UTP Co Curriculum Clicks

By

Adam Malik Dawood Khan

Dissertation submitted in partial fulfilment of the requirements for the

Bachelor of Technology (Hons)

(Business Information Systems)

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CERTIFICATION OF APPROVAL

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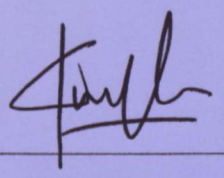


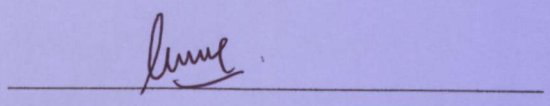
(Mr Faizal Ahmad Fadzil)

UNIVERSITI TEKNOLOGI PETRONAS

TRONOH, PERAK

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.



ADAM MALIK DAWOOD KHAN

ABSTRACT

Education is very critical. Everyday students have to make choices on which subject to undertake and which course would benefit them. In UTP, students are required to attend several co curriculum courses as part of the requirement to be graduated. Most of the students in UTP have problems on deciding co curriculum coursesand they basically choose these courses without proper knowledge and understanding on what these courses got to offer. The author has decided to use the blackboard system knowledge capture technique and to create an interactive web based knowledge management system to assiststudents pertaining to the course selection of Co Curriculum in UTP. The author will now discuss the progress of his proposed project and the additions and removals made post proposal. The author discusses the problems and the solutions provided by the implementation of UTP Co Curriculum Clicks. UTP Co Curriculum Clicks solved all the problems defined as discussed in this report.

ACKNOWLEDGEMENT

Praise to Allah S.W.T the most merciful, and the most compassionate for granting me the chance and strength to complete this project successfully.

First and foremost, I would like to thank everyone who has helped me during the period of my research and development. I would particularly like to thank En Faizal bin Ahmad Fadzil for his time and commitment advising and facilitating my progress.

I have plenty of gratitude and appreciation towards staff and friends for all the guidance and support given to me during my time as developing this project. I would like to thank Azfar Abdul Aziz my colleague, for his advice, teachings and assistance to me as a learning developer. I also would like to give tokens of appreciation also to the Final Year Project Coordinator, for her commitment making this year's FYP course a success.

Finally, I would like to thank Allah S.W.T for his grace and grants as I was made able to go through all pleasure and pain during my internship.

Truly,

Adam Malik Dawood Khan

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CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND STUDY

Knowledge Management (KM) comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizations as processes or practices. This information consists of a mixture of fixed and variable data. A web form is one of the transaction media thathas been used nowadays. A web form is a form that is created on a webpage where it allows online users to enter data to be submitted to a server for processing.

The users will filled out this forms by using the checkboxes, radio button or either text field. The data entered into this form later on will be sent and save to the server. For example, a user can fill up an online survey form and the survey result data will then be stored at the server created for the survey. The survey data can be retrieved later from the server when needed.

There are no restricted languages to create the online form. It can be created by using HTML, Perl, PHP, and Java, JavaScript or .Net/ASP.NET. The implementations of those languages will create the Graphic User Interface (GUI) for the interface, such as grids and themes, minimizing programming time, costs and risk.

A Blackboard System consists of knowledge sources that are a set of independent modules containing domain specific knowledge. The blackboard itself is a shared data structure through which knowledge structures communicate. To implement both this objective we need a control system that will determine which how the knowledge system will be operated in the blackboard.

Effectiveness is defined as the capability of producing a desired effect. When something is deemed effective, it means it has an intended or expected

outcome, or produces a deep, vivid impression. Creating an effective blackboard system is important towards the effectiveness of a course. What is important often depends on how the departments or sections measure the performance.

1.2 PROBLEM STATEMENT

Traditionally, students in UTP enrol into co curriculum classes based on recommendations from their friends. They do not reallyunderstand the benefits that they can gain from each of the co curriculum courses offered in UTP.Most students haveno idea and right references to make decisions on what co-curriculum courses that they should take. The most appropriate referencewould be the graduated seniors that have left UTP. The UTP management does not have a properchannel for the new students to interact with the seniors students in which can assist the new students to select the best co-curriculum that benefits them as well as getting flying colour results in the end. Finally, there is no course enrolment offered in UTP e-learning for co curriculum subjects.

In a summary the problem discussed above can be divided as follows:-

1. Students do not have a general idea regarding what the co curriculum course got to offer.
2. Thereis unavailable implicit knowledge from the UTP graduates that have left UTP.
3. There is no medium especially online information focusing on co curriculum courses in UTP.
4. Missing medium communication links between students and management regarding information co curriculum courses.

The online survey will assess the effectiveness (list of measurement to measure effectiveness) of the course as well as the improvements that can be added in survey to be used for the new semester. The variety of survey tools

used will ensure that important experience (tacit knowledge) can be collected and shared with students.

Students nowadays are getting more demanding with their expectations in universities. Students tend to have their own perceptions on what they want from extra-curricular classes. We need to include feedbacks from senior students and constantly update the feedbacks from current students to avoid a waste of resources for co-curricular classes hence not getting the desired learning outcomes through the course. Management also can be in constant updates with the progress of the courses through the feedbacks received in the blackboard system.

. The idea was to use the Microsoft SharePoint application to create the intranet webpage and to develop a system to collect the feedbacks and store them in a database. Microsoft SharePoint was opted because the author needs a Control Management System for collaboration and document management as well as a platform for enterprise information portal. The intranet website will be for reference and another page for online survey and to display responses and survey results. However due to the limited service by the UTP internet that prevented ease of downloads and installation, SharePoint was not used and PHP was opted instead.

1.3 OBJECTIVES

- To use blackboard technique as knowledge capture for UTP co curriculum courses
- To create an intranet website system that can gather students and management for knowledge exchange and sharing
- To reduce the gap between current students and senior students in terms of knowledge sharing
- To design a market survey form with tools and database for knowledge management

- To maximize the usage of the internet.

1.4 SCOPE OF STUDY

The scope of study will coveronly the students that take co-curriculum, co-curriculum management, graduated UTP student, procedure to enrol the co-curriculum. The development of the system will involve internet programmingstudy on online form survey and thedesign of the online forms specifically for co-curriculum and database. There will be a separate page to cater for survey displays and sections for assessment. The author had used different methods of online survey ranging from questionnaire till SMS related questions in order to suit the different targets of students the author wants to get knowledge from. Current students can participate in the surveys in the intranet website itself. The author plans to use the SMS to get information from students that have already left UTP so we can share with the UTP population as a whole the garnered information. Knowledge sharing is made effective this way. The author had removed the Ozeki Message Server as he had made a team of knowledge experts by identifying most of his senior friends that are available and got information from them through emails and also personal SMS.

The limitation caused by the templates of SharePoint is overcome where all design can be chose by me without being dependant on any fixed template. So the interface will be more users friendly and easy to be used by all range of requestor.

1.5 FEASIBILITY STUDY

"Feasibility study is the analysis of specific aspects in the project environment to help determine whether to proceed with the project. The developer uses it to uncover important risks associated with the project." (Dennis, Wixom &Teagarden, 2005) With regards to this project, a technical and operational feasibility analysis has been conducted.

1.5.1 Technical Feasibility

The project is feasible technically, although there are some risks. The risks are the number of Co Curriculum courses offered in UTP. The initial risk is whether the author can cater for all courses which were impossible due to the limited time to complete the project. The author decided to proceed by concentrating on performing arts and sports related co curriculum in this system.

The project is still feasible as of this progress report date. The only problem was the poor internet facilities in UTP that has hindered the author from downloading the necessary installers to set up SharePoint in his computer. Therefore the progress of the prototype is slow but the data mining work runs on schedule l.

1.5.2 Operational Feasibility

By acknowledging the level of users' acceptance of the software, this project has a low risk. The objective of the software is simply to provide a knowledge management system for UTP Co curriculum courses. It is a centre where students meet to seek answers regarding what the co curriculum courses got to offer. Therefore, the users of the software are expected to take advantage on the benefits that will be provided from the development of this project.

1.6 FINDING

The author conducted a questionnaire to improve and get respond from the user. The response showed that almost all students prefer a standalone website to handle co curriculum matters. The current e learning is not effective in delivering news and update to students due to the missing section that solely caters for co curriculum.

The author also has made visits to different co curriculum classes to see what type of information that need to be put online in the website. The author found out that the most basic information that can be put into the website is through images and videos. This allows the student to experience for themselves what these courses have to offer.

The author also contacted one of his seniors that have graduated and asked him his willingness to participate in SMS related questions. The author was happy to find out that seniors are more than happy to share their views and experience. This allows the author to constantly asking questions when appropriate and needed.

So taking the point above, the author has decided to get images and videos first from different co curriculum courses. The author also has to create both the intranet website and the survey page simultaneously before deciding on types of survey. The author has problems in getting all information from ALL co curriculum courses due to time constraint and also classes and student life hence the author decided to get information from courses that are possible to attend and decided to put all other courses that are impossible to attend for data gathering as future developments.

The author had asked help from friends to get the necessary content to be uploaded into the project. Time was very limited and the author improvised by using all resources available.

CHAPTER TWO
LITERATURE REVIEW

Based on the UTP Final Year Research Project Guidelines, a literature review is the analytical, critical and objective review of written materials on the chosen topic and area of study. It means to introduce the readers on what knowledge or ideas have been established on the field of study and what are their strengths and benefits.

2.1 UTP CO CURICULLUM COURSES

Universiti Teknologi PETRONAS makes it compulsory for all students to take a total of 3 different co curriculum classes upon graduating. This is to inculcate diverse interests and develop students' potential to complement their academic attainment. The various co-curricular programs available in UTP vary from 22 different courses available for students.

Having these courses makes student prone to decision making often having decision problems when enrolling a co curriculum subject.

2.2 BLACKBOARD TECHNIQUE

A blackboard system is an artificial intelligence application based on the blackboard architectural model, where a common knowledge base, the "blackboard", is iteratively updated by a diverse group of specialist knowledge sources, starting with a problem specification and ending with a solution. (Wikipedia)

Based on this definition the author is proposing to build a blackboard system and the knowledge experts that he refers to are mainly students. The survey designed is to gather answers for specific problems and the survey results are the source of these answers.

The author would like to clarify that he is not using or adapting the blackboard system online but he's using the blackboard system methodology to perform the knowledge capture. Using a web page as the platform the author applies the blackboard methodologies to create a site having similar properties to the known blackboard system.

The author is not trying to create a very complex blackboard system as the author focuses on a few courses from the co curriculum courses offered in UTP. However the reason the author proposes to create this system is as follows.

Participants share a common protocol for interaction

- Organized participation
- Iterative approach to problem solving
- Flexible representation of information
- Efficient storage and location of information

The inference engine and the knowledge base are part of the blackboard system. This approach is useful in case of situations involving multiple expertise, diverse knowledge representations, or situation involving uncertain knowledge representation.

2.3 RELATED WORK

Existing Online Forms:

- A product from Process Maker® has been chosen as to compare to the project.
- Create an effective knowledge management system.
- Using knowledge capture techniques for multi type surveys.

- Managing both the blackboard and knowledge capture simultaneously.

2.4 ADVANTAGES OF USING THEBLACKBOARD MECHANISM

- This software not just provides single purposes such as creating form but can be used for other purposes.
- Can be integrated with JavaScript.
- The data can be export into spread sheet as the documentation purposes.
- The software provide the offline usage where the changes will be update when the server is online
- Form can be created from the end-user computer rather than created in the server.
- All the data from the same template of creating the form can be integrated with each other.
- The developer has experience in using the software to create an intranet website during his internship.

CHAPTER THREE
METHODOLOGY

3.1 RESEARCH METHODOLOGY

For this project, the author has chosen Rapid Application Development (RAD). The RAD approach to software development has its roots in interactive prototyping and computer-aided software engineering (CASE), both of which is used to speed the development of prototypes. RAD is the best method because of the constraint scope and good use tools and application program interfaces can be used.

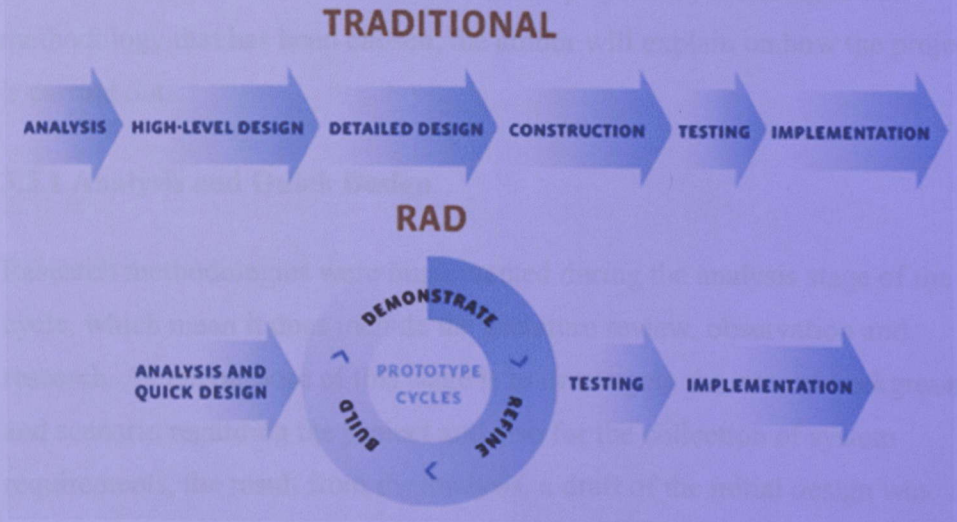

Figure 3.1: Research Methodology

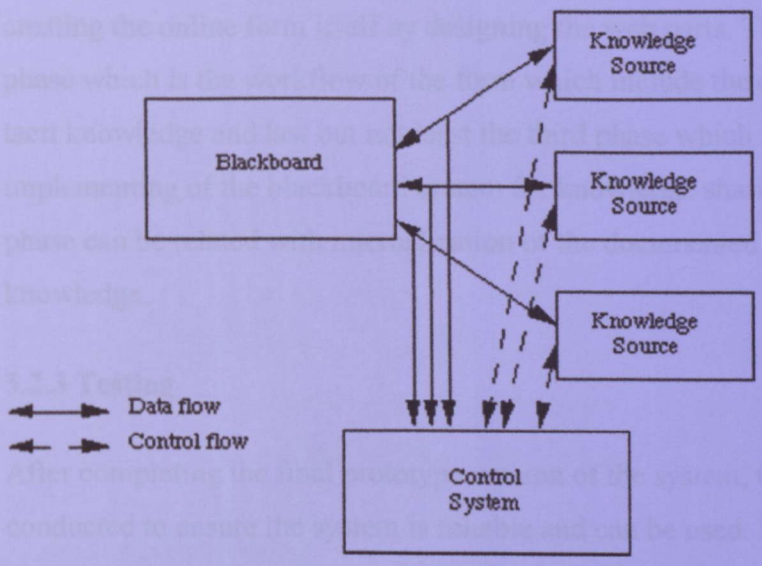

Figure 3.2: The Blackboard Method

3.2 PROJECT ACTIVITIES

In this section, the author will explain how the project activities were carried out as the author started to work on with the project. By referring to the methodology that has been chosen, the author will explain on how the project is carried out.

3.2.1 Analysis and Quick Design

Research methodologies were implemented during the analysis stage of the cycle, which mean it does include the literature review, observation and research. As the purpose of this stage is to investigate the current background and scenario regarding the project and also for the collection of system requirements, the result from the analysis, a draft of the initial design was made to have an overall view of the system. The initial design created during the proposal in FYP 1 was retained.

3.2.2 Prototyping Cycles

As the RAD method was chosen because the development of this project can be separated into three main parts which are the project first phase which is

creating the online form itself by designing the web parts. Then the second phase which is the workflow of the form which include the codification of the tacit knowledge and last but not least the third phase which is integrating and implementing of the blackboard system for knowledge sharing. This final phase can be related with internalization of the documented explicit knowledge.

3.2.3 Testing

After completing the final prototype version of the system, testing was conducted to ensure the system is reliable and can be used. It also needed as to detect any bugs or errors regarding the system. This test will be conducted by different group of people with the different background. This is needed as to make sure the feedback from the user can be the source of improvements and enhancement in the future.

3.2.4 Implementation

Implementation is the last step after the author finished the project. The project will be judge by several panels and after get the approval this project will be published. After this prototype is finished and implemented, the author will continuously keep track with it as to enhance the usability and the effectiveness of this online form.

3.3 PROJECT MILESTONES

3.3.1 First Milestone

The first milestone of the system will be the implementation of the software in the author's hardware. Three personal computers are needed to complete this project. Those three computers include the server, the user and also the editor. As of this progress report, the first milestone is met successfully.

3.5.2 Second Milestone

The author had designed the pages on papers first. Since SharePoint is no longer in use, the author had to design the template for the website. The node (computer) which be involve in this phase will be the server and also the editor. The author created and edited the form from the editor's computer. Another target in this milestone will be data mining and gathering. The author focused on journalistic research where interviews, videos, images and audio recording are made.

Next the author created the page that solely handles the knowledge capture process which is through the surveys conducted. All results and data from these surveys are captured and displayed in this form. Once the page is fully developed, the author will be linking the page in the UTP Co Curriculum Clicks. This page is not developed using the SharePoint platform as the author has discovered that the SharePoint has limited knowledge capture technics embedded in the platform itself. After the form has been created, the author will proceed to the next milestone. As of this date the author is still reaching this milestone.

3.5.3 Third Milestone

The third milestone will be implementing the workflow into the form and also update the interface of the form. Using the designing methods learnt in Visual Basic classes, the author will use one of the features provided which is workflow. Using this workflow, the author will create a step which the step will started with some indicator such as created by time or date and it will prompt the workflow.

After the implementation of the workflow is done, the author will change the look and also the visibility of the text field. This is required as to maintain the data will remain save and unchanged by other people. The interface will be created to be more user-friendly and highlight some of the key element for the form as to improve the usability. After the third phase is finish, the project proceeds to the fourth milestone.

3.5.5 Fourth Milestone

The fourth phase will be the last phase of creating the blackboard clicks website where the system will be added with a link to any survey results that the author created. The author plans to create a separate page for results of survey because of the limits that the SharePoint software has in creating surveys.

3.4 GANTT CHART

The developer had prepared the Gantt chart for the research. This Gantt chart will help the author to have proper planning for the research in build ability. The Gantt chart consists of activities and the duration or period to complete the task or activities. The author managed to complete all his activities by May 2012 .Please refer figure 3.3 for the Gantt chart.

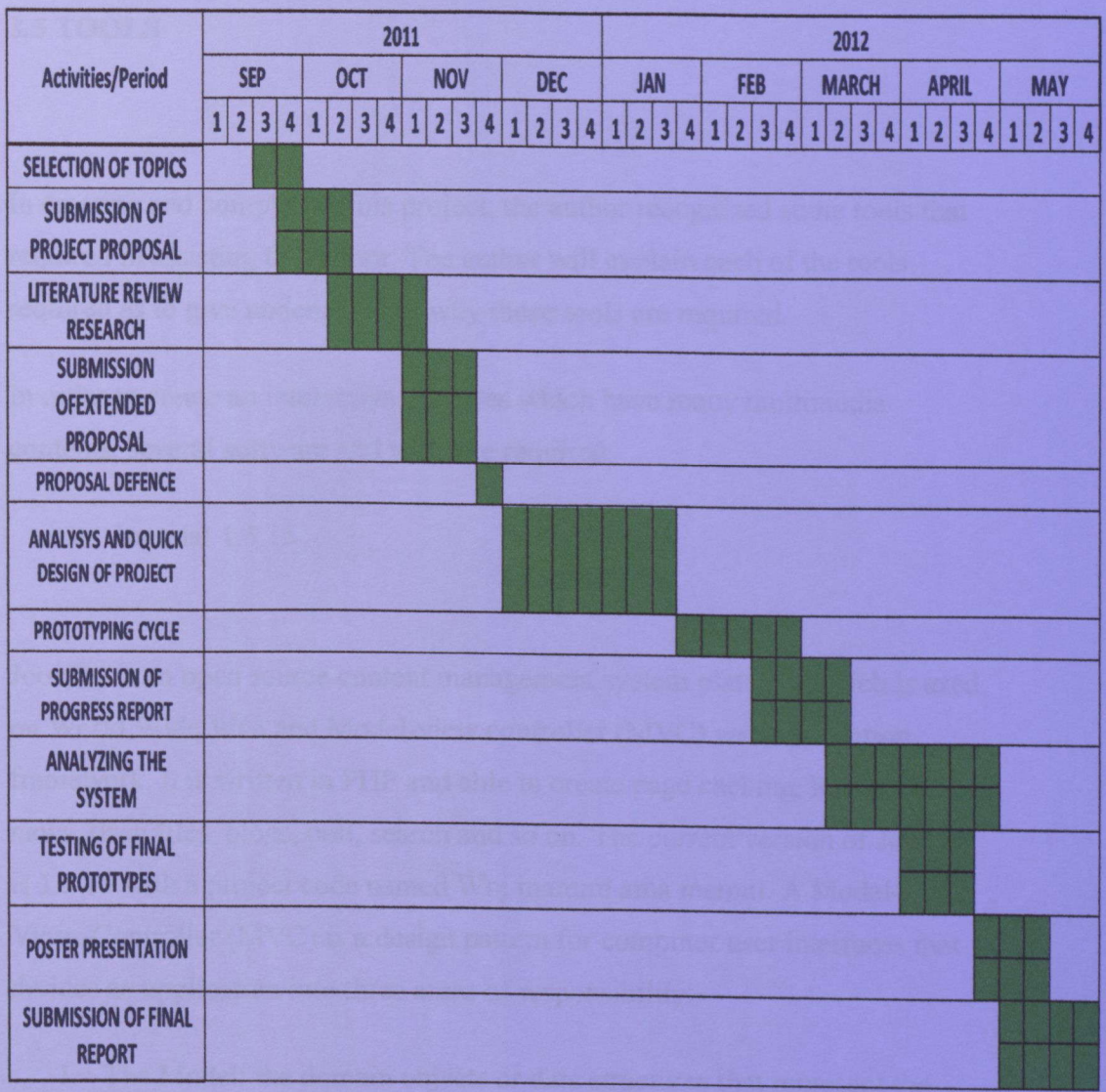
Activities/Period
2011
2012
SEP
OCT
NOV
DEC
JAN
FEB
MARCH
APRIL
MAY
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
SELECTION OF TOPICS
SUBMISSION OF PROJECT PROPOSAL
LITERATURE REVIEW RESEARCH
SUBMISSION OFEXTENDED PROPOSAL
PROPOSAL DEFENCE
ANALYSYS AND QUICK DESIGN OF PROJECT
PROTOTYPING CYCLE
SUBMISSION OF PROGRESS REPORT
ANALYZING THE SYSTEM
TESTING OF FINAL PROTOTYPES
POSTER PRESENTATION
SUBMISSION OF FINAL REPORT

Figure 3.3

3.5 TOOLS

In creating and completing this project, the author recognized some tools that required in assisting the author. The author will explain each of the tools required as to give understanding why those tools are required.

In order to create an interactive websites which have many multimedia contents, several software and tools are required:

- Joomla! 1.5.15

Joomla! is an open source content management system platform which is used on World Wide Web and Model-view controller (MVC) web application framework. It is written in PHP and able to create page caching, RSS feeds, news, flash files, blogs, poll, search and so on. The current version of Joomla is 1.5.15 with a project code named Woj mammi ama mamni. A Model–View–Controller (MVC) is a design pattern for computer user interfaces that divides an application into three areas of responsibility:

1. The Model: the domain objects or data structures that represent the application's state.
2. The View, which observes the state and generates output to the users.
3. The Controller, which translates user input into operations on the model.

- MySQL

  MySql is a free query database which is supported by various types of websites as well as framework. It is compatible with almost any proprietary third party software.

- Adobe Flash CS4

  Adobe Flash CS4 is a development tool in order to create interactive flash contents by using ActionScript 2.0 as well as ActionScript 3.0.

- Adobe DreamWeaver CS4

  Adobe DreamWeaver CS4 is a development tool in order to do website coding by using the approach of 'what you see is what you get'.

- GIMP

  GIMP is an open source graphic manipulation tool in order to create and edit image. It has almost all the functions of proprietary graphic manipulation tools.

3.5.1 Hardware

Hardware is one of the most important things in starting and completing this project. As this is an IT project, it requires the most important hardware which is computer. As for this project, the author should have more than one computer because there will be server, user, and a computer for the author himself as to create and editing the project.

Besides a computer the author also uses a variety of cameras and recorders to photograph, record sound clips and also record videos. These are the materials displayed in the website for student viewing. These materials are used as the medium to allow students to analyses and make choices on which course to undertake.

The third important device is the author's mobile phone. This mobile phone is used to make calls, phone interviews and also as tests for successful SMS surveys. Besides that a smart mobile phone also has the ability to access the survey page online enabling the author to constantly update on the data collected through survey.

3.5.3 Software

This is one of the tools which are really important. To accomplish this project, the author has chosen PHP and Java as the platform to create the online form. Then the author also needed several image, video and audio editing skills as to create the workflow and also editing in Graphical User Interface (GUI). To hold the database the author uses MySQL as bundled in the XAMPP service.

The author also uses the Adobe Photoshop software for all image and photo editing purposes. The author plans to create slideshows using images edited using this software. Besides that the author also plan to use another software namely Swish Max to create charts and other interactive diagrams to add spice to the system.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 Data Gathering

The reason the author would like to create this blackboard clicks site is because the author wants to solve all the known problems the author has described in the problem statement section. In order to ensure that the author is developing a system to solve the problem, the author has started the development of his system by conducting a short survey to clarify the problems stated by the author earlier in the problem statement section.

The author has constructed a series of questions that is parallel to the problem statement discussed earlier by the author and used Survey Monkey as the tool for this online survey. The author ensured that all participants are UTP students.

The author constructed six direct questions that define the author's objective in developing his project. The author substantiates all his arguments during his proposal defence that most UTP students have no idea on what the courses got to offer and there are no proper platform that handles UTP co curriculum matters and also the missing medium between the students and management regarding the course.

Besides the survey the author has begun visiting the performing arts co curriculum courses to see what type of knowledge capture techniques should be used to be adapted into the knowledge management system he is developing. The most common capture tool has been used which is photographing. The author has used his mobile phone for this purpose.

4.2 Data Analysing

Based on the five questions through the survey the author realized that the problem statements and the objectives of his project are preliminarily justified. The survey proves that UTP students need a user interactive knowledge management system that would allow them to solve all existing problems that the author has specified. Based on the survey the author has been clear on how the initial prototype of the blackboard based KMS should be developed.

4.3 Results

The first question that I have asked in the survey is: Do you find the co curriculum courses in UTP interesting? The graphs (Figure 1) and (Figure 2) of the stated questions are shown below:

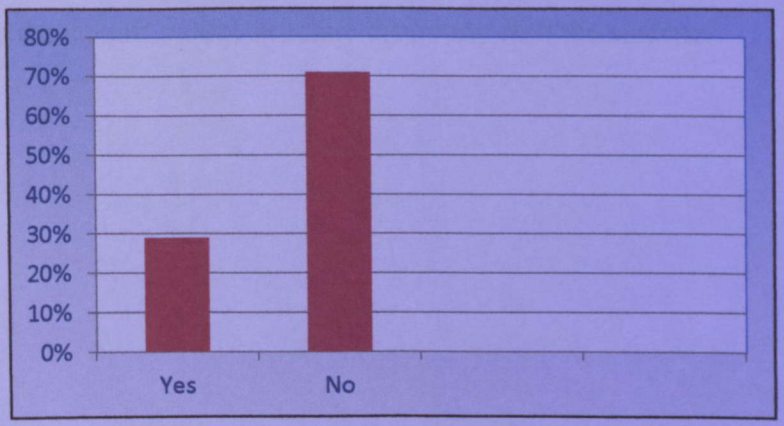

Figure 4.1: Do you find the co curriculum courses in UTP interesting?

This questions show that there are a significant amount of students that find the co curriculum courses offered as not interesting. Why that is so? To answer that question the author proves that there is a need for a centralized website to cater for co curriculum courses related matters.

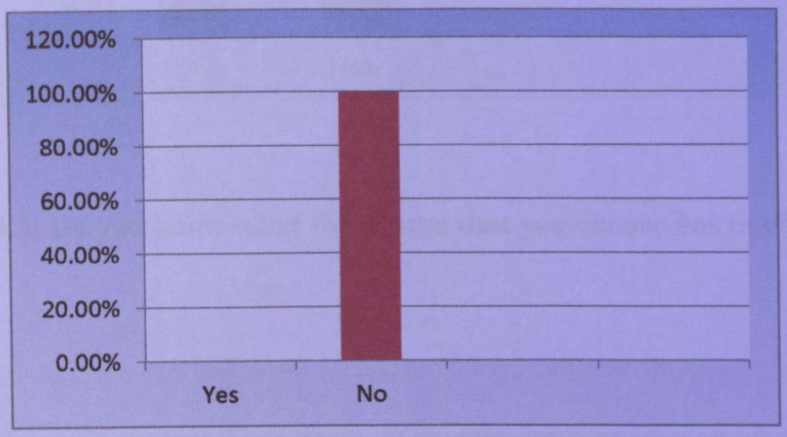

Figure 4.2: Is there any website that caters for co curriculum courses enrolment?

This questions shows exactly the missing medium or knowledge centred system for co curriculum related matters. It is obvious that eLearning does not offer privileges for co curriculum courses and there are no website that discusses the cu curriculum structure discretely with the students

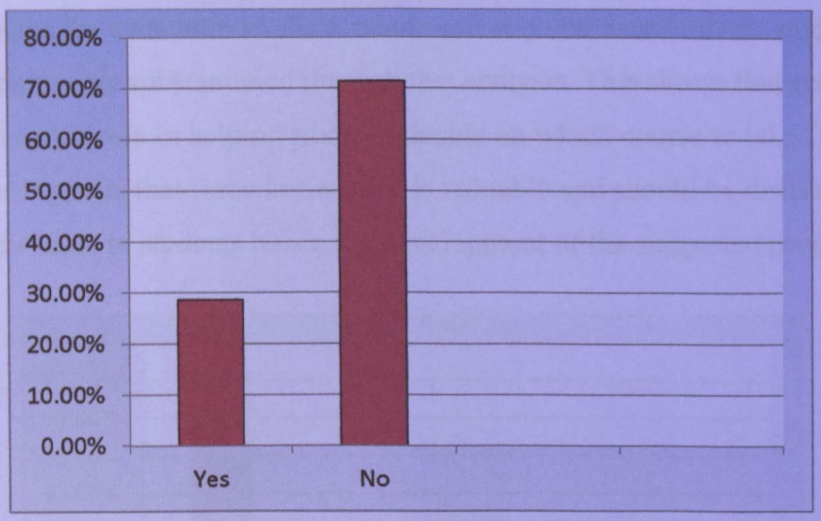

Figure 4.3: Do you know what the course that you choose has to offer?

This question shows that the majority of students have no idea on what the co curriculum courses that are available has to offer. For instance, the author himself did not know that in a Basic Dance class, students will be able to learn Cha Cha, Zapin and also basics of Ballet. This shows that the system the author is developing would be helpful in providing this information to the students from reliable knowledge experts.

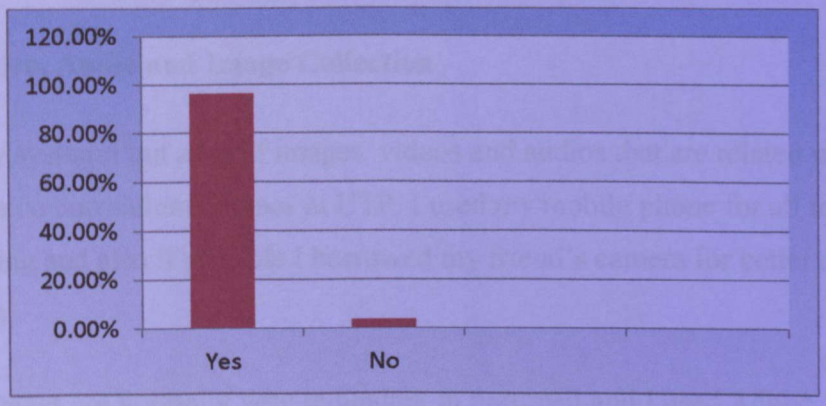

Figure 4.4: Did you refer to senior students before you enrol yourself in the co curriculum course?

The need for a medium to allow communication between current students and seniors are substantiated through this analysis. This shows that seniors play a major role in helping students decide on which course to take. The author suggests that these knowledge is valuable and should be distributed in a larger scale to students hence the development of the suggested project.

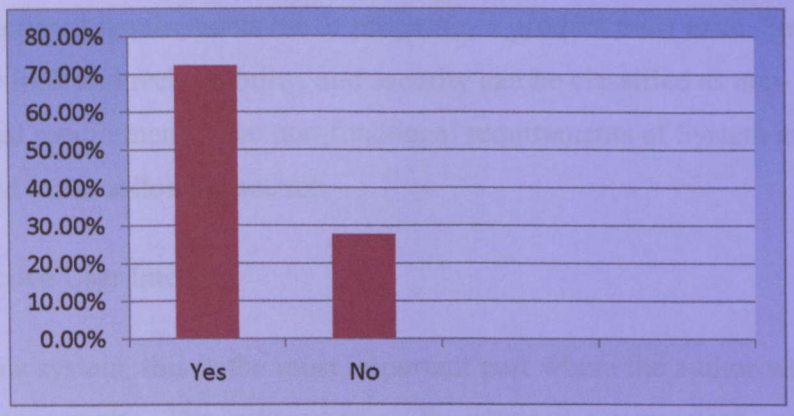

Figure 4.5: Do you need a website to cater for UTP Co Curriculum?

The final question is just an enquiry to show on how much market the proposed system capture could when its development is completed. The answer shows that there is a majority of students want the existence of a site to focus on co curriculum issues.

4.6 Video, Audio and Image Collection

For my system I put a lot of images, videos and audios that are related with the various co curriculum courses in UTP. I used my mobile phone for all image capturing and also if possible I borrowed my friend's camera for better quality images.

The images are normally very redundant in portrayal and I used Adobe Photoshop to perform the editing. This is very important not only to reduce the size of images to be uploaded but also avoid unwanted images in the site.

4.7 Non-functional Requirements

Non-functional requirements are or properties a product must have. For example look and feel, usability, and security can be classified as non-functional requirements. The non-functional requirements of System are described in the following section.

a. Attractive User Interface

In this system, this is the most important part where the author would like to focus most. The author has so far planned a very clean, good, and simple interface for user .The use of appropriate color scheme and graphical representation provide a readable and clear user interface. Finally, the use of icons and instructions help to reduce the user's probability of making errors, and also to avoid confusion.

b. User Friendly

UTP Co Curriculum Clicks is designed to be simple enough for inexperienced users. Interface design is made simple by clicking on a button with label on it to perform a specific function. This helps the users to save time learning about the features of the system.

c. Performance: Response Time

Whenever an action is performed, the system is able to process the input, with its relations, picture, sample sentence, and animation of the sign within 15 seconds.

d. Correctness

The information shared and spread through the system is consistently checked to avoid wrong interpretation of knowledge related to UTP co curriculum.

4.8.1 Flow Diagram for Knowledge Searching

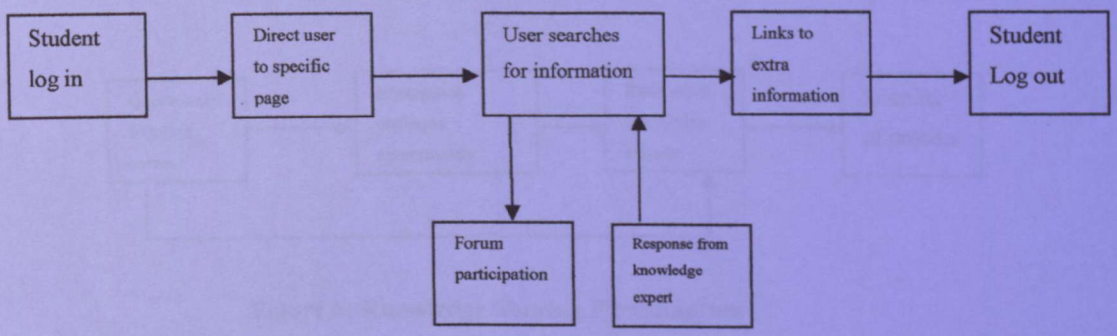

Figure 5: Flow Diagram for Knowledge Searching

Figure 5 shows the flow diagram for the process of knowledge searching by the users. The author had used these flows to create the system where as a norm all secured system starts with a log in page. This log in page is put on the

home page and all users are required to log in. Different log in ID has different privileges which is necessary to create the respective forms. Administrators would have full control on the system where else management and experts will have privileges to edit add and edit forms that gives the required information to the required requestor. The user will then direct himself to the respective co curriculum course page to get whatever information available pertaining the course. The author had decided to mix colours and add background articles to make the users experience using the system more informative and conducive. The user will have interaction with the knowledge experts (seniors) and the author is confident that the user will get whatever information he needs in this process.

4.8.2 Flow Diagram for Knowledge Sharing

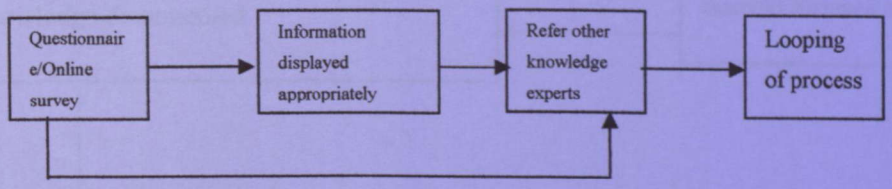

Figure 6: Knowledge Sharing FlowDiagram

Figure 6 shows the typical cycle of knowledge sharing. As mentioned previously, the author gets the required knowledge through questionnaires, online survey and also emails blasting. For this a panel of experts is formed where the author had decided to have about 50 senior students as committee of this panel. This panel will mutually agree to share all knowledge they have through this methods as sincere and reliable as possible. The author who is also the administrator will have the responsibility to recheck and confirm that

the received data is correct by resending shuffled questionnaire to the same panel to get the most accurate result as possible. This process will be done repetitively till satisfactory knowledge is documented. The reason the author repeats the knowledge capture process is to ensure correct and reliable knowledge is displayed in the system for users' view.

4.8.3 Flow Diagram for Tacit to Explicit Knowledge Process

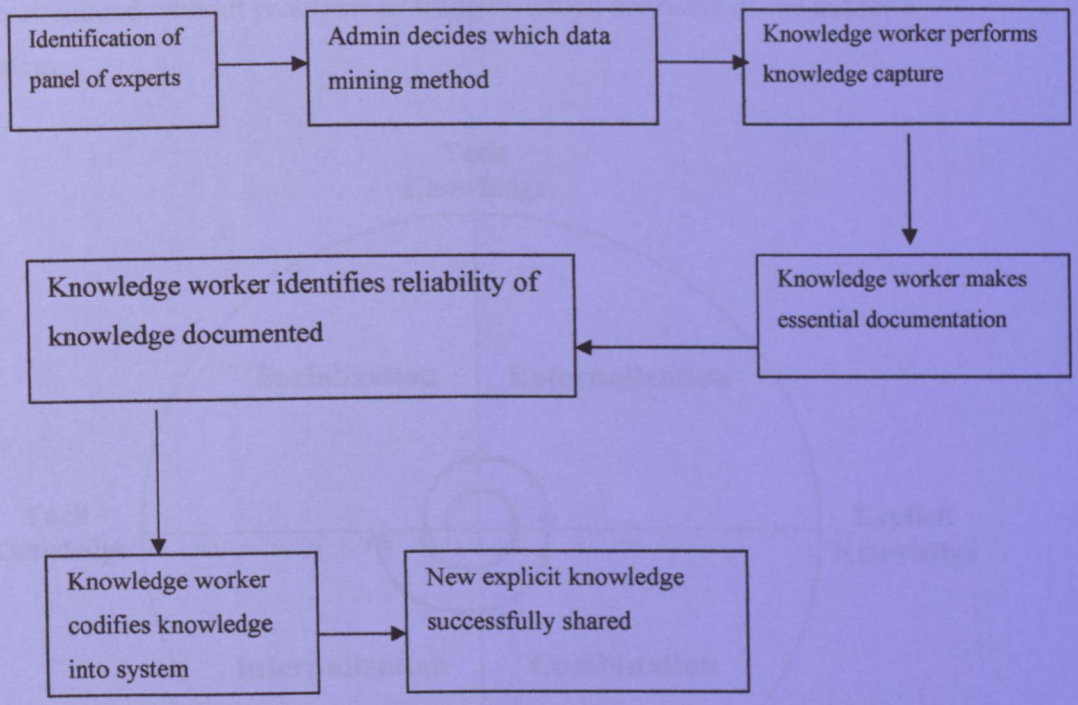

Figure 7: Flow Diagram for Tacit to Explicit Knowledge Process

Figure 8 shows flow diagram that clearly illustrates the process of knowledge management itself. Using Nonaka's model which is illustrated below, the entire SECI process is adapted. The panel of experts is identified through interviews and mutual recognition as an expert and their commitment is made

clear to them as contributors to the Blackboard. The author as mentioned before decides on which method to get the tacit knowledge from them in the Socialization process. The author than does knowledge capture by recording the knowledge gained from the survey or research as documentation. This process is under the externalization section of the model. As to maintain knowledge reliability and integrity the author also called as the knowledge worker will check for any discrepancies to avoid wrong data put onto the system. The third process was the combination process where knowledge is codified into the system where knowledge sharing takes place. This is done in the forums developed in the blackboard supported system the author had developed. The final process which is the ultimate goal of the author's system is internalization where the tacit knowledge collected by the panel of experts are circulated without problems to students which are users of the author's system.

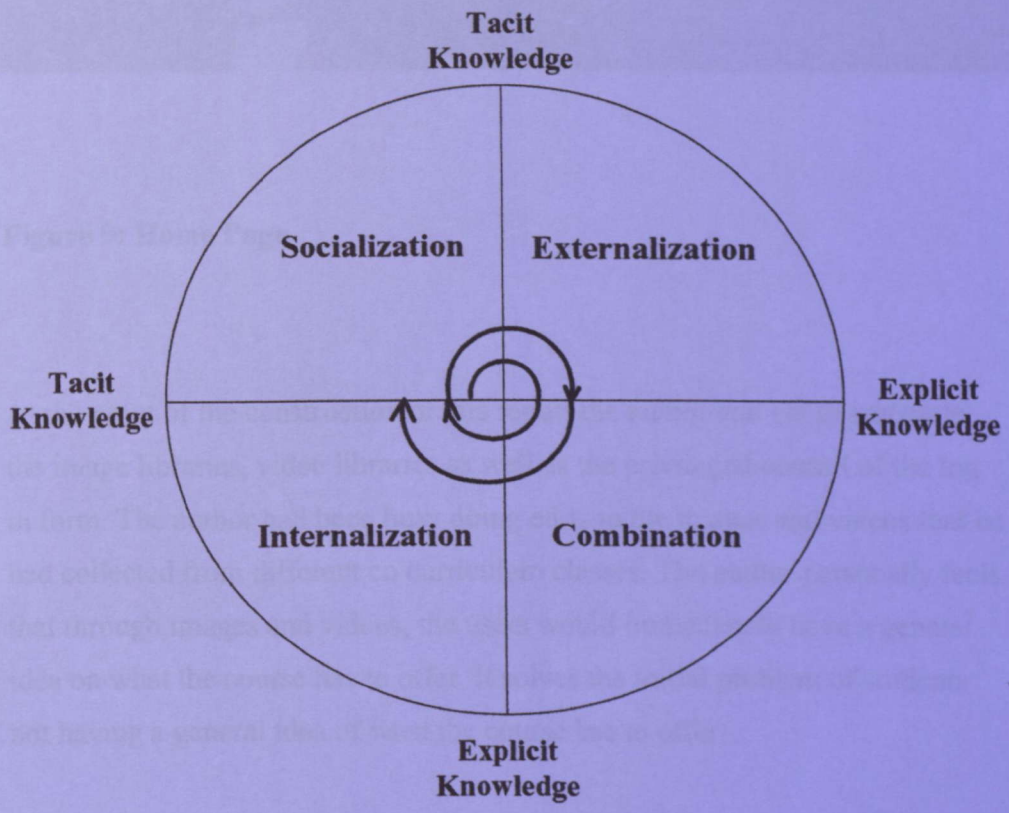

Figure 8: The Nonaka's SECI Model

4.9 Prototype Discussion

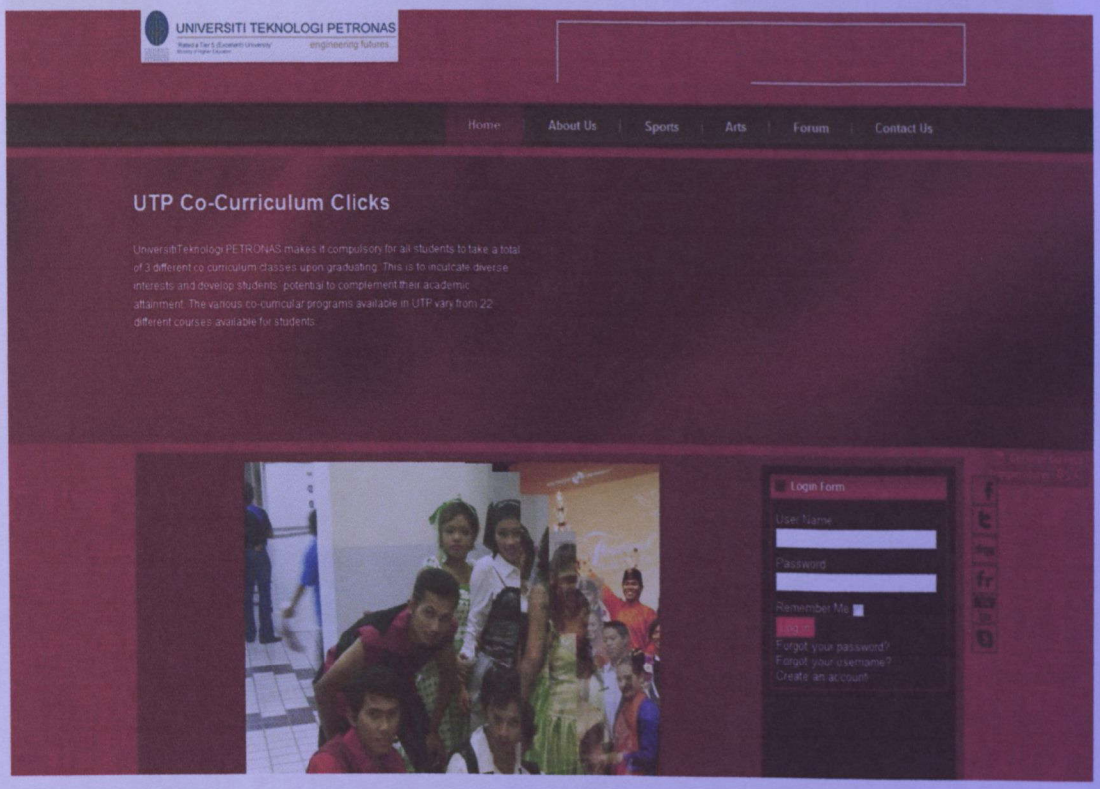

Figure 9: Home Page

At the point of the construction of this report the author had yet to complete the image libraries, video libraries as well as the privileged control of the log in form. The author had been busy doing edits to the images and videos that he had collected from different co curriculum classes. The author personally feels that through images and videos, the users would immediately have a general idea on what the course has to offer. It solves the initial problem of students not having a general idea of what the course has to offer.

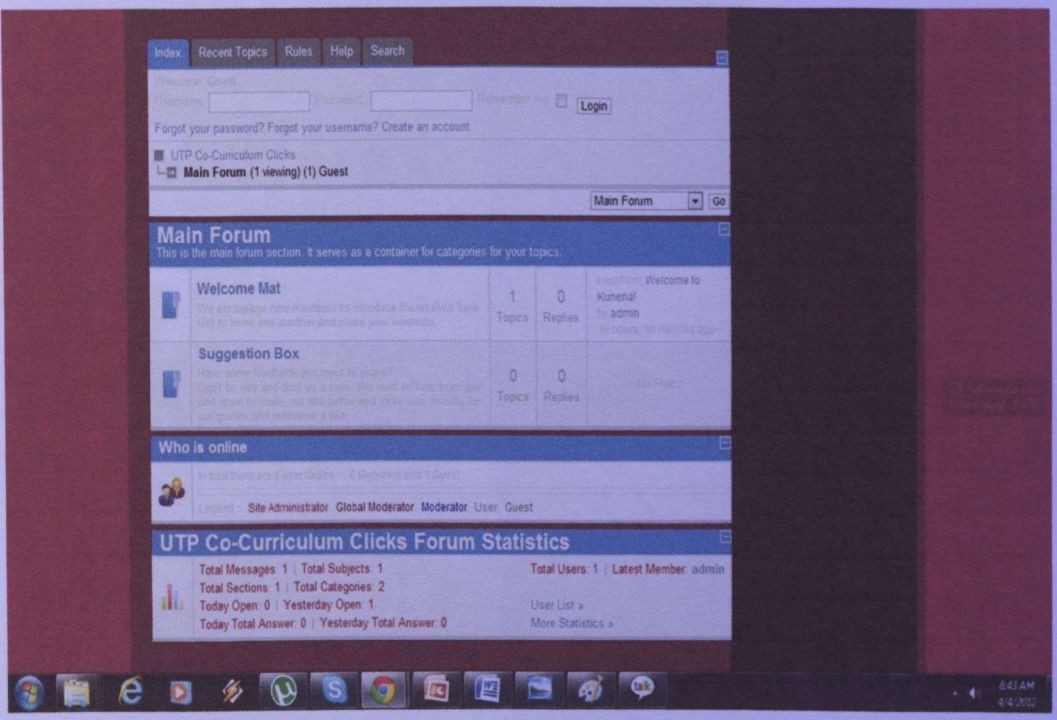

Figure 10: Forum page for knowledge sharing

This page developed using Joomla! is the considered the most important feature in the site thus far. This is where the interaction takes place between current students, senior students, administrators and also the management. This template is effective as well as efficient has it displays all the important items that is discussed between any individuals or groups and is available for all users. The suggestion box available also shows that students have a say in what they demand or giving opinion on any rising issues.

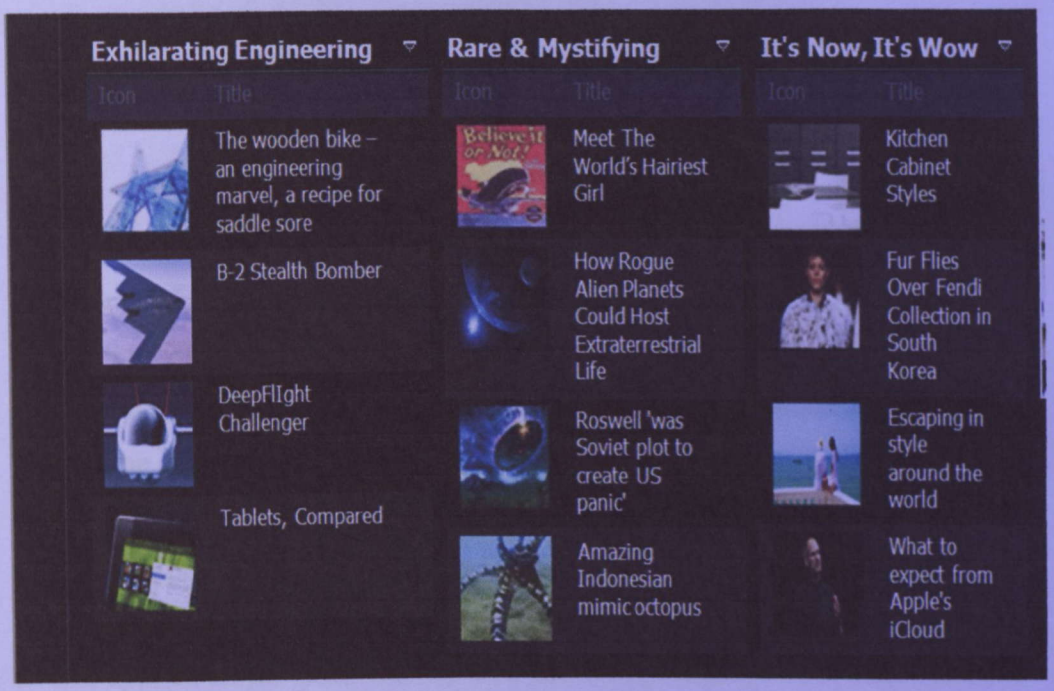

Figure 11: Articles Section of UTP Co Curriculum Clicks

This is the planned design template for the articles section. The main reason for this section is to make UTP Co Curriculum Clicks as informative as possible to maintain interest from users. The content can be posted by users and the appropriateness will be controlled by the administrator to avoid any sensitive or non-related materials. The articles are updated twice a month to ensure that obsolete articles are removed. This is to prevent loss of interest from the students. Students are interested with articles that suit their lifestyle and the author as a student understands type of articles to be put in the system. The goal is to make the users active in discussion as they always do in Facebook. The author realizes the limits of a Facebook page but also is aware of the impact of social media on younger generation. Articles are used to attract and make students participate in the forum created in the system

CHAPTER 5

CONCLUSION

As a conclusion, after all the data and information gathering made, the author is confident that his project will be beneficial to the students. Based on all the discussion mentioned above the author is clear on what he should do and the time frame allocated would assist him to meet all objectives suggested in the previous proposal. The author believes that he has chosen the best methods to develop his project and based on the feasibility analysis did, he is confident that he had solved all the problems identified. The author is very confident that he had applied all the skills learned as a knowledge management major student to produce a system that would summarize all his skills learnt during his time in UTP.

UTP Co Curriculum Clicks is a knowledge management system that need to be upgraded always and updated for better features to help the students and management as where co curriculum exercises is concerned. Although all the objectives had been made the author personally feels that knowledge evolves fast and UTP Co Curriculum Clicks should also improve its features in time.

Reference

Distributed reasoning systems

Source

2011, 11/18/2011, http://www.cs.cf.ac.uk/Dave/AI2/node104.html

How to Create a Market Survey | eHow.com

Source

2011, 11/18/2011, http://www.ehow.com/how_8597_create-market-survey.html

Blackboard System

Source

2011, 11/18/2011, http://en.wikipedia.org/wiki/Blackboard_system

Welcome to UTP Main Website

Source

2011, 11/18/2011, http://www.utp.edu.my/

MS Gateway, SMS Server, SMS Software, SMS Server 6

Source

2011, 11/18/2011, http://www.ozeki.hu/

Knowledge Management

Source

2011, 11/18/2011, http://www.systems-thinking.org/kmgmt/kmgmt.htm

: KMtalk.net - First Malaysian Knowledge Management site

Source

2011, 11/18/2011, http://www.kmtalk.net/