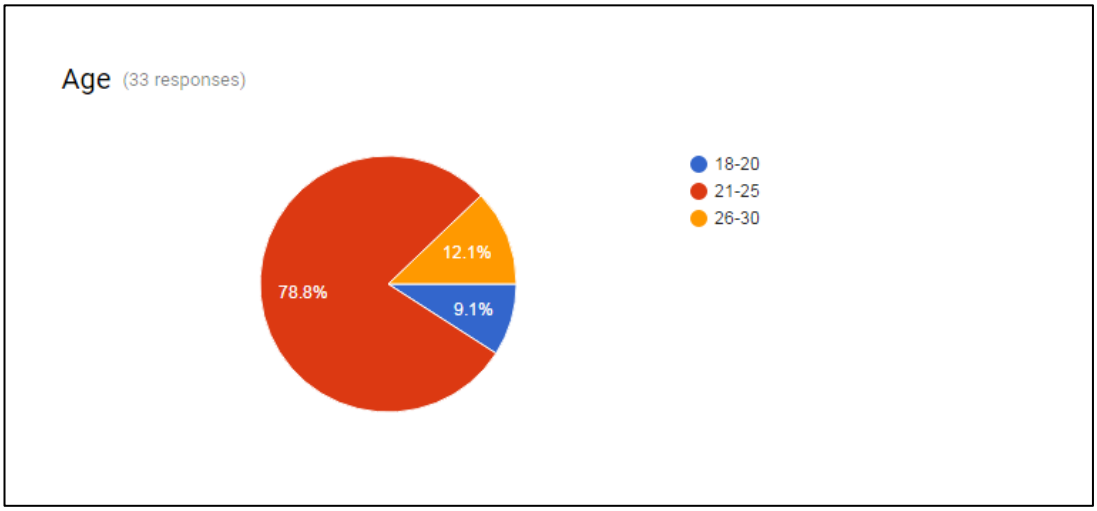

Figure 6.6.iv

From the figure 6.6.iv, the chart shows the most of the respondents are in the range of age between 21 to 25. With second range of age is between 26 to 30. The least age of respondents are between 18 to 20.

3. Rationality.

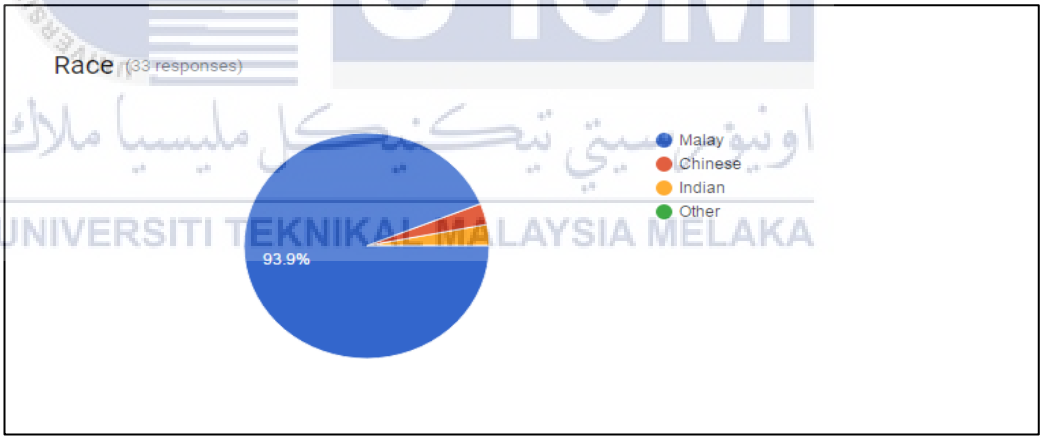

Figure 6.6.v

From the figure 6.6.v, the chart shows the rationality is monopolied by Malays, followed by Chinese and Indians.

4. Course

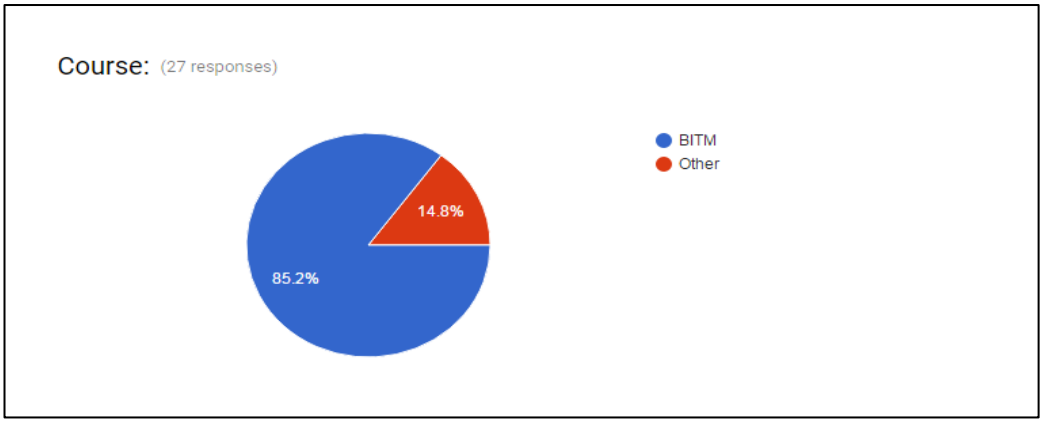

Figure 6.6. vi

From the figure 6.6.vi, the graph shows most of the respondents are from BITM course and the rest are from the other course.

Demographic Characteristics Data Analysis

Variables	Category	Frequemcy	Percent (%)
1) **Gender**	Male	12	36.4
	Female	21	63.6
2) **Age**	18 - 20	3	9.1
	21 - 25	26	18.8
	26 - 30	4	12.1
3) **Rationality**	Malay	30	93.9
	Chinese	2	6.01
	Indians	1	3.01
	Others	0	0.00
4) **Course**	BITM	23	85.2
	Others	4	14.8

Part B: The Use of Massive Open Online Courses (MOOCs).

There are five question about the usage of MOOCs. This question being asked to ensure that they know what is MOOCs platform and how they functions. The questions are stated below:

Questions about The Use of Massive Open Online Coures.
(Perceived Usefulness)

1. Strongly Disagree 2. Disagree 3. Agree 4. Very Agree 5. Strongly Agree

1. I have known what it is Massive Open Online Courses (MOOCs).	1	2	3	4	5
2. I found MOOCs is easy to use.	1	2	3	4	5
3. I found that MOOCs is interactive and friendly user.	1	2	3	4	5
4. My interactions with MOOCs platform was understandable.	1	2	3	4	5
5. Using MOOCs would improve my course performance.	1	2	3	4	5

This table shows the question for **Part B: The Use of Massive Open Online Courses (MOOCs)** (**Perceived Usefulness)**

The data gathered will be explained as the table below shown.

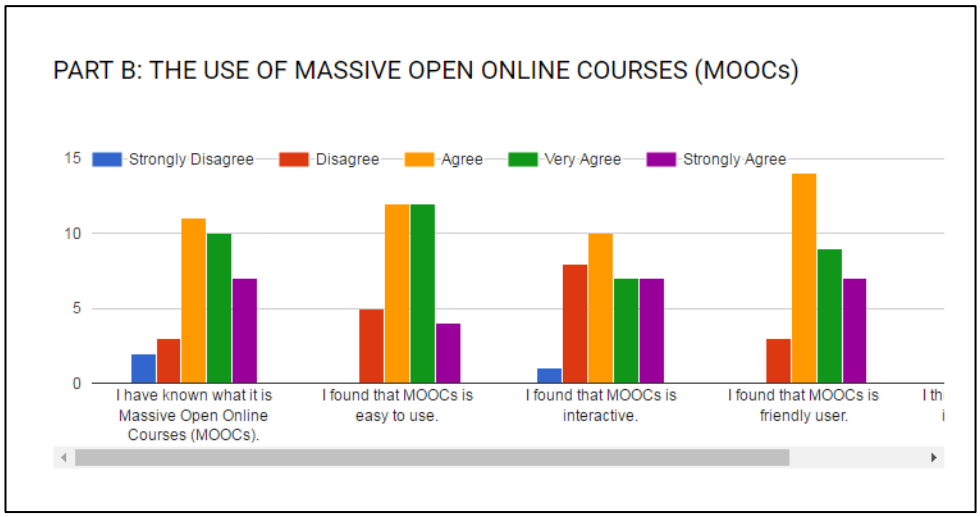

Figure 6.6.vii

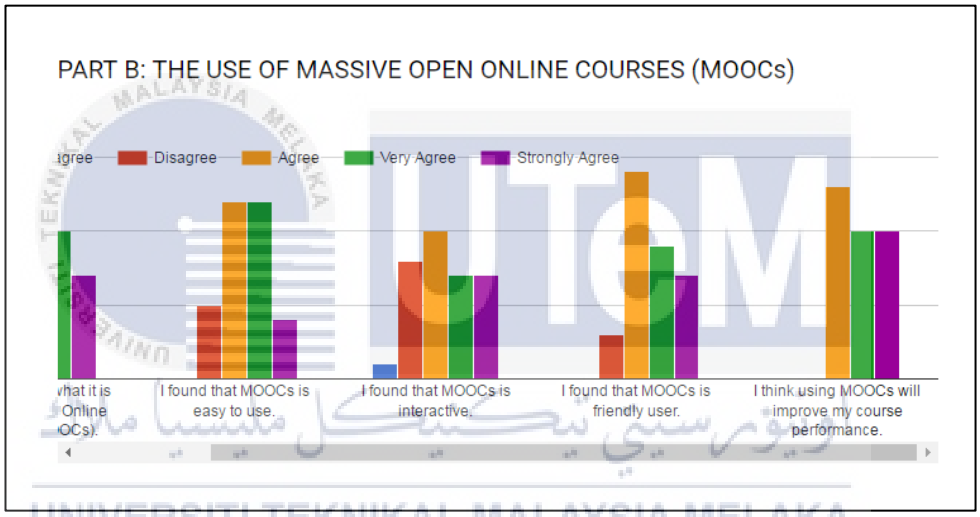

Figure 6.6.viii

This table shows the response from the respondents that has joined the course and using the MOOCs.

Q1: I have known what it is Massive Open Online Courses (MOOCs).

The graph shows most of them agree they known what it is MOOCs after they joined the course.

Q2: I found that MOOCs is easy to use.

The graph shows the same rate of scale which are agree and very agree they think that MOOCs is easy to use

Q3: I found that MOOCs is interactive.

The graph shows the students are agree that MOOCs is interactive and one person is showing the disagree about MOOCs is interactive.

Q4: My interactions with MOOCs platform was friendly user.

The graph shown that most of the user are agree MOOCs was friendly user but there is also a minority disagree that MOOCs was friendly user.

Q5: I think using MOOCs will improve my course development.

The graph shown that the user are agree about the improvement using MOOCs and there are also the same rate of agreement from the user about the course development.

Data below shows the analysis of distribution response scale from 1=Strongly Disagree, 2=Disagree, 3=Agree, 4= Very Agree, 5= Strongly Disagree.

	Items	**Mean**	**Average**	**Response**				
				1	2	3	4	5
Q1	I have known what it is Massive Open Online Courses (MOOCs)	3.52	3.52	2 6.06%	3 9.09%	11 33.3%	10 30.3%	7 21.2%
Q2	I found MOOCs is easy to use.	3.45	3.45	0 0%	5 15.2%	12 36.4%	12 36.4%	4 12.1%
Q3	I found that MOOCs is interactive and friendly user.	3.70	3.70	1 3.03%	8 24.2%	10 30.3%	7 21.2%	7 21.2%
Q4	My interactions with MOOCs platform was understandable.	3.36	3.36	0 0%	3 9.1%	14 42.4%	7 21.2%	7 21.2%
Q5	Using MOOCs would improve my course performance.	3.91	3.91	0 0%	0 0%	13 39.3%	10 30.3%	10 30.3%

Qn= number of questions.

Table 6.2 Distribution response for The Use of Massive Open Online Courses (MOOCs) (Perceived Usefulness)

Part C: Course Content and Activities. (Ease of Use)

There are ten questionanire in this course content and activities part which are five question for course content and five question more focus on the activities.

Questions for Course Content and Activities. (Ease of Use)

1. Strongly Disagree 2. Disagree 3. Agree 4. Very Agree
5. Strongly Agree

1. The learning material were clear.	1	2	3	4	5
2. The materials were acceptable.	1	2	3	4	5
3. The materials were interesting.	1	2	3	4	5
4. The reference material were useful.	1	2	3	4	5
5. The content were accurate.	1	2	3	4	5
6. The course activities helped me learned.	1	2	3	4	5
7. The activities were realistic	1	2	3	4	5
8. The course activities help me to apply what I have learned.	1	2	3	4	5
9. The course activities improved my social skills.	1	2	3	4	5
10. The course activities are engaging.	1	2	3	4	5

Table below shown the result and data gather from the test.

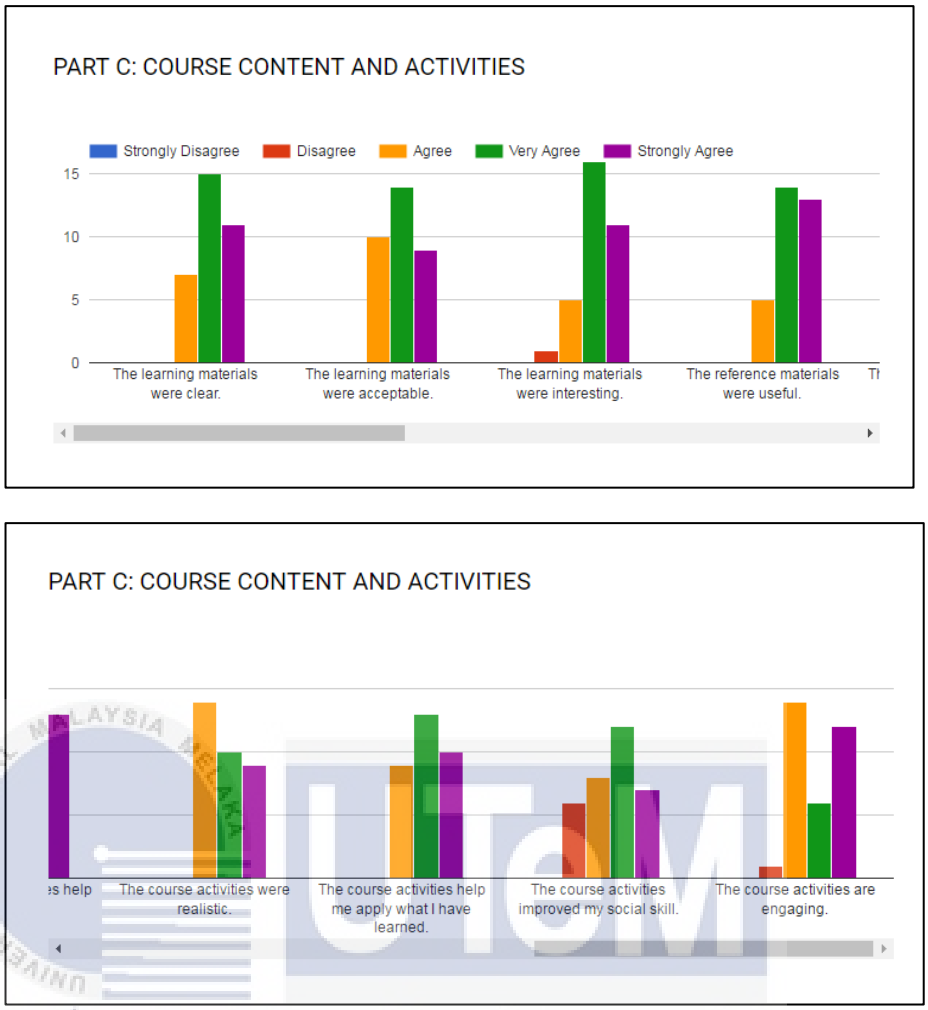

Figure 6.6.1.i

There are 10 questions for this survey questionnaire.

The table shows the graph that analyse the data gathered from the survey.

Q1: The learning materials were clear.

From the graph, it shows that most of the user are very agree that the materials are clear.

Q2: The learning materials were acceptable.

From the graph, most of the user can accept the learning materials.

Q3: The learning materials were interesting.

From the graph, the user majority very agree that it is interesting but there is also minority disagree that it is interesting.

Q4:The reference materials were useful.

From the graph, we can see that most of user very agree it is useful.

Q5: The content were accurate.

From the graph, we can see that, there are vice versa of the user opinion which is most of the user strongly agree it is accurate meanwhile there are user disagree it is accurate.

Q6: The course activities help me learn.

From the graph, the user are very agree that it is help students to learn.

Q7:The course activities were realistic.

From the graph, the user are agree it is realistic and can be use.

Q8: The course activities help me apply what I have learned.

From the graph, the user are very agree they can apply what they have learned before when joining the activities.

Q9: The course activities improved my social skill.

From the graph, the user are very agree that the activities can improve their social skill.

Q10: The course activities are engaging.

From the graph, the user are agree that it is engaging.

Data below shows the analysis of distribution response scale from

1=Strongly Disagree, 2=Disagree, 3=Agree, 4= Very Agree, 5= Strongly Disagree.

Table 6.2 Distribution response table for Course Content and Activities

	Items	Mean	Average	Response				
				1	2	3	4	5
Q1	The learning material were clear.	4.12	4.12	0	0	7	15	11
				0%	0%	21.2	45.5%	33.3%
Q2	The materials were acceptable.	3.97	3.97	0	0	10	14	9
				0%	0%	30.3%	42.4%	20.9%
Q3	The materials were interesting.	4.12	4.12	0	1	5	16	11
				0%	3.03%	15.1%	48.5%	33.3%
Q4	The reference material were useful.	4.24	4.24	0	1	5	12	15
				0%	3.03%	15.1%	36.4%	45.5%
Q5	The content were accurate.	4.21	4.21	0	0	6	14	13
				0%	0%	39.3%	42.4%	30.4%
Q6	The course activities helped me learned.	4.21	4.21	0	0	6	14	13
				0%	0%	18.2%	42.4%	39.4%
Q7	The activities were realistic.	3.85	3.85	0	0	14	10	9
				0%	0%	42.4%	30.3%	27.3%
Q8	The course activities help me to apply what I have learned.	3.91	3.91	0	0	9	13	10
				0%	0%	27.3%	39.4%	30.3%
Q9	The course activities improved my social skills.	3.61	3.61	0	6	8	12	7
				0%	18.2%	24.2%	36.4%	21.2%
Q10	The course activities are engaging.	3.88	3.88	0	1	14	6	12
				0%	3.03%	42.4%	18.2%	36.4%

Part D: Overall

In this part, the question are more general to get the opinion of the user about the MOOCs. There are seven question in this part.

Questionnaire for Overall of the project.

1. Strongly Disagree 2. Disagree 3. Agree 4. Very Agree 5. Strongly Agree

1. The course content met my personal target goals of learning.	1	2	3	4	5
2. The quality of the course met my expextations.	1	2	3	4	5
3. The course objectives, content and assessments were consistent.	1	2	3	4	5
4. I would recommend this course to a colleague or friend.	1	2	3	4	5
5. What aspects of this course were most useful or valuable ?					
6. How would you improve this course ?					
7. Why did you choose this course?	• Degree Requirement • Time offered • Interest				

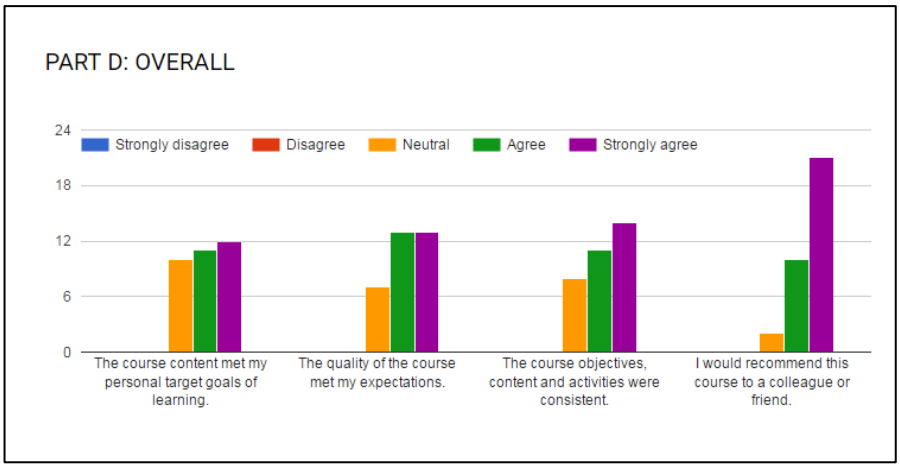

Figure 6.6.1.ii

From the table, the data has been analysed from the graph based on the questionnaire.

Q1: The course content met my personal target goals of learning.

From the graph, most of the user are strongly agree the course content met the target goals of learning.

Q2: The quality of the course met my expectations.

From the graph, the user showing the same result of agreement between agree and strongly agree that the quality of the course met their expectations.

Q3: The course objectives, content and activities were consistent.

From the graph, most of the user are strongly agree that the course objectives, content and activities were consistent.

Q4: I would recommend this course to a colleague or friend.

From the graph , most of the user are strongly agree that they would recommend this course to a colleague or friend.

Data below shows the analysis of distribution response scale from

1=Strongly Disagree, 2=Disagree, 3=Agree, 4= Very Agree, 5= Strongly Disagree.

Table 6.3 Distribution of response for overall courses.

	Items	**Mean**	**Average**	**Response**				
				1	2	3	4	5
Q1	The course content met my personal target goals of learning.	4.06	4.06	0 0%	0 0%	10 30.3%	11 33.3%	12 36.4%
Q2	The quality of the course met my expectations.	4.18	4.18	0 0%	0 0%	7 21.2%	13 39.4%	13 39.4%
Q3	The course objectives, content and assessments were consistent.	4.18	4.18	0 0%	0 0%	8 24.4%	11 33.3%	14 42.4%
Q4	I would recommend this course to a colleague or friend.	4.58	4.58	0 0%	0 0.00%	2 6.06%	10 30.3%	21 63.6%

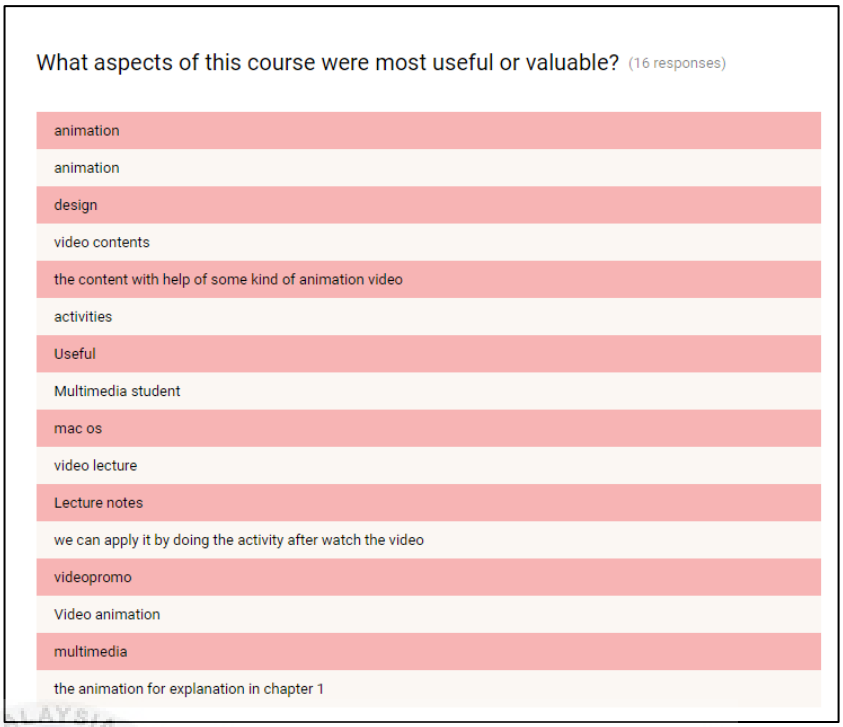

Figure 6.6.1.iii

Q5: what aspects of this course were most useful or valuable?

From the survey, we can see that they think the most useful aspects that they can have in this MOOCs is the videos and animation.

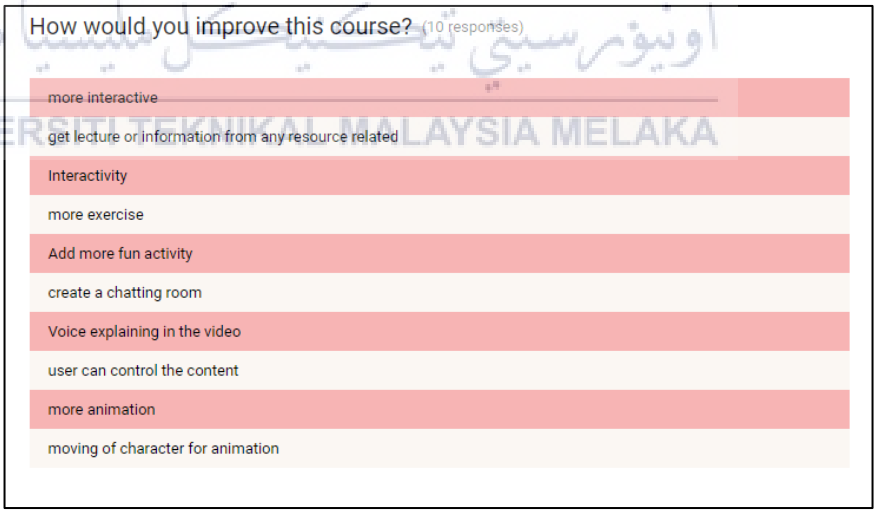

Figure 6.6.1.iv

Q6: How would you improve this course?

From the survey, we can see that the suggest to improve more interactivity and more animation to enhance the interactive learning.

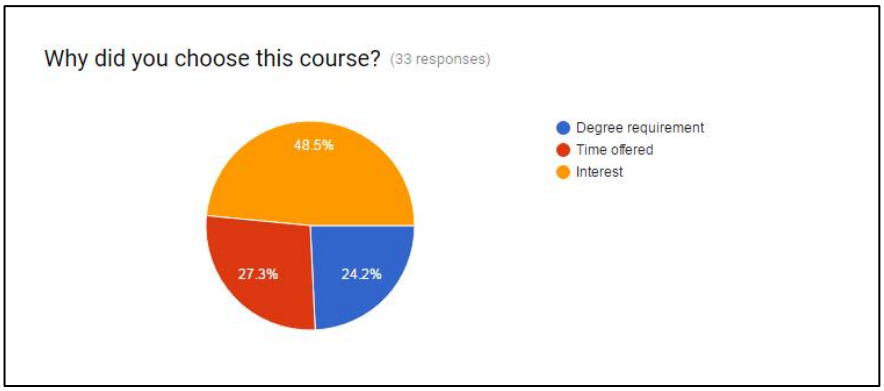

Figure 6.6.1.v

Q7: Why did you choose this course ?

From the pie chart, we can see that most of the students are joining this course is because of interest with highest percentage 48.5% , followed by Time offered with 27.3% and lastly because of degree requirement with 24.2%.

Overall Analysis Test

After the technique of gathering data for testing is to collected and do an analysis that has been done. From the survey testing that has been conducted, the result shown for this project is positive. The overall analysis testing show that the user as a students need a new platform for learning. In order to attract their attention, the testing is being done to know the strength and weakness side of them as a student to learn. Hence, by conducting the testing, the data gathered can used to be a reference and improvement for the future of our education.

6.6 Conclusion

This chapter describe all the testing part and all the testing analysis that has been done and analysed. After the result has been analysed, it is proved that the development of Massive Open Online Courses (MOOCs) for Multimedia System are succeed and readiness to be publish because of the support and the involvement of the students during the testing. But still, the course need to be improved from time to time and in the future this project will achieved the requirements to being the most interactive education learning in the world.

CHAPTER VII

CONCLUSION

7.1 Introduction

In this section, the discussion about the result of the testing and conclusion for every phase that have been done so far. After the testing phase, the future of this project has found their strength and weakess in orde to give the best service for the user to become really what they want as a user. It is hard to produce a product that is perfect because in every product there are their weakness and strength while being developed. After go through all the phases, lastly one product is being developed. Hence, it is really a big hope that the user can still enjoy their learning and be able to learn. The improvement are needed from time to time. Here, in this chapter is about to summarize all the ideas and the testing that has been done. Besides, there are also a few suggestion that can be done in the future.

7.2 Observation on Weaknesses and Strengths

After the testing has been done, the user response are very important because they evaluate our product and feel by themselves about the product. Hence, we can see that, the strength of our product is the video lecture. This is because, the conventional way of learning is using notes and slides compared with our product offered video lecture. The students find it interesting and can go further with an addition of animation, cartoon animation, more interactivity and can go two ways communication in the future.

7.2.1 Strength

After the testing has been done, the user response are very important because they evaluate our product and feel by themselves about the product. Hence, we can see that, the strength of our product is the video lecture. This is because, the conventional way of learning is using notes and slides compared with our product offered video lecture. The students find it interesting and can go further with an addition of animation, cartoon animation, more interactivity and can go two ways communication in the future.

7.2.2 Weakness

Some weakness are identified also from the survey conducted which are they need the content more interactive. Besides , they also need some addition of animation during the videos to create an interactivity. Hence, this weakness of the product will be improve from time to time and being more interactivity and engaging.

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7.3 Proposition for Improvement

In the future, the generation of students will be able to learn in more open environment of education learning. I hope, this MOOCs platform will open wide area of education learning area in the future which is the students are not anymore being stucked in learning area of environment. In the future, the education can be access at anywhere and anytime. Apart from that, the improvement of this course are more focusing on create an engaging learning activities, more interactive content learning and the design of the content learning will be stress out.

7.4 Project Contribution

The development of Massive Open Online Courses (MOOCs) content for Multimedia System is contribute for the PSTP UTeM of learning education centre. Hopefully this project will help the students to learn in new perspective area of education and enable them to become more understanding about the topics being learned. Hence, hopefully this project will contribute on the improvement of the Multimedia System subject. Besides, there are many aspects of education offer in this MOOCs to become guidance and reference for their learning.

7.5 Conclusion

Lastly, there are many hardships that we have to go through in order to produce a great product. In order to developed the product, the improvement still have to be done from time to time. But, from phase to phase a product is succeed being created. Hence, it is a really big hope as this product can give a benefit to the user. Hopefully the user can understand more and be more interested in learning. Everything seems easier because technology are updated from time to time. In the future, the education sector will accept this change of learning education world and be able to learn in fast way which is at anytime, anywhere do they want.

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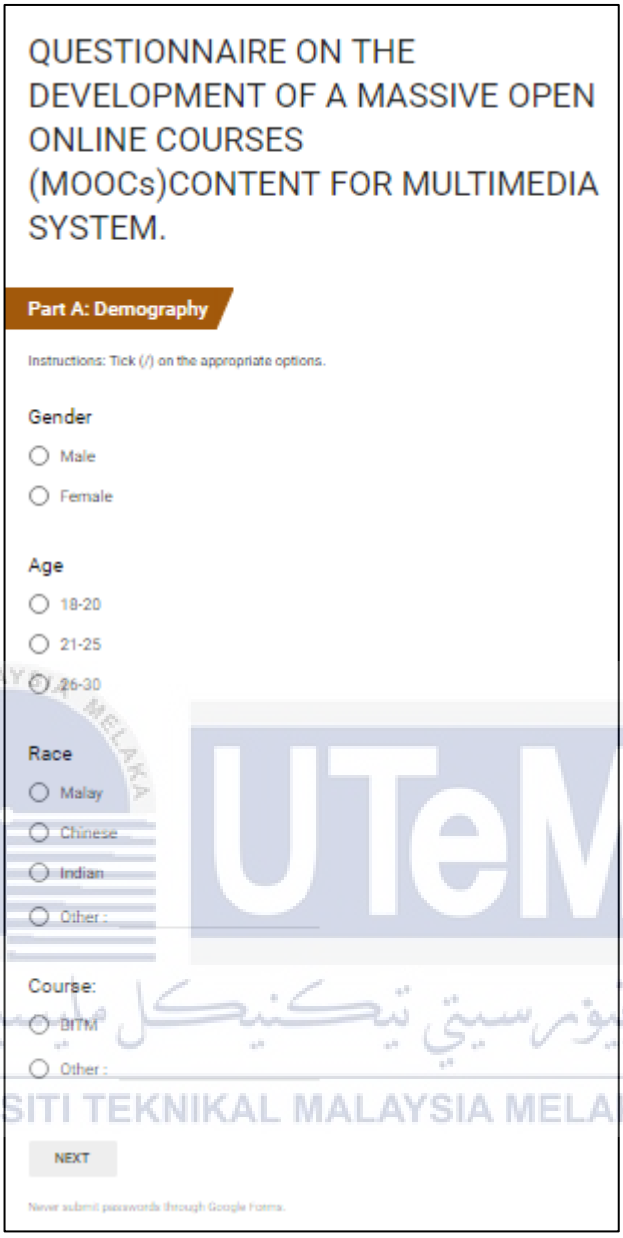
APPENDICES



QUESTIONNAIRE ON THE DEVELOPMENT OF A MASSIVE OPEN ONLINE COURSES (MOOCs)CONTENT FOR MULTIMEDIA SYSTEM.

Part A: Demography

Instructions: Tick (/) on the appropriate options.

Gender

- Male
- Female

Age

- 18-20
- 21-25
- 26-30

Race

- Malay
- Chinese
- Indian
- Other :

Course:

- DITM
- Other :

NEXT

Never submit passwords through Google Forms.

QUESTIONNAIRE ON THE DEVELOPMENT OF A MASSIVE OPEN ONLINE COURSES (MOOCs)CONTENT FOR MULTIMEDIA SYSTEM.

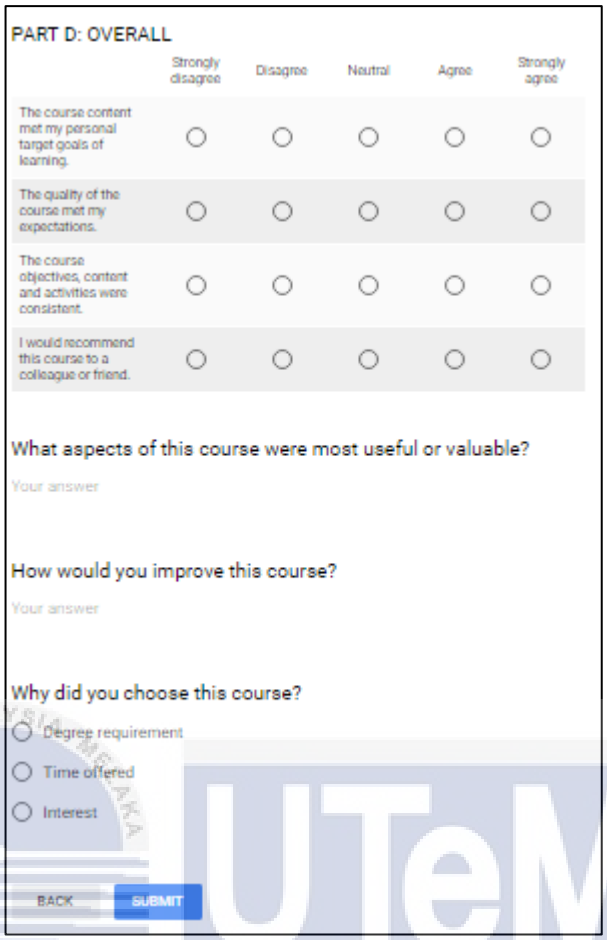
* Required

PART B: THE USE OF MASSIVE OPEN ONLINE COURSES (MOOCs) *

	Strongly Disagree	Disagree	Agree	Very Agree	Strongly Agree
I have known what it is Massive Open Online Courses (MOOCs).	○	○	○	○	○
I found that MOOCs is easy to use.	○	○	○	○	○
I found that MOOCs is interactive.	○	○	○	○	○
I found that MOOCs is friendly user.	○	○	○	○	○
I think using MOOCs will improve my course performance.	○	○	○	○	○

PART C: COURSE CONTENT AND ACTIVITIES

	Strongly Disagree	Disagree	Agree	Very Agree	Strongly Agree
The learning materials were clear.	○	○	○	○	○
The learning materials were acceptable.	○	○	○	○	○
The learning materials were interesting.	○	○	○	○	○
The reference materials were useful.	○	○	○	○	○
The content were accurate.	○	○	○	○	○
The course activities help me learn.	○	○	○	○	○
The course activities were realistic.	○	○	○	○	○
The course activities help me apply what I have learned.	○	○	○	○	○
The course activities improved my social skill.	○	○	○	○	○
The course activities are engaging.	○	○	○	○	○



PART D: OVERALL

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The course content met my personal target goals of learning.	○	○	○	○	○
The quality of the course met my expectations.	○	○	○	○	○
The course objectives, content and activities were consistent.	○	○	○	○	○
I would recommend this course to a colleague or friend.	○	○	○	○	○

What aspects of this course were most useful or valuable?

Your answer

How would you improve this course?

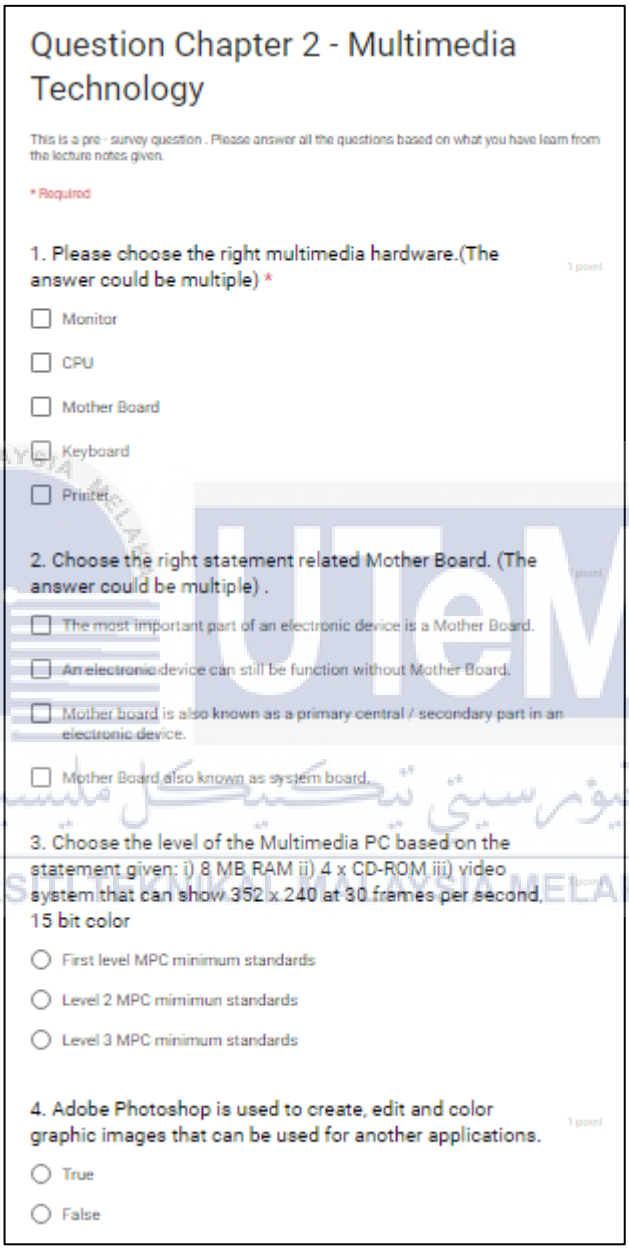
Your answer

Why did you choose this course?

- ○ Degree requirement
- ○ Time offered
- ○ Interest

BACK SUBMIT

PRE TEST QUESTIONNAIRE



Question Chapter 2 - Multimedia Technology

This is a pre - survey question . Please answer all the questions based on what you have learn from the lecture notes given.

* Required

1. Please choose the right multimedia hardware.(The answer could be multiple) * 1 point

- [ ] Monitor
- [ ] CPU
- [ ] Mother Board
- [ ] Keyboard
- [ ] Printer

2. Choose the right statement related Mother Board. (The answer could be multiple) . 1 point

- [ ] The most important part of an electronic device is a Mother Board.
- [ ] An electronic device can still be function without Mother Board.
- [ ] Mother board is also known as a primary central / secondary part in an electronic device.
- [ ] Mother Board also known as system board.

3. Choose the level of the Multimedia PC based on the statement given: i) 8 MB RAM ii) 4 x CD-ROM iii) video system that can show 352 x 240 at 30 frames per second, 15 bit color

- ( ) First level MPC minimum standards
- ( ) Level 2 MPC mimimun standards
- ( ) Level 3 MPC minimum standards

4. Adobe Photoshop is used to create, edit and color graphic images that can be used for another applications. 1 point

- ( ) True
- ( ) False

5. _____ offers an interface and superb editing tools fro video, multimedia or the web. 1 point

- ○ Cool Edit
- ○ Adobe Premier
- ○ 3D Studio Max

6. What is a Multimedia Delivery System ? 1 point

- ○ A delivery system is the medium of data storage device used to deliver Multimedia Application
- ○ A multimedia delivery system could be hard disk, thumb drive, internet and storage tools

7. Choose the right statement of internet.(The answer could be multiple) 1 point

- ☐ It is a uniform graphical environment.
- ☐ It is a network technology based on transferring data in cells or packet.
- ☐ It is a built in redundancy proofing.
- ☐ it is allows more data to be sent over existing copper telephone lines (POTS)
- ☐ A multimedia on tap.

8. Choose the right storage tools. (The answer could be multiple). 1 point

- ☐ USB Drive
- ☐ Card reader
- ☐ Monitor
- ☐ Processor

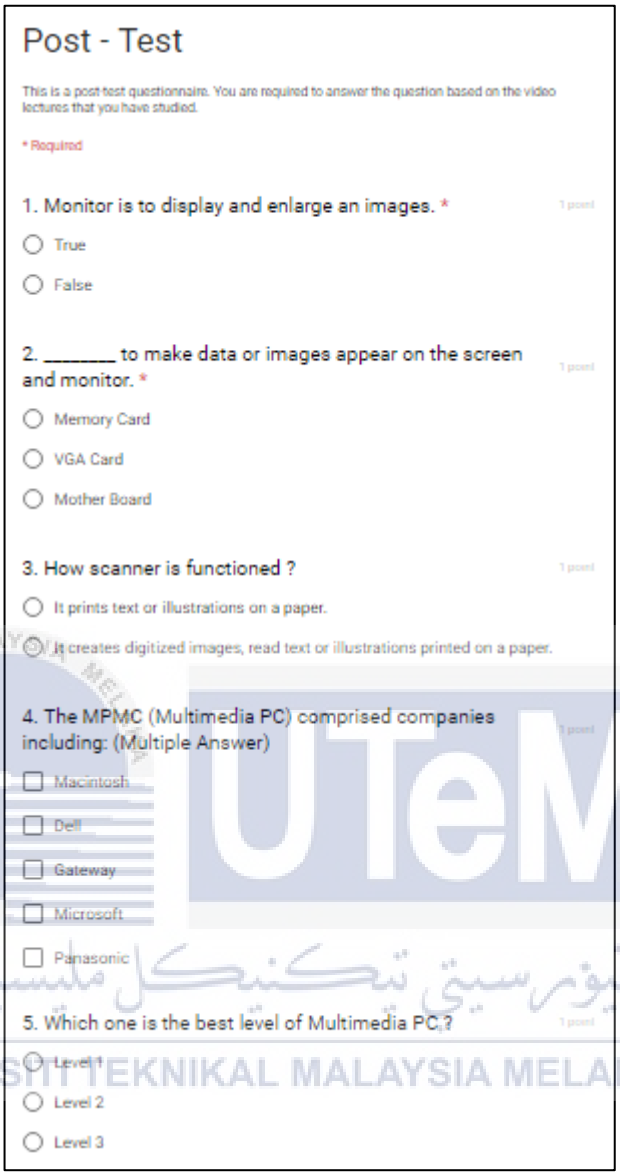
9. Windows Platform was introduced on Jan 24, 1984 and produced by Microsoft company. 1 point

- ○ True
- ○ False

10. Macintosh was marketed by Apple Inc company and first commercial successful personal computer to feature a mouse and a GUI 1 point

- ○ True
- ○ False

POST TEST QUESTIONNAIRE



Post - Test

This is a post test questionnaire. You are required to answer the question based on the video lectures that you have studied.

* Required

1. Monitor is to display and enlarge an images. * 1 point

- True
- False

2. _____ to make data or images appear on the screen and monitor. * 1 point

- Memory Card
- VGA Card
- Mother Board

3. How scanner is functioned ? 1 point

- It prints text or illustrations on a paper.
- It creates digitized images, read text or illustrations printed on a paper.

4. The MPMC (Multimedia PC) comprised companies including: (Multiple Answer) 1 point

- [ ] Macintosh
- [ ] Dell
- [ ] Gateway
- [ ] Microsoft
- [ ] Panasonic

5. Which one is the best level of Multimedia PC ? 1 point

- Level 1
- Level 2
- Level 3

5. Which one is the best level of Multimedia PC ? 1 point

- ○ Level 1
- ○ Level 2
- ○ Level 3

6. Choose the right Multimedia Delivery Tools ? (Multiple Answer) 1 point

- ☐ Asynchronous Subscriber Line (ADSL)
- ☐ Wireless LAN
- ☐ Internet
- ☐ IoS(Internet Over Satellite)
- ☐ Intranet

7. What is the use of Asynchronous Digital Subscriber Line (ADSL) as a delivery tools ? 1 point

- ○ It allows more data to be sent over existing copper telephone lines (POTS)
- ○ It is a network technology based on transferring data in cells or packets of a fixed size
- ○ The installation of optical fiber from a telephone switch to within 1000 feet of a home or enterprise.

8. USB is a short for Universal Serial Bus. USB supports Plug-In-Play installation and hot plugging. 1 point

- ○ True
- ○ False

9. Microsoft Windows is a series of a software operating system and graphical user interfaces (GUI) produces by Microsoft 1 point

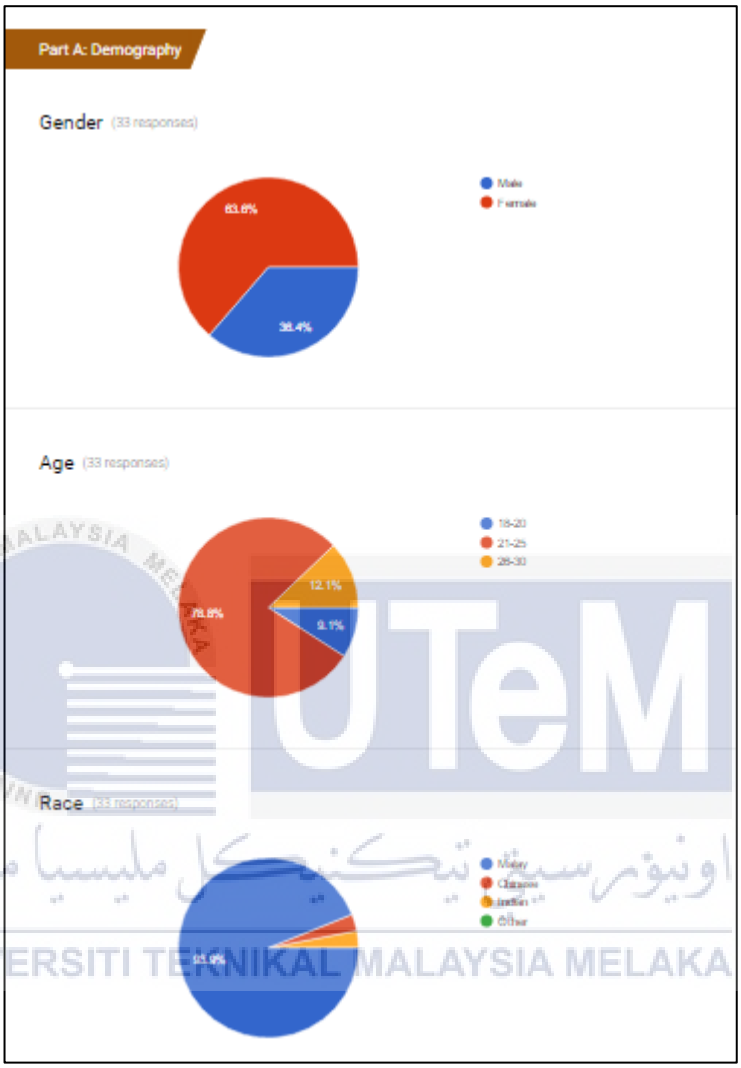
- ○ True
- ○ False

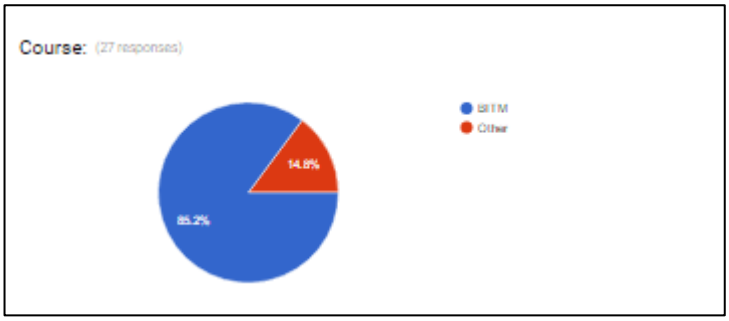
10. Macintosh was the first commercially successful personal computer to feature a keyboard and command user interfaces. 1 point

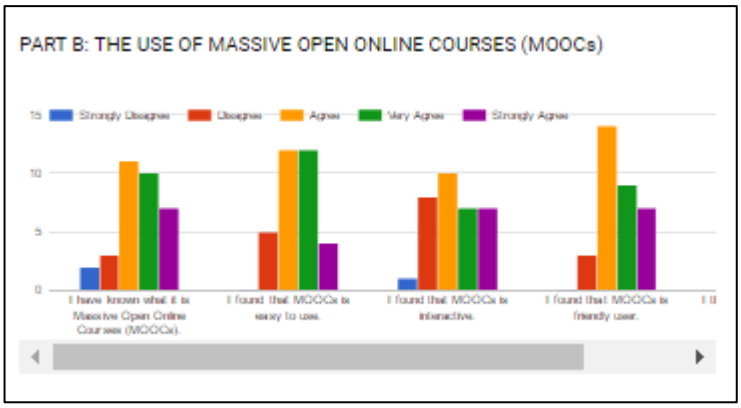
- ○ True
- ○ False

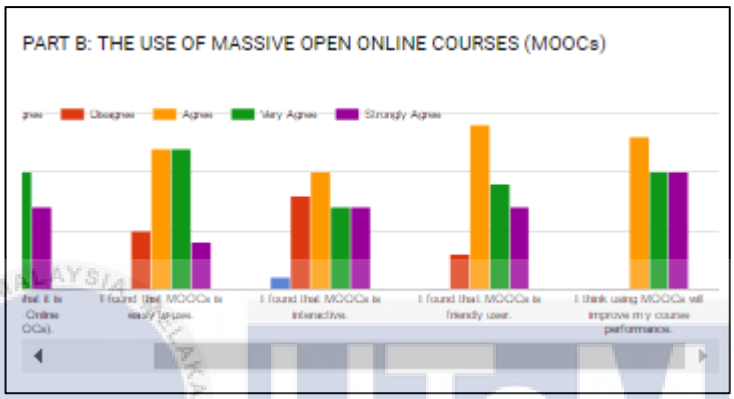
RESULT DATA ANALYSIS

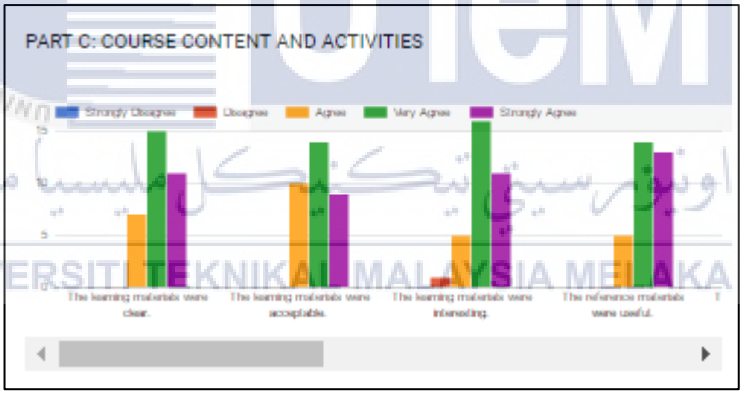
SURVEY QUESTIONNAIRES

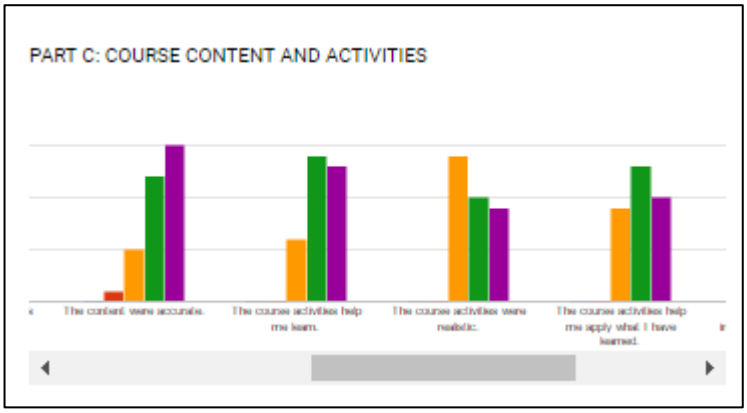






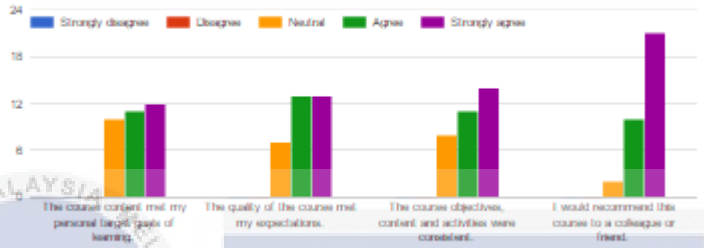






PART C: COURSE CONTENT AND ACTIVITIES

PART D: OVERALL



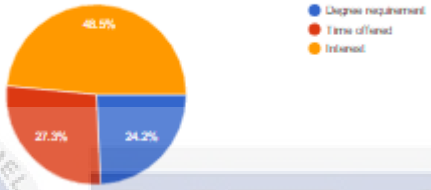
What aspects of this course were most useful or valuable? (16 responses)

animation
animation
design
video contents
the content with help of some kind of animation/video
activities
Useful
Multimedia student
mac os
video lecture
Lecture notes
we can apply it by doing the activity after watch the video
videopromo
Video animation
multimedia
the animation for explanation in chapter 1

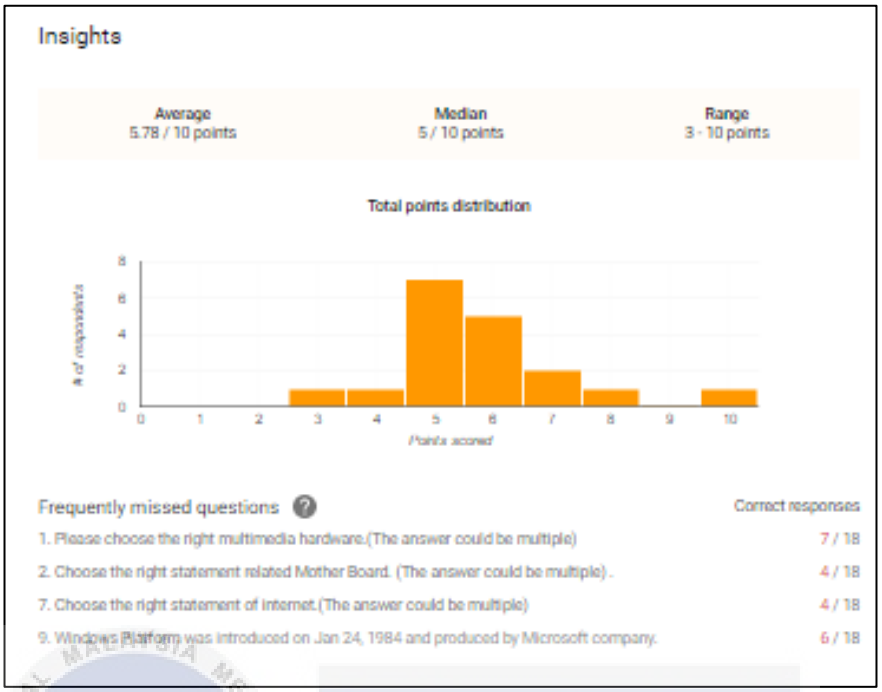
How would you improve this course? (10 responses)

more interactive
get lecture or information from any resource related
Interactivity
more exercise
Add more fun activity
create a chatting room
Voice explaining in the video
user can control the content
more animation
moving of character for animation

Why did you choose this course? (33 responses)



PRE TEST DATA



Insights

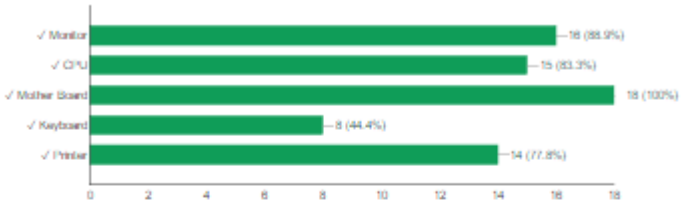
Average	Median	Range
5.78 / 10 points	5 / 10 points	3 - 10 points

Total points distribution

Frequently missed questions	Correct responses
1. Please choose the right multimedia hardware.(The answer could be multiple)	7 / 18
2. Choose the right statement related Mother Board. (The answer could be multiple) .	4 / 18
7. Choose the right statement of internet.(The answer could be multiple)	4 / 18
9. Windows Platform was introduced on Jan 24, 1984 and produced by Microsoft company.	6 / 18

1. Please choose the right multimedia hardware.(The answer could be multiple)

7 / 18 correct responses

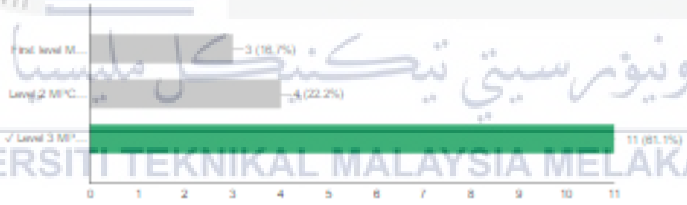


2. Choose the right statement related Mother Board. (The answer could be multiple) .

4 / 18 correct responses

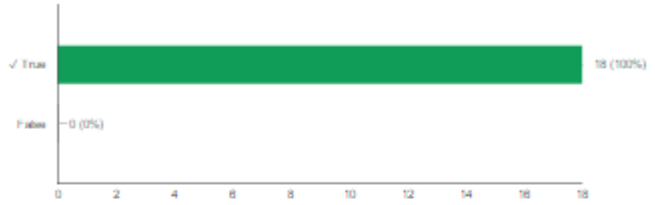
3. Choose the level of the Multimedia PC based on the statement given: i) 8 MB RAM ii) 4 x CD-ROM iii) video system that can show 352 x 240 at 30 frames per second, 15 bit color

11 / 18 correct responses



4. Adobe Photoshop is used to create, edit and color graphic images that can be used for another applications.

18 / 18 correct responses



5. _____ offers an interface and superb editing tools fro video, multimedia or the web.

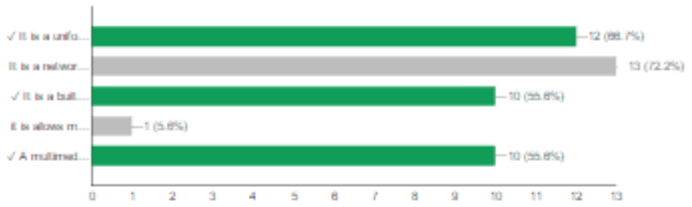
16 / 18 correct responses

6. What is a Multimedia Delivery System ?

14 / 18 correct responses

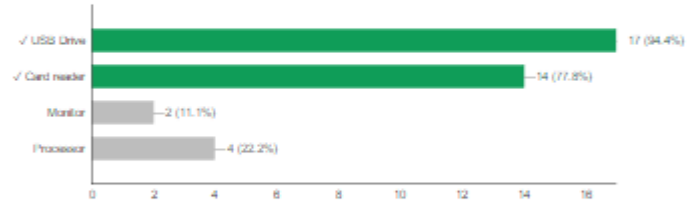
7. Choose the right statement of internet.(The answer could be multiple)

4 / 18 correct responses



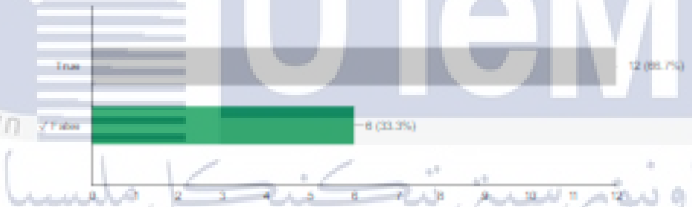
8. Choose the right storage tools. (The answer could be multiple).

9 / 18 correct responses



9. Windows Platform was introduced on Jan 24, 1984 and produced by Microsoft company.

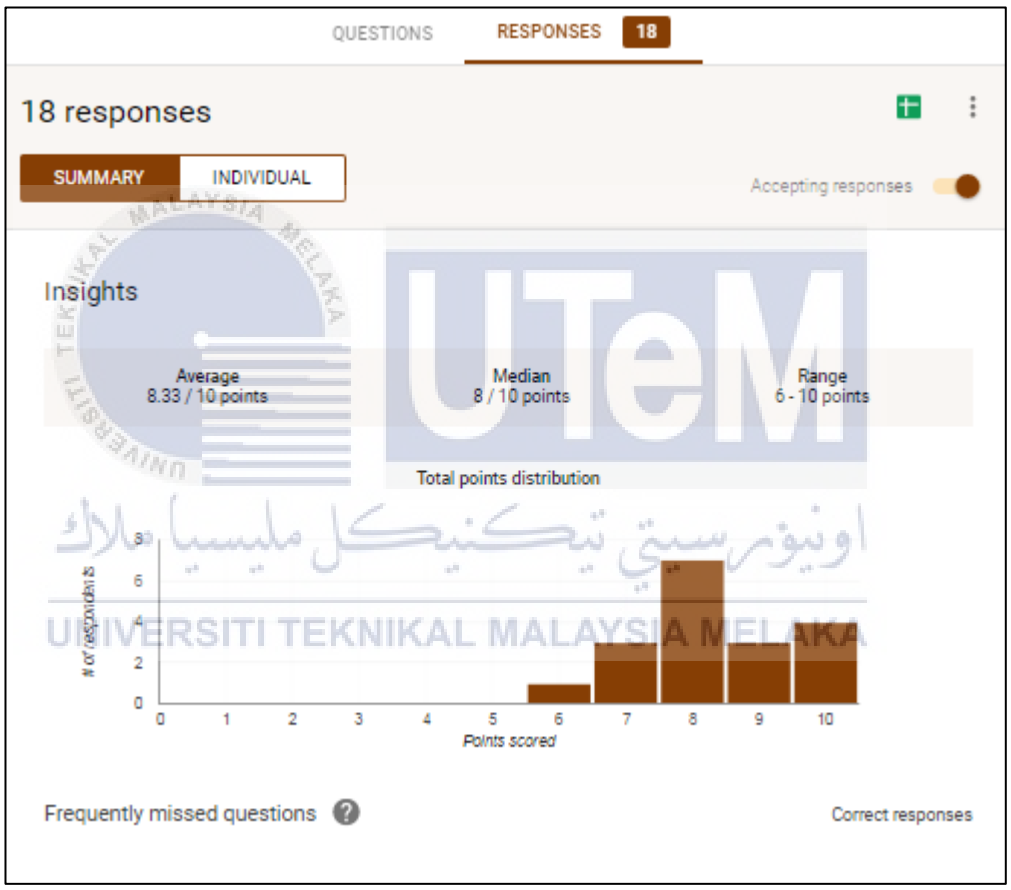
6 / 18 correct responses



10. Macintosh was marketed by Apple Inc company and first commercial successful personal computer to feature a mouse and a GUI

15 / 18 correct responses

POST TEST DATA



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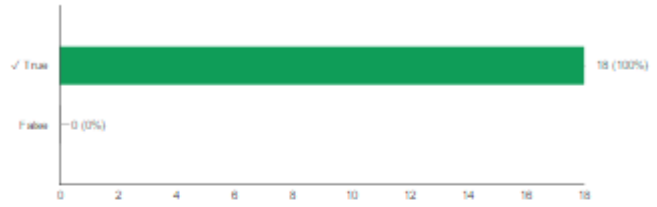
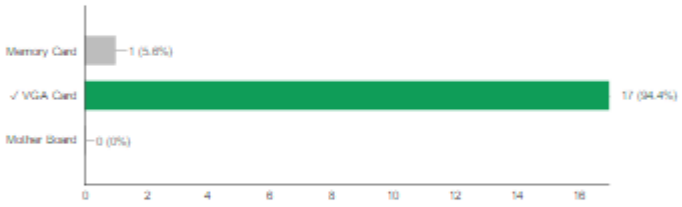
18 / 18 correct responses



2. _____ to make data or images appear on the screen and monitor.

17 / 18 correct responses

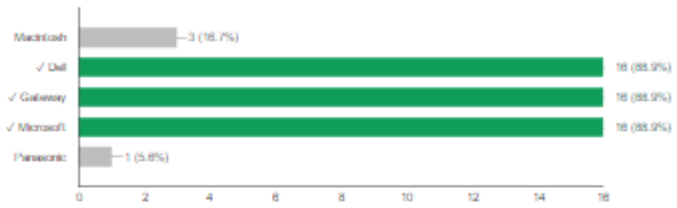


3. How scanner is functioned ?

15 / 18 correct responses

4. The MPMC (Multimedia PC) comprised companies including: (Multiple Answer)

14 / 18 correct responses



5. Which one is the best level of Multimedia PC ?

18 / 18 correct responses

6. Choose the right Multimedia Delivery Tools ? (Multiple Answer)

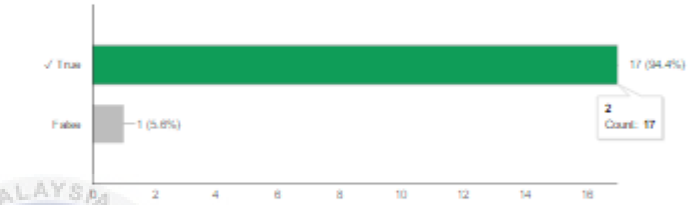
9 / 18 correct responses

7. What is the use of Asynchronous Digital Subscriber Line (ADSL) as a delivery tools ?

16 / 18 correct responses

8. USB is a short for Universal Serial Bus. USB supports Plug-In-Play installation and hot plugging.

17 / 18 correct responses



9. Microsoft Windows is a series of a software operating system and graphical user interfaces (GUI) produces by Microsoft

16 / 18 correct responses

10. Macintosh was the first commercially successful personal computer to feature a keyboard and command user interfaces.

10 / 18 correct responses