

UPU Tracker System

By

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CERTIFICATION OF APPROVAL

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Approved by,

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UNIVERSITI TEKNOLOGI PETRONAS
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SEPTEMBER 2014

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.

(MOHD FADZRIL BIN HAKIMI)

ABSTRACT

As student, competition to get placement in higher education is one of the important problems for them. Many efforts were taken by peoples to identify this problem among students in Malaysia. The purpose of this project is to develop webpage system for students who are interested to pursue their studies in higher education institute. It is important for students to have a decision supports tools in assisting them to make the right choice after finishing secondary school. Many methods already were used to capture the feedback from students regarding the feasibility of this project. These feedback captured were gathered and analysed accordingly. The results were positive. Students need assistance in deciding the right programme and university to further their studies. To ensure they choose the correct path to further their studies, it is important for students to have proper guidance. The system purpose can help students to make the wise choices which will reduce many problem faces by student and the university. Result we obtain from students and the university, its show the problem normally occurs when students make wrong choices when applying for the universities. Students do not know their strength and ability in learning because they do not have a proper system to measure their ability. Developing this system will minimize the problem that can because of the wrong choices in selecting the right programme and university. Before deciding to proceed with the project development to determine the purpose system whether it can give the benefit to the students and also university, the feasibility studies were conducted. The writing and development of this project is divided into two stages. In the first stage, data collection from the respondent was crucial to determine the usefulness of the project development to the students. The students at a secondary school were interviewed and given questionnaire to obtain their feedback and later analysed. The feedback received from students can be used to determine other factors that could affect the decision making process in choosing the right programme and university for them. Feedback from student had shown a good reason to proceed with the project development. From the questionnaire did indicate the numbers of students who do not have proper assistance or guidelines in making the right decision in choosing the programme and universities after finishing SPM examination. Interview also indicates students are lacking information regarding the programme that available in particular university. Majority of students choose the university and

programme based on popularity and reputation. Students do not ever consider the availability of programme in that particular university. Students make decision without thinking the availability of the programme in the universities. From the project there are many significant obtains during the research process that involved students and universities. For students, the studies conducted provide them proper assistances and guidelines in the decision making process. Wise decision making process will give positive impact to students career path later. On the other hand, for universities the studies will help higher education institutions in by Malaysia reducing the number of academic problem student's face. Results obtained from the survey indicated that wrong choices made by students when applying for programmes in university lead to low academic performance among them in Malaysia.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Since the conception of the Malaysian Federation in 1963, higher instruction organizations (Heis) have extended wonderfully in number of student and the scope of programmes they offer. In 2000, there were 11 universities in the public sector, other than 6 private universities and 283 private colleges. The interest for higher education was high where it lead to six private colleges were made in only two years in 1996 and 1997 because of the public demand and inability of government to provide enough universities to student . In 1996, selection in the Heis was 17,589; in 1997, it jumped to 28,344 students. Indeed thus, in 1997, only third of the aggregate of 86,384applicant could be admitted to the universities. Hence, in 1996, more than 15,000 students went abroad for higher institutions.

Admission to national colleges in Malaysia for undergraduate education is controlled by examination and selection. The base prerequisite is passing the SPM and STPM examinations and got good result. Candidates must apply through the Universities Central Admissions Unit. Every institution has the choice of choosing which type of candidates to admit. To help student from country who don't have adequate preparation in term of learning facilities where a few spots are saved for them in some national colleges.

Currently, there are two main departments in Ministry of Higher Education (MOHE) which are department of higher education (DHE) and department of polytechnic and community college education (DPE). This two department deal directly with all issues related with students, for DHE it is responsible for the development of both public and private higher education in Malaysia and also to maintain the quality same standing with international education institute. DPE responsible to provide education and training at Polytechnics and Community Colleges where it focus to give alternative ways to secondary level student further their studies in higher education same with student in the university.

The government demonstrates the important it appends to university education and how it relevance to the economic growth in producing high quality graduate in serving the country. Subsequently, a Ministry of Education statement states: In the 21st century, the young person entering the workforce will be judged not so much on the knowledge and skills acquired, but on the capacity for lateral thinking, creativity, and an integrated approach to learning. The university system is expected to bridge the fundamental shift from an information-based society to a knowledge-based one. Malaysia is putting in place the hardware and software to equip students to take advantage of the opportunities offered by an increasingly interconnected world. (Source: Official Portal Higher Education Sector (2011))

Table 1 : Public Institutions of Higher Education in Malaysia

University	Characteristics
<ol style="list-style-type: none"> 1. Universiti Malaya (UM) 2. Universiti Sains Malaysia (USM) 3. Universiti Kebangsaan Malaysia (UKM) 4. Universiti Putra Malaysia (UPM) 5. Universiti Teknologi Malaysia (UTM) 	Research university
<ol style="list-style-type: none"> 6. Universiti Teknologi MARA (UiTM) 7. Universiti Islam Antarabangsa Malaysia (UIA) 8. Universiti Malaysia Sabah (UMS) 9. Universiti Malaysia Sarawak (UNIMAS) 	Comprehensive university
<ol style="list-style-type: none"> 10. Universiti Utara Malaysia (UUM) 11. Universiti Pendidikan Sultan Idris (UPSI) 12. Universiti Tun Hussein Onn Malaysia (UTHM) 13. Universiti Teknikal Malaysia Melaka (UTeM) 14. Universiti Malaysia Perlis (UniMAP) 15. Universiti Malaysia Terengganu (UMT) 16. Universiti Malaysia Pahang (UMP) 17. Universiti Sains Islam Malaysia (USIM) 18. Universiti Sultan Zainal Abidin (UniSZA) 19. Universiti Malaysia Kelantan (UMK) 20. Universiti Pertahanan Nasional Malaysia (UPNM) 	Public university

Table 2 : Private Institutions of Higher Education in Malaysia

University	Characteristics
<ol style="list-style-type: none"> 1. Universiti AIMST (AIMST), Kedah 2. Universiti Perdana (Perdana University), Selangor 3. Universiti Perubatan Antarabangsa (IMU), Kuala Lumpur 4. Universiti Teknologi Kreatif Limkokwing (LUCT), Selangor 5. Universiti Sains dan Teknologi Malaysia (MUST), Selangor 6. Universiti Pengurusan dan Sains (MSU), Selangor 7. Universiti Multimedia (MMU), Selangor 8. Universiti Taylor's, Selangor 9. Universiti Terbuka Malaysia (OUM), Kuala Lumpur 10. Universiti Teknologi Petronas (UTP), Perak 11. Universiti Tenaga Nasional (UNITEN), Selangor 12. Universiti Tun Abdul Razak (UniRazak), Kuala Lumpur 13. Universiti Tunku Abdul Rahman (UTAR), Selangor 14. Universiti Kuala Lumpur (UniKL), Kuala Lumpur 15. Universiti Selangor (UNISEL), Selangor 16. Universiti Sunway, Selangor 17. Universiti Terbuka Wawasan (WOU), Pulau Pinang 18. Universiti UCSI (UCSI University), Kuala Lumpur 19. Universiti Antarabangsa Al-Madinah (MEDIU), Selangor 20. Universiti Antarabangsa Albukhary (AIU), Kedah 21. Universiti Antarabangsa INTI (INTI IU), Negeri Sembilan 22. Universiti Islam Malaysia (UIM), Selangor 	<p>Private university</p>
<ol style="list-style-type: none"> 23. Universiti Teknologi Curtin, Sarawak 24. Universiti Monash Malaysia, Selangor 	<p>Foreign university in Malaysia</p>

<p>25. Universiti Teknologi Swinburne Malaysia, Sarawak</p> <p>26. Universiti Nottingham Malaysia, Selangor</p> <p>27. Universiti Perubatan Newcastle Malaysia, Iskandar Malaysia, Johor</p>	
<p>28. Kolej Universiti Tunku Abdul Rahman, Kuala Lumpur</p> <p>29. Kolej Universiti Selatan, Skudai, Johor</p> <p>30. Kolej Universiti SEGi, Kuala Lumpur</p> <p>31. Kolej Universiti Teknologi & Inovasi Asia Tenggara (UCTI), Kuala Lumpur</p> <p>32. Kolej Universiti Binary, Selangor</p> <p>33. Kolej Universiti Antarabangsa Cosmopoint (CiUC)(dulu Kolej Teknologi Cosmopoint)</p> <p>34. Kolej Universiti Sains Perubatan Cyberjaya (CUCMS), Selangor</p> <p>35. Kolej Universiti HELP, Kuala Lumpur</p> <p>36. Kolej Universiti Teknologi Antarabangsa Twintech (IUCTT), Kuala Lumpur</p> <p>37. Kolej Universiti Islam Antarabangsa Selangor (KUIS), Selangor</p> <p>38. Kolej Universiti Insaniah (KUIN), Kedah</p> <p>39. Kolej Universiti Infrastruktur Kuala Lumpur (KLIUC), Selangor</p> <p>40. Kolej Universiti Linton (KUL), Negeri Sembilan</p> <p>41. Kolej Universiti Nilai, Negeri Sembilan</p> <p>42. Kolej Universiti TATI (TATiUC), Terengganu (dulu TATI)</p>	University College

Table 3: Summary of Institutions of Higher Education in Malaysia

Research university	5 universities
Comprehensive university	4 universities
Public university	11 universities

Private university	22 universities
Foreign university in Malaysia	5 universities
University College	15 universities

1.2 Problem Statement

1.2.1 Problem identification

In Malaysia many programmes offered by public and private universities, it good for the students because of choices that they have to further study. Students have difficulties in determining programme and university that available in the country. Lacking of information can caused students facing problem to make any decision related to the university admission. For some students they may faces problems in choosing the suitable programmes that available in the universities or college. Students do not know their current interest when choosing programmes and universities that available for them. They do not given proper assistances in determining level of interests that currently possess. They just follow others students while making the decision about selections of programmes and universities after finishing secondary school. Because of this, many students in university now having problem in their academic achievements even though they got good result in SPM or STPM. Learning process at university and school are totally different, students sometimes cannot adapt university learning style which need them to be more independent to gain the knowledge. Thus, in order for students to easily gain the knowledge, they need to know the actual interests and strengths that they have before deciding which universities or programmes they interested. There are also students whose having problem to make the decision because of the several factors such as locations, reputations and education fees of the universities. These problems arise because some students are unsure about their decision in choosing programmes and universities to pursue studies. To solve these problems, a webpage system named UPU Tracker System is created. The purpose of this system to assists SPM and STPM students in making decision regarding placement in higher

education institutions. This system will help to determine suitable programme and university based on brain hemisphere dominance. From the system, students will be able to determine their brain dominance whether right or left dominance. After knowing the brain dominance side, students can generate information such as programmes, universities, characteristics and careers that are suitable for them. In order to specify the selection, students can view public and private institutions based on locations, reputations and education fees among universities in Malaysia. From that, students will be able to make the final decision through UPU main website that is available on the internet.

There are two main problems identified in this project as follows:

- Students have difficulties in determining programmes and universities that are available in the country
- Students do not know their current interests when choosing programmes and universities that are available for them
- There are also students who have a problem making the decision because of several factors such as locations, reputations and education fees of the universities

1.2.2 Significance of Study

The significance of this study is because of the number of students who do not have a proper guideline in choosing suitable programmes and universities after SPM and STPM examinations. It involves a lot of students who have just finished their secondary school and want to continue their studies in higher education institutions. Therefore, these situations lead to a big problem for both sides, which are the student and the university. This study will assist students who do not know their current interests, where it can be used as determining factors to choose suitable programmes and universities that are available in the country. The university can also reduce the number of students who have academic problems because the output of this project can match suitable programmes based on their current interests.

1.3 Objectives

Getting the right programme and university in higher education institute really give problem to student nowadays because of the numbers of programme and university that available in Malaysia. Many initiative already been done by the government to solve this problem especially by Ministry of Higher Education, one of the ways that taken by government regarding this matter is to find the factor that can help student to increase the chance to get right programme in the university. Therefore, they are two objectives available of this project are as follow:

- To design decision support system as a tool for SPM and STPM students to access information regarding programme and university (Public & Private) in Malaysia
- To develop a webpage system to help students in determining their brain dominance and providing them information about programme, university, career and characteristic based test given.

1.4 Scope of Study

The scope of study for this project is divided into two categories:

Target Group:

- The development is focused for student who just finished SPM (age 17-18)
- Location of case study is general where it will include all students around Malaysia who can access to the internet.

Focus Topic:

- Focus on current real situation about the system used by Ministry of Higher Education
- Case study will be focused on webpage system that will be used by the student.
- Development is in English
- Self-directed user (personal use and easy access in the webpage)

1.5 Project Feasibility

Feasibility study is an evaluation or analysis whether the potential project proposed can be proceed or not based on certain factors given. For this project it covers scope, time frame, cost-effectiveness and technical capability.

Scope

- Scope for this project actually targets any students who just finished secondary school and have a plan to further study in higher education institution.
- Main method for collecting the data is from conducting survey, it easy to find the target group to conduct survey because of the number of student that available right now.

Time Frame

- Time allocated for project research is 4 months during Final Year Project 1
- Time allocated for project development (working prototype) is 4 months during Final Year Project 2
- Time allocated to finish all the project which is research and development is 8 months

Cost Effectiveness

- Information uses for this project are retrieved from the journal, article, online book and etc.
- Data retrieved by conducting survey at school without any charging fees
- Cost incur for the project development is less because of the little requirement needed for IT project
- Free software is use for the project development

Technical Capability

- Technical programming that will be used for project development is webpage HTML, JavaScript and PHP

CHAPTER 2

LITERATURE REVIEW

2.1 Factors That Influencing The Students' Decision Making In Choosing Their Higher Education Institutions

2.1.1 Student's Characteristics

Many factors can influence student decision to choose the right placement in the higher education institution. Each university and programme contains various requirement that need to be fulfil by the candidates. First factor that are related to the student decision is the student characteristics itself, many student didn't realized their own personality can affect them in making any decision. The information gathered based on Ming (2011) research, characteristic of student itself can influenced the selection of the universities after finish secondary school. There are three characteristics which is the first one is called aspiration, aptitude and high school performance. First characteristics which aspiration normally will have a good intend to attend the universities. Students with this type of characteristic have clear future and career plan; this type of characteristics has good potential to survive in the higher education institution (Carpenter & Fleishman, 1987; Ariffin, Ahmad, Ahmad & Ibrahim, 2008; Jackson, 1978). Next characteristics is call aptitude, this type of characteristics will tends to aware their real potential and ability in any tasks they do. Student with this type of characteristics will have good potential to success in academic; they are more focus on the individual self-reflection when deciding to attend the university (Hossler, 1984). The last characteristics that can influence the decision factors are high school performance. During high school many activities already been planned to student as part of the learning objectives, student who have positive reaction to this type of process can be categorized as good candidates for universities admission. They have good achievement and contribute fully commitment to the any school activities available (Borus, 1993; Hossler&Gallagher, 1987; Manski&Wise, 1983).

2.1.2 Student's Interest In Subject Area

Interest in the subject area is also one of the factor student make decision to pursue study in higher education institution. Student will choose the programme that suits their subject area rather than the location of the university. Al-Fattal (September 2010) emphasised, " ... students' interest in a subject area also influenced their choices of specific programmes to pursue".

Based on the survey conducted, Round (April 2005) comments that:

In response to the item 'In general, I found my course very interesting', 61.5% of students agreed and 10.8% of students 'strongly agreed'. This represent almost a third of students who were, for the most part, interested in their work. A further 23.1% chose 'neither agree nor disagree', and disagreement was expressed by 13.8% of students.

(Price et.al, 2013) emphasised, "Characteristics of the students should fit with the ability of the institution to respond adequately to those characteristics, ultimately leading to increased student satisfaction, academic achievement and personal growth". (Torrey, n.d) emphasised, "Tobias claims that prior knowledge about a topic enhances interest, and some of my students were interested in programs because of connections with majors or hobbies.

2.1.3 Programmes Offered by University

Programmes that available in the university also can influence student's selection to pursue study in higher education; many students will only look at universities that offered particular programme that capture their interest. Courses offered by universities to students were depend on their grade achieved after examination (Price et al., 2013) and students were influenced in choosing the institution because of good academic environment quality of institution, programme, and diversity of courses offered (Kallio, 1995). Lee and Chatfield (n.d) stated in their research paper there were many factors that influenced students in choosing the university such as field of study offered, course and institutional reputation, course entry scores, easy access to home and institutional characteristics. Students are exposed to the university reputation in certain criteria as for example the graduate satisfaction from the programme, employment rate from the programme, the quality of learning

programme, learning process from the programme and the last one flexible of study that available for that particular programme.

2.1.4 Reputation of University

Reputation of university itself is one of the elements that can influence student choices (Price, Matzdorf and Smith, n.d). The university reputation can give an impact where easily be recognized and be choices institution for the student. The reputation of an institution refines the reputation of its teaching. University that have good image and reputation can be main factors for the student to get the placement at that particular university (Ming 2011). (Ivy, 2001) mentioned, “Students’ perceptions about the reputation and image of an institution are shaped by hearsay, past experience, and marketing activities that promote the institution” (p.109). Thus it is possible that university have good reputation can produce the high quality graduate

2.1.5 Facilities Provided by University

University that have good facilities also can be one of the factors to the student considering their decision to pursue the study in higher education institution. (Matzdorf et al., 1997) mentioned, “various critical impacts of facilities on the “business” of a university might be considered, depending in part where a particular institution is positioned, or aspires to position itself... “(p.212). Most of student now are coming from generation Y where information technology are part of them, so for university that providing the internet accommodation in bedrooms can totally influence them to make that university as a choices. University services especially the adequacy and quality of library resources and services were also rated as one of the top important influencing factor on issues related to university services (Kitsawad, 2013). Sport and student are totally related; most of students today are sportsmen or sportswomen in their high school. Opportunity to play sports or sports facilities can also influence for students’ choice of university (Noel-Levitz, 2012).

2.1.6 Location of University

Next factor that can influenced decision making is the location of the university itself. Strategic university location can attract many student from different locations because of the accommodation that provided by the authorities in that area. Even though majority of student appreciate the strategic locations, they still want to stay in their region to pursue study in higher education because of many reasons. Students only consider college that located nearly to their hometown because it will reduce education and financial problem during their studies (Jackson, 1982 in Fernandez, 2010).

Hoyt & Brown, 2003; Paulsen, 1990 in Schoenherr (2009) mentioned that:

Students are more likely to attend college study outside of their local market area when they are male, when they belong to a higher socioeconomic status, when their parents have higher education levels, and when they have high academic abilities and educational aspirations.

2.1.7 Cost of Study

The last factor that can influenced students in making decision about university placement is cost of study. Cost of living give huge impact to the society now especially student, student that come from low income group having problem to attend the university because of the payment that need to settle. These issues really give an advantage to the high income group to send their children to the university without any pressure. Higher cost of study really give impact to the low income group when come to the tuition fees, its can make the number of high income student can get the placement in the university or college. An article written by Garner (September 16, 2012) stated that the increased of study fees drop the total of applicants to enter university. Students have right to choose any university based on the current financial strength because some university can make them suffered big amount of debt after graduated (Dixon, April 2013).

2.2 The Decision Support System (DSS)

UPU Tracker System is a web based that used the decision support system concept. DSS can be defining as one tools from computerized information system where it can support any task like business or organization decision making activities. According to Louw (2002), in 1960's, DSS that come from high technology mainframe computers gave managers well managed and periodic reports. DSS is computer based system where it have interactive concept that can help the decision makers to do the analysis based on the information or data given. Based on a research written by Densham (n.d), he mentioned that "decision makers faced with a complex spatial problem often have multiple, conflicting objectives for its solution". According to Arnott and Pervan (June 2005), an early stage of DSS, evolved to create one environment where IT based system can help human in doing many tasks related with decision making. Therefore, we can conclude that the DSS suit the current environment that we using where student will interact with the IT based system to make decision regarding the university and programme. The output is clear where student need to take the correct decision based on the assistance provided from the system in order to choose which university or programme to further study in higher education institution.

2.3 Brain Dominance Hemispheres

Bogen (as cited in McCarthy, 1987) mentioned, "The Concept of Hemisphericity described the individual learner's preference for using one side of the brain and its processing mode over the other". Both side are important to people where it possessed with own unique characteristics. The right brain people have function to synthesizing information, recognizing relationships and intuitive insights. For the left brain people normally they are strong in making analyses, solving problem, collecting data based on given situation and have rational thinking process in solving any issues. To ensure quality of the task or job, people with left brain thinker are dominance to use statistical tools and organizing plan. Right brain thinkers are more into relationship diagram to solve problem and need team in order to analyse the problem. The significant phase while dealing

with learning process is by understanding the brain behavior. Personality traits and learning style were reflected from brain behavior (Saleh, 2001).

Table 3 : Personality and learning style

DIVISION OF LABOUR BETWEEN THE HEMISPHERES	
LEFT HEMISPHERE	RIGHT HEMISPHERE
1 Language – Speech	Seeing – Locating (Visuospatial)
2 Verbal Sounds: words, consonants	Non-verbal Sounds: barking, whistling
3 Analytical Processing: seeing the details in a picture	Holistic Processing: seeing the bigger picture
4 Listening - Reading	Metaphor – Poetry – Humor
5 Writing – Speaking	Music, Intonation, Rhythm
6 Abstract Words – <i>loyal, freedom</i>	Concrete Words – <i>desk, jacket</i>
7 Calculation	Recognition
8 Thinking	Attention, Emotion
9 Word puzzles	Art – Colors
10 Logical: Cause and Effect	Drama

From the table, each side of the brain show different functions. However, the brain is work together at most times in some mental issues. People have different mental function which we can categorize it into the characteristics. People with different brain dominance have their own specific behaviour which can be show by studying their characteristics.

Table 4 : Brain dominance characteristic

Left Brain Dominance	Right Brain Dominance
Intellectual	Intuitive
Remembers names	Remembers faces
Responds to verbal instructions and explanations	Responds to demonstrated, illustrated, or symbolic instructions
Experiments systematically and with control	Experiments randomly and with less restraint
Makes objective judgments	Makes subjective judgments
Planned and structured	Fluid and spontaneous
Prefers established, certain information	Prefers elusive, uncertain information
Analytic reader	Synthesizing reader
Reliance on language in thinking and remembering	Reliance on images in thinking and remembering
Prefers talking and writing	Prefers drawing and manipulating objects
Prefers multiple choice tests	Prefers open-ended questions
Controls feelings	More free with feelings
Not good at interpreting body language	Good at interpreting body language
Rarely uses metaphors	Frequently uses metaphors
Favors logical problem solving	Favors intuitive problem solving

Students need to do the brain test in order to determine brain dominance hemisphere. In this project, brain dominance test will be used to determine information for students. The information given by system is based on brain side dominance that students possess. Students can use the information as guidance while choosing university and programme to pursue their studies. From brain test result, students will be categorized under two different sides which is right brain dominance or left brain dominance. Each side will generate the information such as suitable university, programme, career and characteristics.

Table 5 : Information available inside the system

Type of Information	Right Brain Dominance	Left Brain Dominance
Career	Graphic designer English Teacher/professor Marketer Radio/television producer or entertainer Photographer Designer (fashion, interior, etc.) Theoretical Entrepreneurial Artist Psychologists, Psychiatrics, Counsellors Servicing	Science or mathematics Teachers/Professors Doctor Engineering Computer programmers Accountants Attorneys or paralegals Human resources Business management Administrative Assembling Supporting
Programmes	Business Graphic & Design Artistic Language & Education Psychology	Medical Computer Science Engineering Science Accountant
Characteristic related to career	Seeing the big picture Cooperating in groups Giving and receiving	Looking at details Focusing on one thing Giving direct answers

	praise Reading Body language Going with the flow Doing several things at once Focusing on ideas/themes Reading between the lines	Organization Individual competition Establishing routines Working through ideas Following schedules
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CHAPTER 3

METHODOLOGY

3.1 Information Gathering

Information regarding the higher education system in Malaysia already been achieved by conducting research. Basically the idea of project research area is focussing to the system that can be created to support higher education system in Malaysia and also targeting SPM and STPM student that will using this type of system. Data related with this topic easily been obtained by using the internet sources. For this project, data that been used for the research and development are required from other people finding result that available in the internet. Analysing the combination of data that available in the internet can help to increase the credibility of the project research. In propose to give better understanding for the development process, material like journal or article are important as project references. It can be a guide when writing the literature review and background of study. Survey already been conducted to acquired data from SPM candidates where they voluntarily answered the questionnaire after short briefing regarding the survey propose. Survey is one of the knowledge management capture technique been used to obtained information or perception about the system for the project development. Combination of data that retrieved from the survey among SPM student with material from past research can be used to produce the reliable result that will help the project development process.

3.2 System Methodology

The Waterfall Model already been used for this project as research and development method. This method consist five main phases which are requirement stage, design stage, implementation stage, verification stage and maintenance stage. Each stage contains specific roles during the project research process and system development. Every stage has deliverables that need to be review before proceed to the next stage. The Waterfall Model is easy to understand because at each stage all the requirement will be processed and

completed based on the time given. This type of method suit for small size of project development, since the topics chosen for this project only covered small area; we can conclude that this type of method is most suitable for it. The Waterfall Model is shown in the figure 1 below.

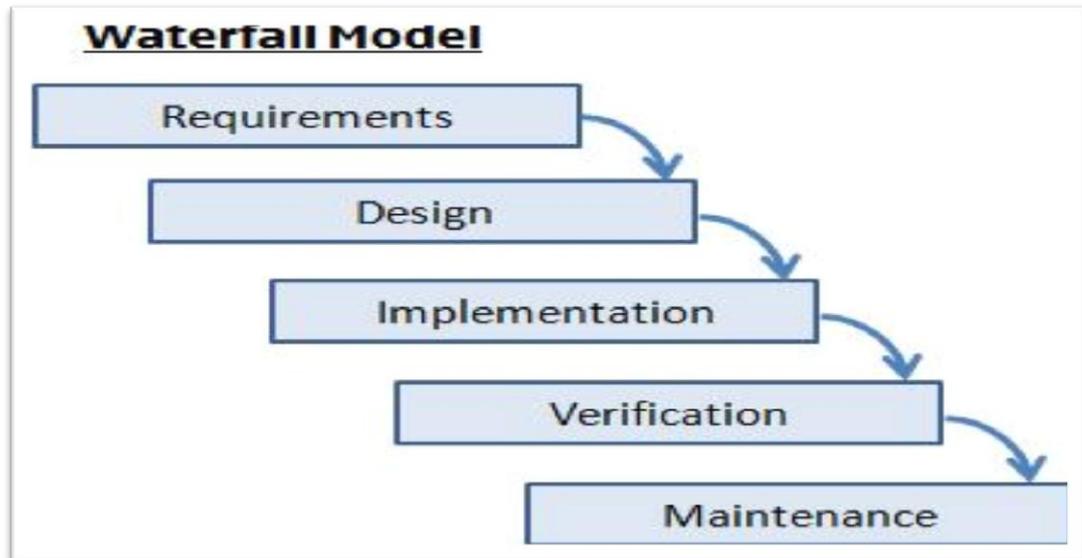


Figure 1: The Waterfall Model

3.2.1 Requirements Stage

In this stage all the requirement and criteria that needed for the project research and development are documented. Direct information regarding the Universities and programme that available in Malaysia gathered by linking it with the current official webpage under Ministry of Higher Education. Identify method of test to evaluate student strength and weakness before proceed with applying the right Universities or programme. Gathered all the data that coming from the respondent based on the survey that already been conducted in order to support the decision making for project research. The survey question prepared based on the factor that will affected student when deciding the right programme and Universities. Survey already been conducted by targeting SPM and STPM student in school where they voluntarily contribute to make this project happen. All data from the survey been analysed and documented as prove that available under result and discussion.

They are certain criteria that used in designing the questionnaire:

1. The student demographic information
2. The main reason SPM candidates to further study in higher education
3. The guidelines material used by student to access information while choosing the higher institute
4. The factor that affect student in making decision regarding the higher institution (public or private institutions)

3.2.2 Design Stage

At this stage it focuses more on the system architecture. It guide the project development by classified all the needed hardware and software that will be used for both phase which is research and development. Below in figure 2 show the system architecture of UPU Tracker system.

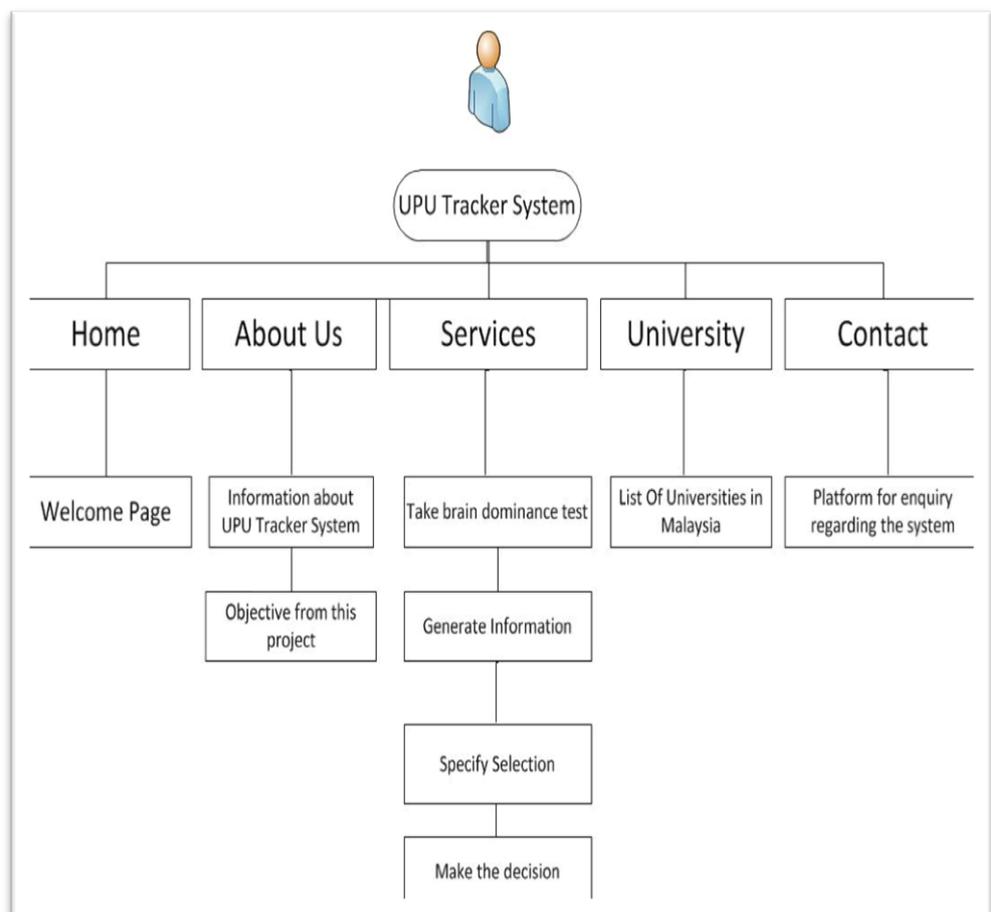


Figure 2: System Architecture

System architecture for UPU Tracker System contains five main divisions. The first division is Home page where it consisted of welcome note for those who want to use this webpage system. Second division that available inside the system is About page. This division will explain to user what is UPU Tracker System functionality and the objective students will get after using this system.

Next division is Services. Inside this page students need to follow all the steps before make any decision regarding university placement and programme. First things that students need to do is complete the brain test which it will determine user brain dominance hemispheres. From that, user can generate information based on the brain dominance hemispheres result. User can know their suitable programme, university, career and characteristic easily. Student also can specify the selection of the university according to the location, reputation and education cost. After finishing with all the steps, student can make the decision and apply for the placement using UPU website that available inside the system.

Under University division, student can view information about university that available in Malaysia. In this section students can easily access the faculty and address of the university by just click the link provided. List of faculty can be access directly from the system because it will pop up for user to view the information.

The last division is the Contact page. Student can use this section to ask any question regarding the system or university placement. Once finished with system architecture and UML diagram, the UPU Tracker System is developed. In this system, the tools required to design the prototype of UPU Tracker System are:

Development tools

Tools needed in designing and developing the UPU Tracker System:

1. Hardware

Personal laptop for programming

2. Software

- Microsoft Word and Microsoft Excel –For document purposes (Research)
- HTML and JavaScript – For project development (Programming)
- Adobe Photoshop-Used for Graphical User Interface design (Edit picture)
- Microsoft Visio-To draw the system flow and architecture

UML Diagram

1) Use Case Diagram

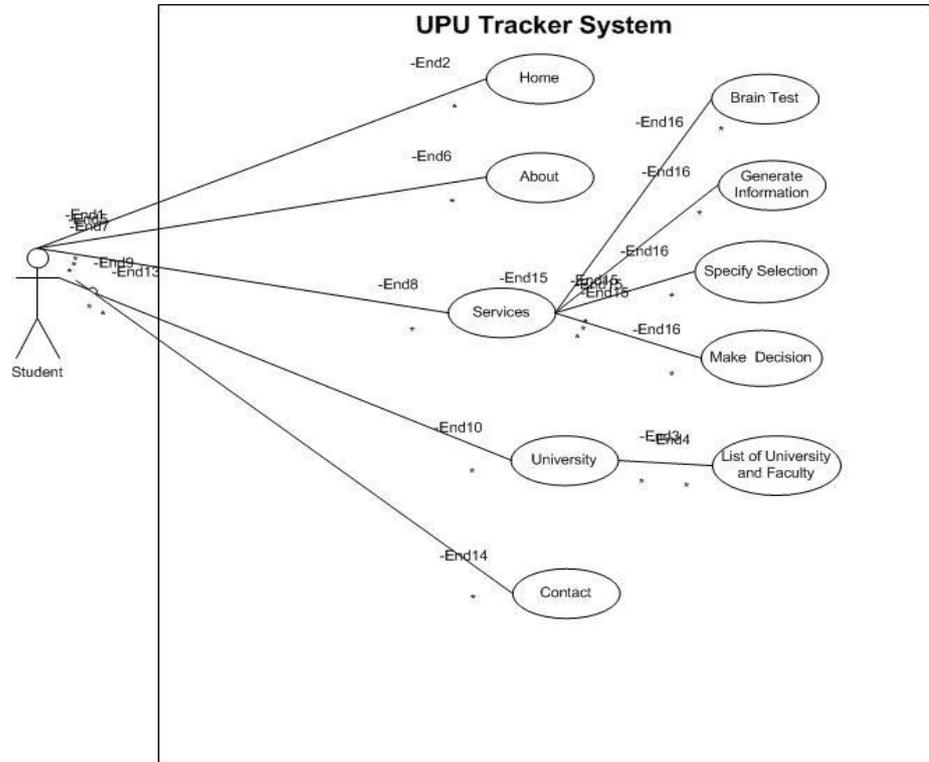


Figure 3: Use Case Diagram

2) Sequence Diagram

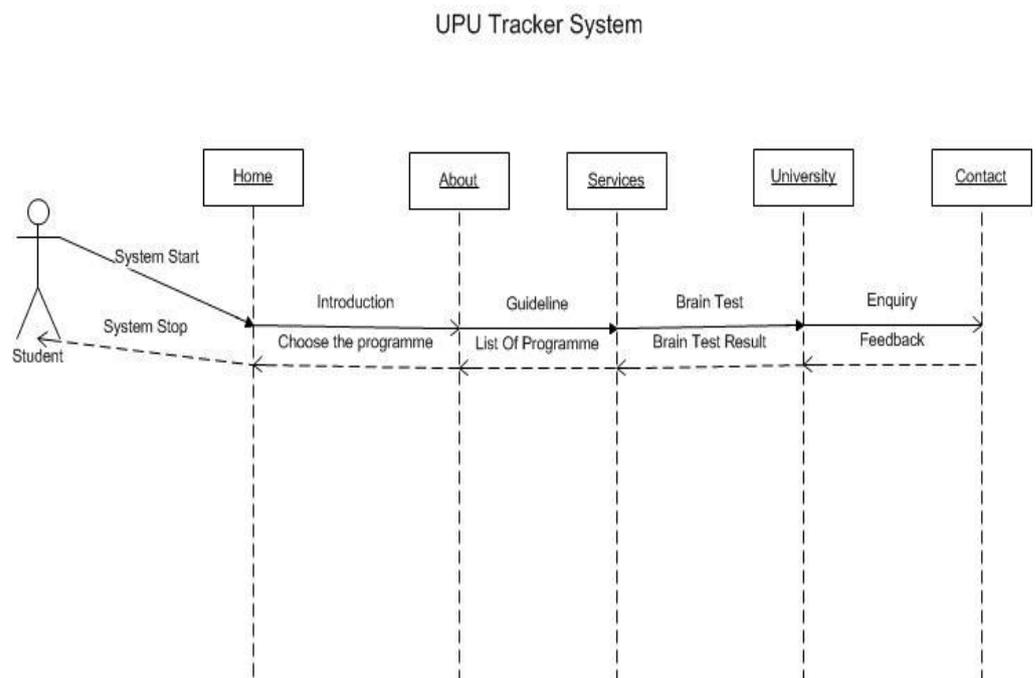


Figure 4: Sequence Diagram

3) Activity Diagram

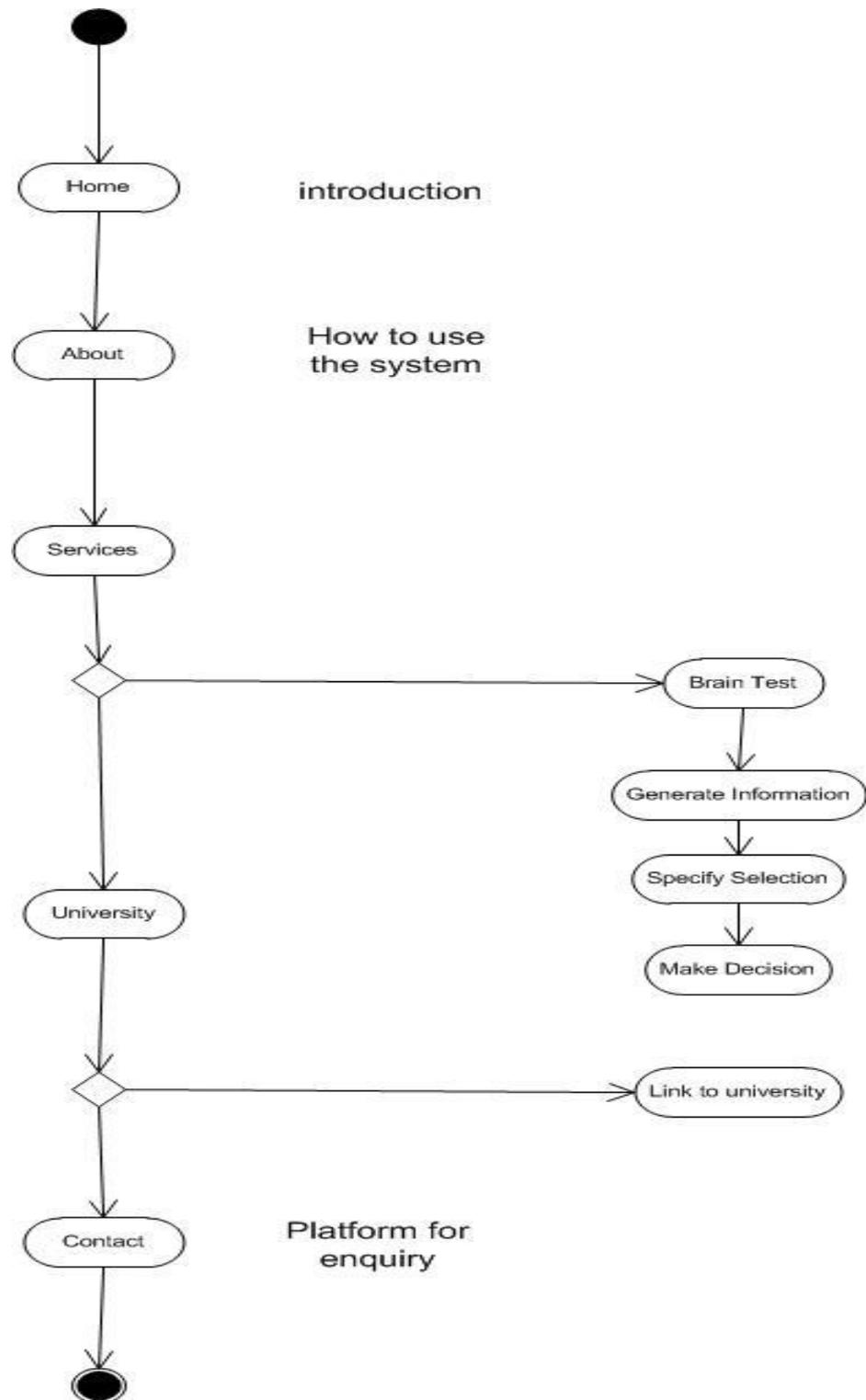


Figure 5: Activity Diagram

3.2.3 Implementation Stage

Based on the method that discussed in the methodology, this system used The Waterfall Model where the system program will be developing in a small unit. At every stage, all units will be integrated before it can be proceed to the next level. Once finish with developing, the system need to be tested to determine the functionality whether follow the requirement that already fix in the design stage. In this stage, the coding activities will takes place to design the interface of the system. This process will cover all programming part where the graphical user interface and the functionality of the system will be coded accordingly. During the programming process all the technical capability which is HTML, PHP and JavaScript language will be used for coding part. Information about Universities type, programme and career will be put into the system.

3.2.4 Verification Stage

Verification stage starting once coding for the system finish, in this stage the output plays important roles. To determine whether the output from the system is accurate, all programmatically procedure will be tested according to the software module. The result from testing will drive to the next step where if the system contains any error, the corrective action needs to be taken by remove it accordingly. Codes generated must be free from any bugs or fault that can give errors to the result. Codes need to be rewritten based on the requirement needed until it produces the correct output to the system.

3.2.5 Maintenance Stage

In this stage, normally the system is completed and fully functioning. The system is ready to be used by the user or client. The system will only hand over to the client after it completed all the testing procedure. Feedbacks from client are important where it can be used as references for future improvement. As a developer, it is fully responsibility to make sure that the system can run effectively and efficiently.

3.3 Project Milestone

Milestone	Completion Week
Submit Title To Coordinator	Week 4
Interim Report Submission	Week 12
Proposal Defence (Viva: FYP 1 Presentation)	Week 14
Pre-Sedex	Week 24
Sedex	Week 26
Online Submission of Technical Report & Dissertation	Week 26
Project Viva	Week 28

3.4 Gantt Chart

Gantt Chart is one of the method used by the developer to ensure all the activities that already been scheduled to develop the system still within the time framework given. A Gantt Chart created based on the method of the software development where all the stage must be included. Normally Gantt Chart will show the duration of the project schedule from the start and finish timelines where it contains all the stages for project research and development. System developer will use the Gantt Chart as a guidelines to make sure that all the activities planned for the project development always keep in track. The schedule that available inside the Gantt Chart will be keep changing based on the progress of the project. The Gantt Chart prepared included for both module which is Final Year Project 1 and Final Year Project 2.

Activities	Week																											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
(A)Introduction	Process	Process																										
Define Problem	Activities	Activities																										
Title Proposal	Activities	Activities																										
(B)Requirement			Process	Process	Process	Process																						
Collect Data			Activities	Activities																								
Review Research Finding			Activities	Activities																								
Conduct Literature Review			Activities	Activities																								
Analyse Data					Activities	Activities																						
(C)Design							Process																					
Design interfaces							Activities																					
Submission of Interim Report													Key milestones															
Proposal Defence														Key milestones														
(D) Implementation															Process													
Development of the system															Activities													
(E)Verification																										Process	Process	Process
Testing the system																									Activities	Activities	Activities	Activities
(F)Maintenance																											Process	Process
Upgrade the system																										Activities	Activities	Activities
Project Submission																												Key milestones

Process				
Activities				
Key milestones				

CHAPTER 4

RESULT AND DISCUSSION

As mentioned in early stage, the methodology that we use for the project research and development is The Waterfall Model. During the requirement stage, one of the methods to gain the data and information is by conducting survey among SPM student in school. A set of questionnaire already been distributed among the student to know their feedback regarding the system or problem. The objectives of the survey are:

1. To study the level of complexity that students facing when making the decision about admission in higher institution
2. To identify all possible factors that affects the decision making
3. To determine student awareness about the significance in choosing the right Universities and programme

To make sure the objectives stated defined, the set of question already been divided into 3 sections. First section which is section A are about respondent demography, age and also gender. Next section which is section B are focus on the decision making process and the last one which is section C are more on to identify the decision making factors among the student related to the university and programme they choose.

4.1 Section A

Demography

In section A which is demography, the variables stated in the questionnaire are age, gender, school and the programme of study. 35 students are involved with the survey where all are from the same school. All students age are same because they in the same class. The different are only in term of gender where 45% male respondent and 55% female respondent. The survey already been conducted at Sekolah Menengah Pengkalan Chepa 1 which is located in Kota Bharu, Kelantan. The respondents are in the same programme which is the science class, they currently in form 5 and will having SPM examination this year.

4.2 Section B

Decision Making Process

In section B, the questions are focus on the decision making process when selecting the university and programme to further their study after finish secondary school. From the survey, the data has shown that student having difficulties in deciding the university and programme. They thought the process of selecting the university and programme to admit are very difficult. From the pie chart show that 51% very difficult, 24% difficult, 13% average, 8% easy and last one 4% very easy. From the percentage that we got from respondent, we can conclude that most of the student having difficulty in selecting the university and programme for them to pursue study in higher education institution.

Please state the level of difficulty the process of choosing the university and programme that available in Malaysia?

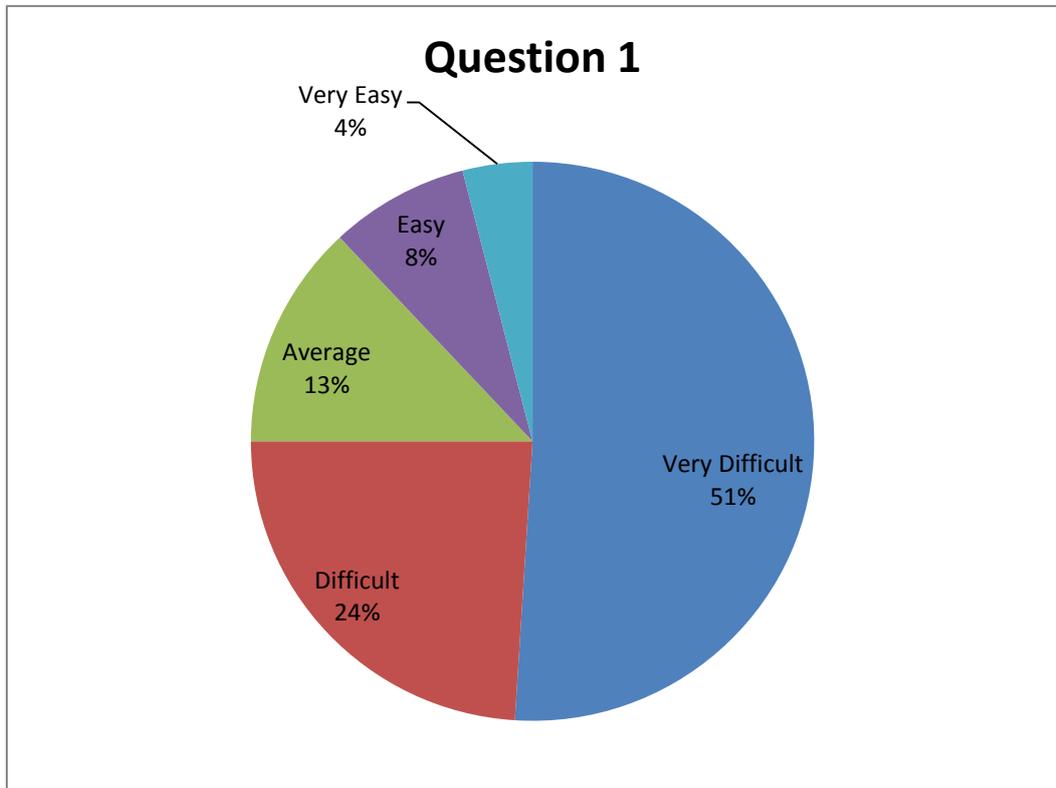


Figure 6: Pie Chart Question 1

Information regarding the university or programme are important when want to do the selection, for the next question student were asked how much support they need in order to gain information to choose right university and programme. From the pie chart we can see independent state a high percentage among the other criteria which is 32%. It was followed by very dependent 26%, dependent 20%, average 13% and the last one was very independent which is 9%. From the survey, we can see that nowadays student are very independent where they don't need much support from people in order to do the decision.

Please state how much support do you need in order to gain information to choosing the university and programme?

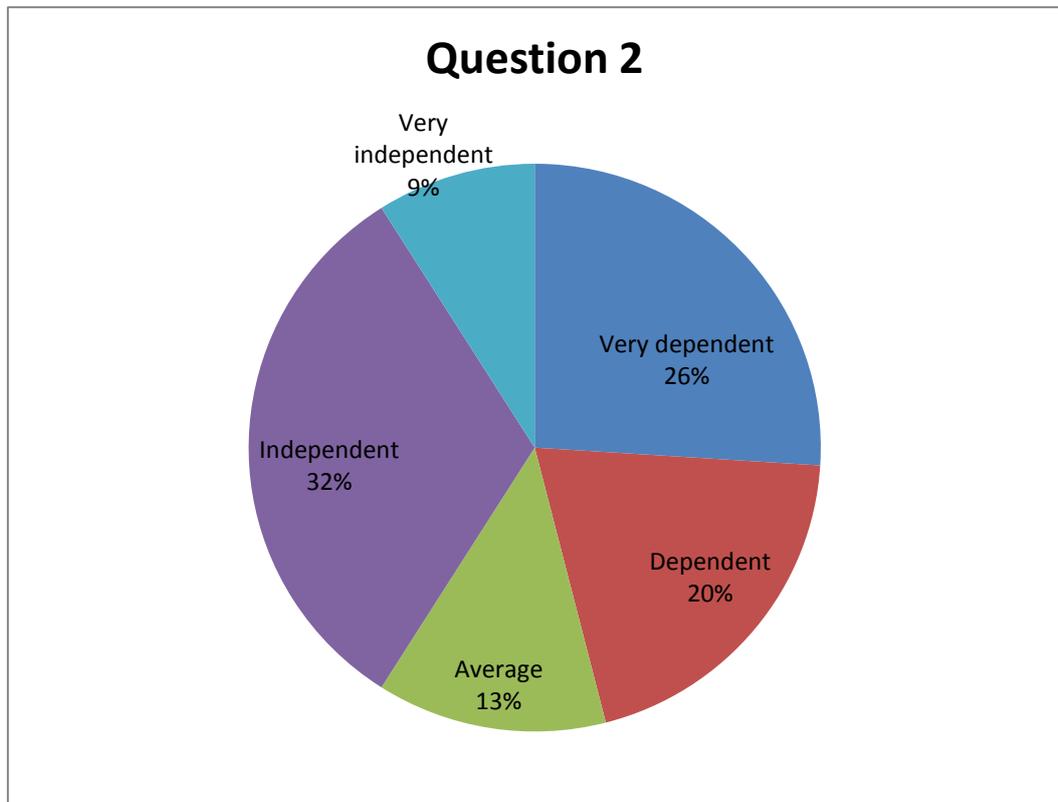


Figure 7: Pie Chart Question 2

Resource are important to the student if they want to do the research before taking any decision, in order to know the level of dependability among students one question already been prepared. The question is to know the level of dependability in choosing the university and programme to the resources such as Advertisement, Newspaper, Internet, Magazines, etc. From the survey, the high percentage which is 62% shown that the student are very dependant to any resources. It was followed by dependent 23%, average 10%, independent 3% and the last one very independent which is 2%. From the result, we can conclude that student really depend on the resources or material to find information regarding the university and programme before taking any decision in choosing the placement.

Please state the level of dependability in choosing the university and programme to the resources such as Advertisement, Newspaper, Internet, Magazines, etc.?

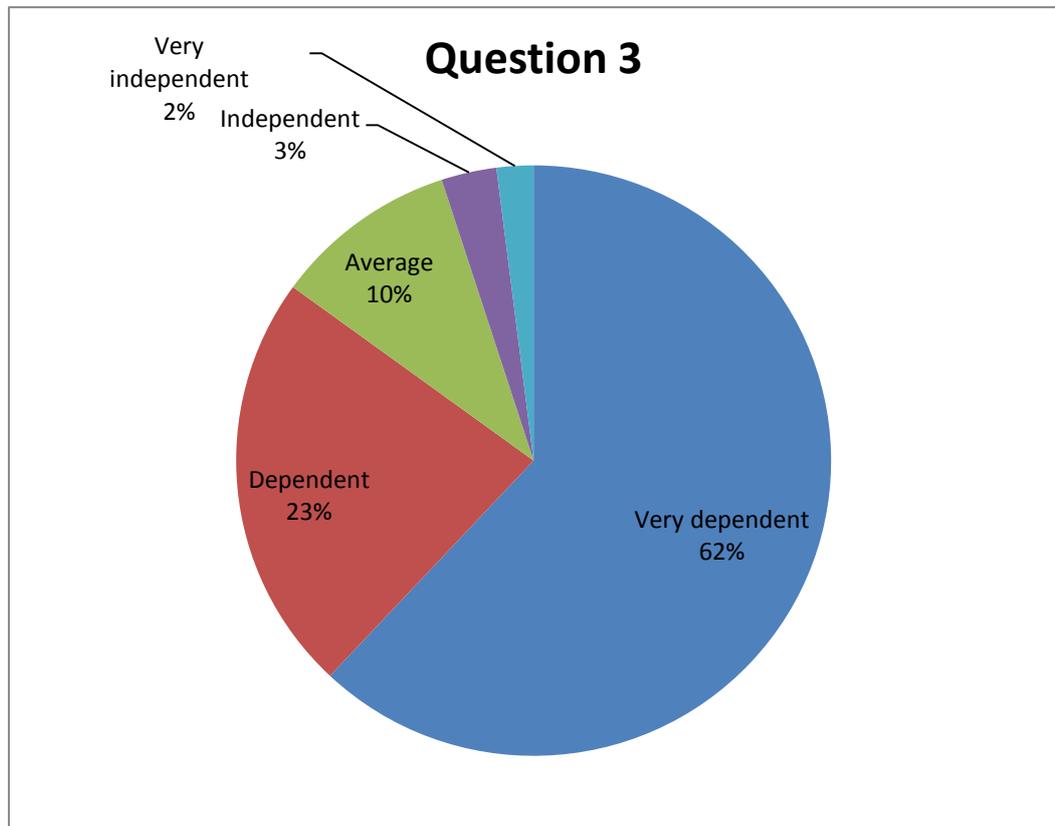


Figure 8: Pie Chart Question 3

Time management is important in decision making, it crucial for people to make quick decision on any work related today. The students also been given a question on how long do they spend in order to make decision regarding the university and programme that they will choose. From the survey, the highest percentage time required by the student is 5 to 6 days to make the decision. It was followed by 1 to 2 days 24%, 3 to 4 days 18% and the last one is one week or more which is 16%. From the result, we can conclude that student totally spend more time before making the decision about the university and programme they want to enrol in.

Please state how long do you spend in order to make decision regarding the university and programme that you will choose?

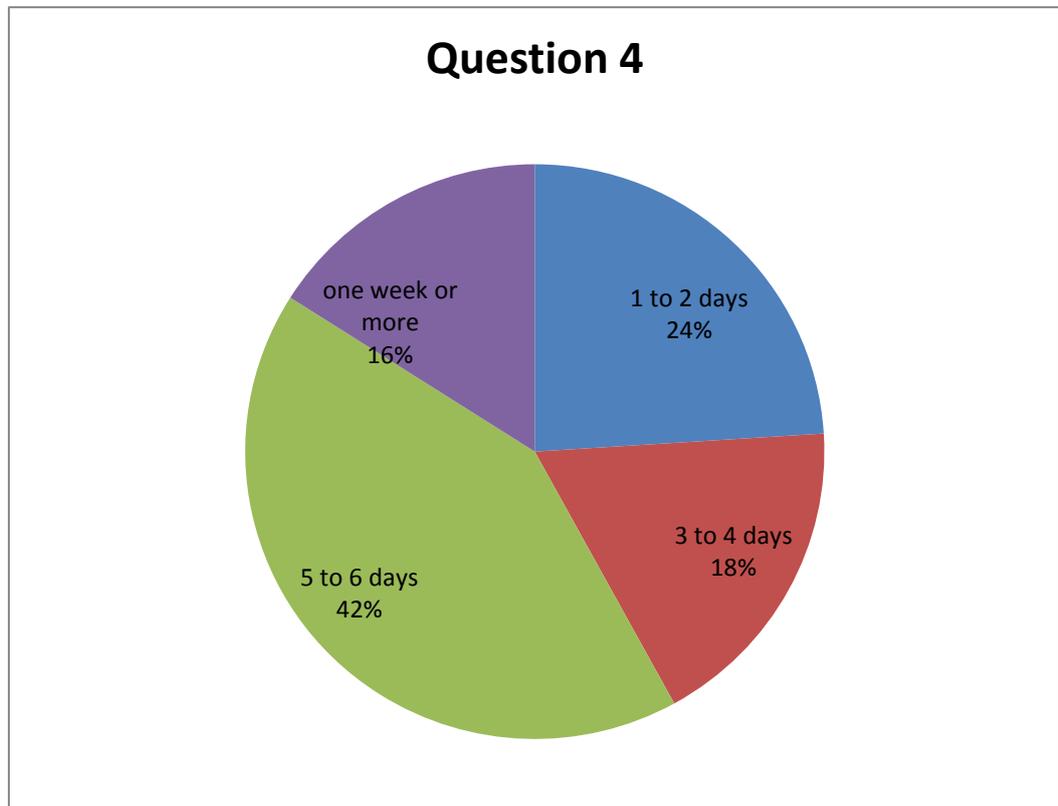


Figure 9: Pie Chart Question 4

4.3 Section C

Decision Making Factors

In the section C, it focus on the decision making factors that can affect or influenced student to make decision on the university and programme they want to choose after finish secondary school. First question is regarding the sequence process they take when deciding the university and programme, three criteria that been asked in questionnaire which is university first or programme first and the last one is no sequence at all. From the survey the highest percentage is programme first then university which is 37%. It was followed by the no sequence at all 35% and the last one is university first the programme 28%. From the result we can conclude that student will choose the programme first rather than the university when choosing the placement in higher institution.

Please state the sequence process while deciding the university and programme accordingly?

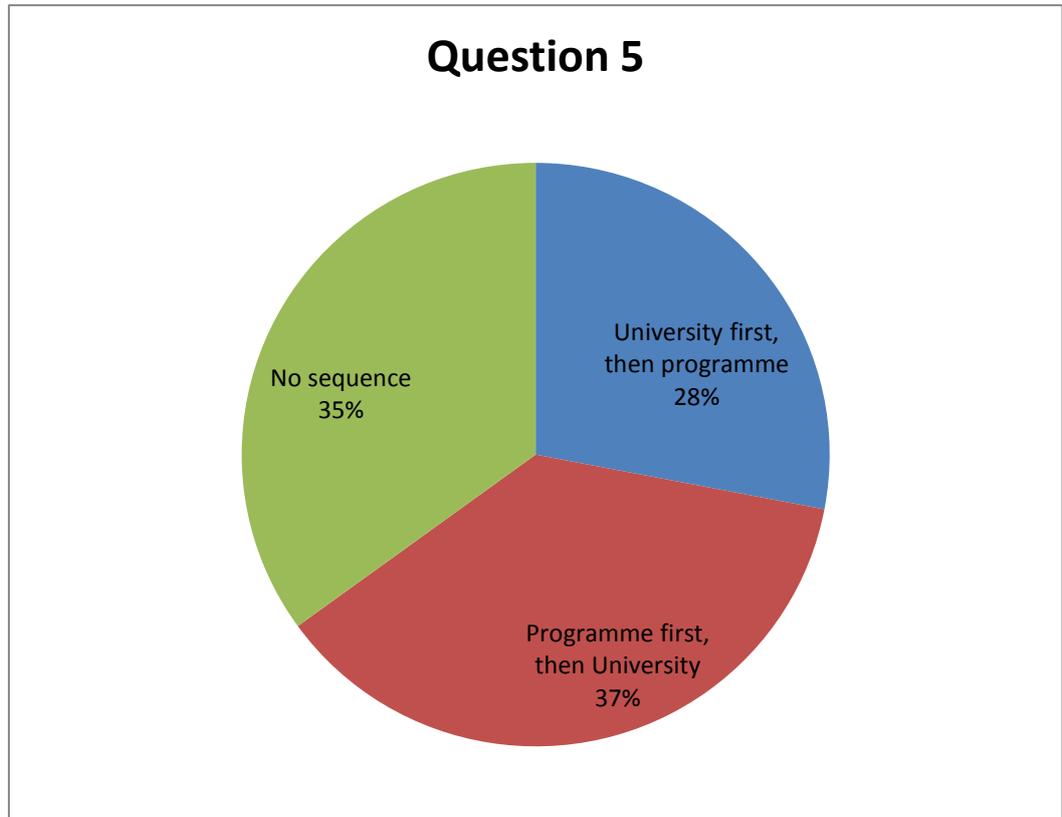


Figure 10: Pie Chart Question 5

Next question is to determine the level of emphasis that they put when choosing the programme available in university based on their own interest. Normally students will only choose the programme based on their interest. From the survey, the highest percentage showed very emphasized which is 51%. It was followed by emphasized 33%, average 8%, less emphasized 6% and the last one is not emphasized which is 2%. From that we can conclude student will choose the programme based on their interest when making the decision regarding the placement in the university.

Please state the level of emphasis that you put when choosing the programme available in university based on your own interest?

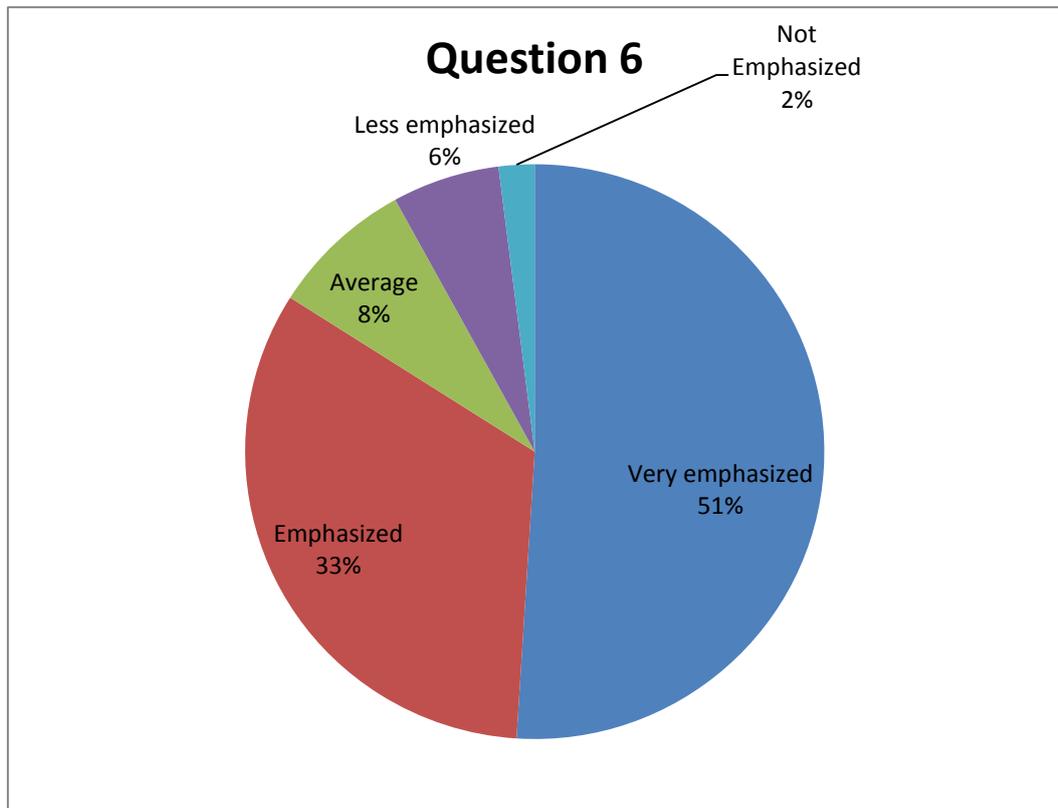


Figure 11: Pie Chart Question 6

Students now can access the information about the university and placement easily; the most popular university or programme will normally have the advantage. The question was designed to study the level of emphasis that students choosing the university and programme based on their current popularity. This type of question was prepared to determine what the university criteria that can make students interested. From the survey, average state the higher value compare to the other criteria which is 37%. It was followed by the emphasized 32%, very emphasized 28%, less emphasized 2% and the last one is not emphasized is 1%. From that we can conclude that popularity of the university and programme also will be one of the factors to student in making the decision.

Please state the level of emphasis that you choosing the university and programme based on their current popularity?

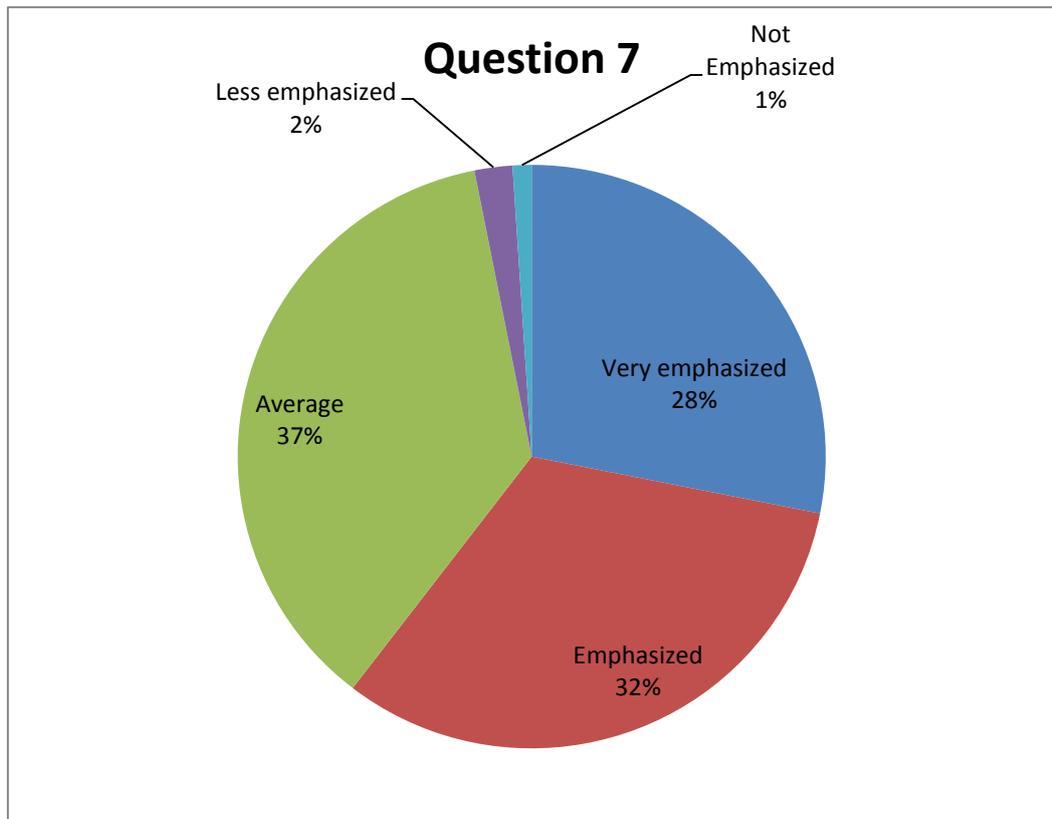


Figure 12: Pie Chart Question 7

Last question in the survey is to determine the level of emphasis that the difficulty of the programme will affect students while choosing the university programme to enrol in. The difficulty of the programme is one of the factors that can influence the decision making because student normally reluctant to choose the difficult programme that available in university. Based on the pie chart showed those 27% students are less emphasized to this factor. It was followed by the emphasized 25%, average 19%, very emphasized 18% and the last one which is not emphasized 11%. From the result we can conclude that students are also concerns to the difficulty of the programme that available in the university before making the decision.

Please state the level of emphasis that the difficulty level of the programme will affect while choosing the programme to enrol in?

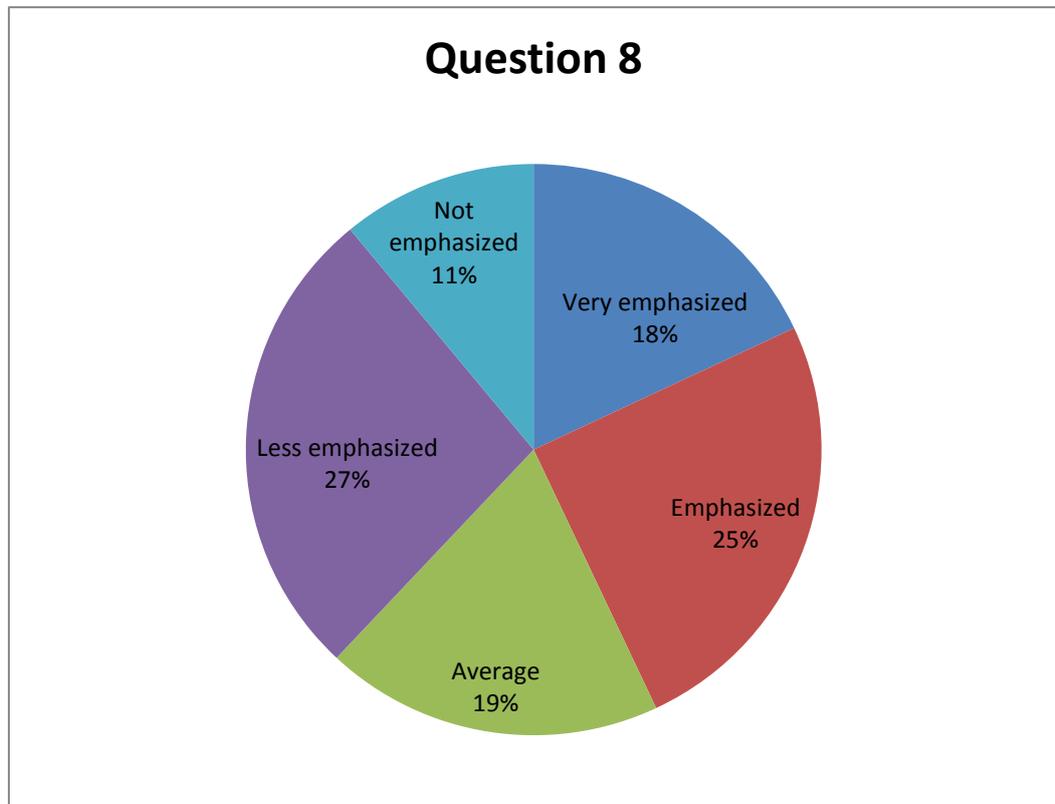


Figure 13: Pie Chart Question 8

All feedback received and be analysed accordingly, the data been used to support the feasibility of the project research and development. The questionnaire prepared already meet the objectives where all the criteria like decision making process and decision making factors can be determine accordingly. Data retrieved show the positive result where it has the significance to the topics chosen for project research and development.

4.4 Prototype

4.4.1 First Prototype

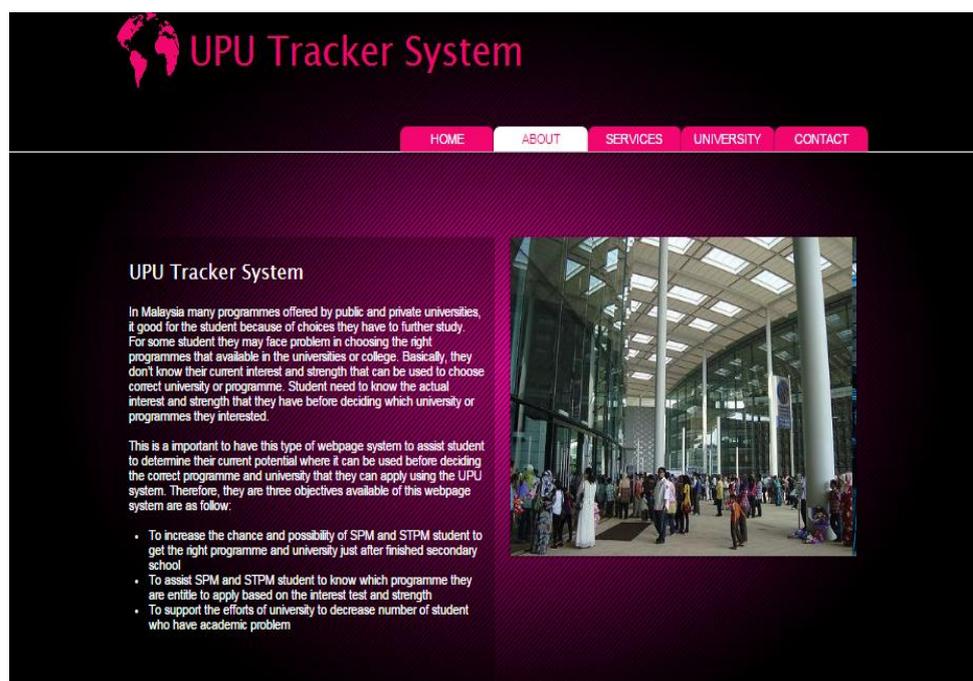
Home page

Welcome page for UPU Tracker System



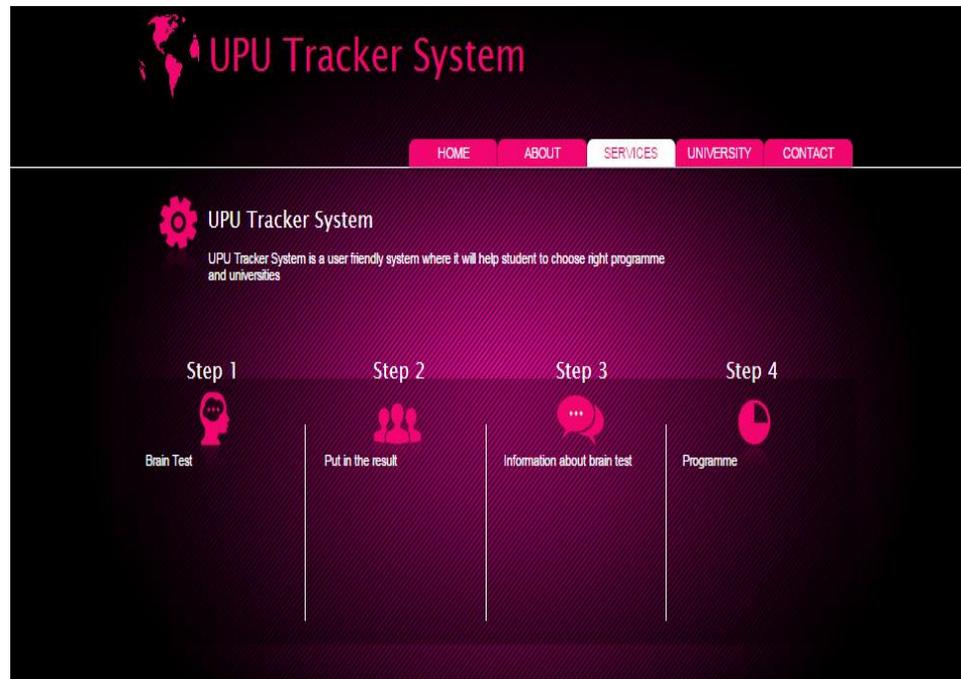
About page

Briefly explain what UPU Tracker System is all about



Services

Student need to do the brain test and generate the information



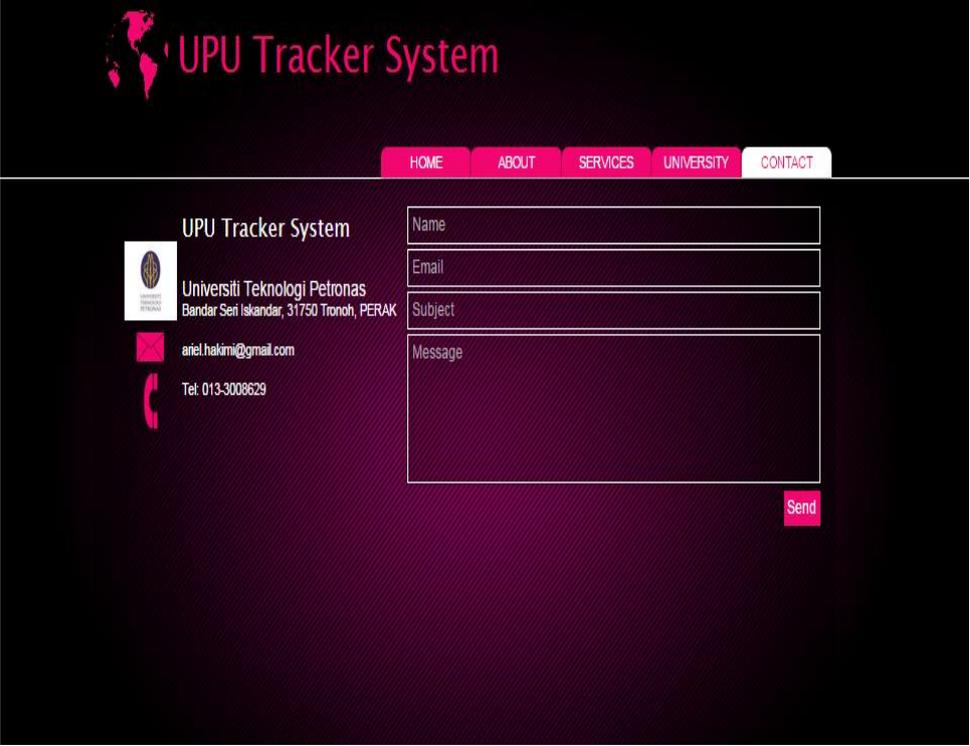
University

List of university available in Malaysia



Contact

Student can use this platform for any enquiry about the university or programme



UPU Tracker System

HOME ABOUT SERVICES UNIVERSITY CONTACT

UPU Tracker System

Universiti Teknologi Petronas
Bandar Seri Iskandar, 31750 Tronoh, PERAK

aniel.hakimi@gmail.com

Tel: 013-3008629

Name

Email

Subject

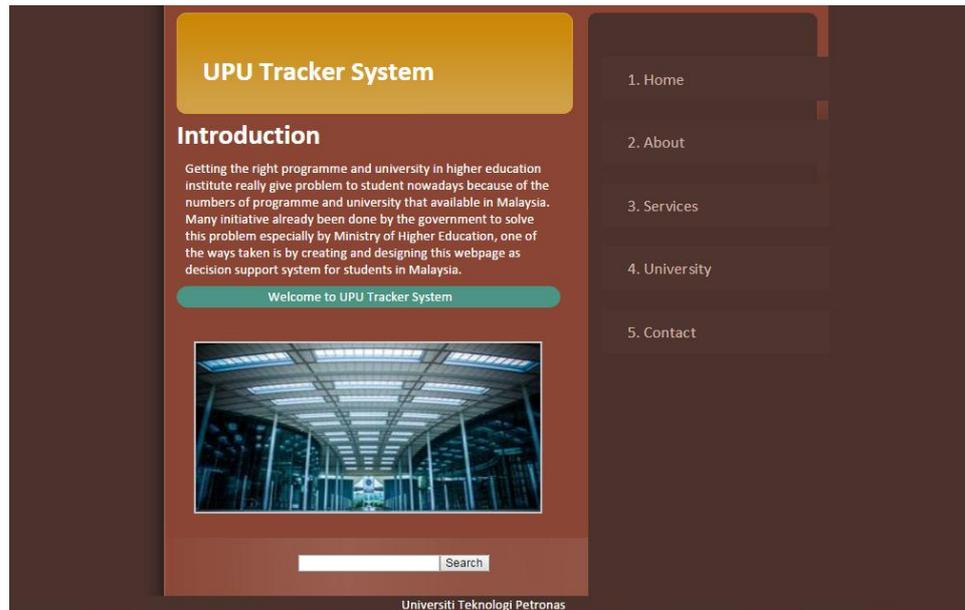
Message

Send

4.4.2 Final Prototype

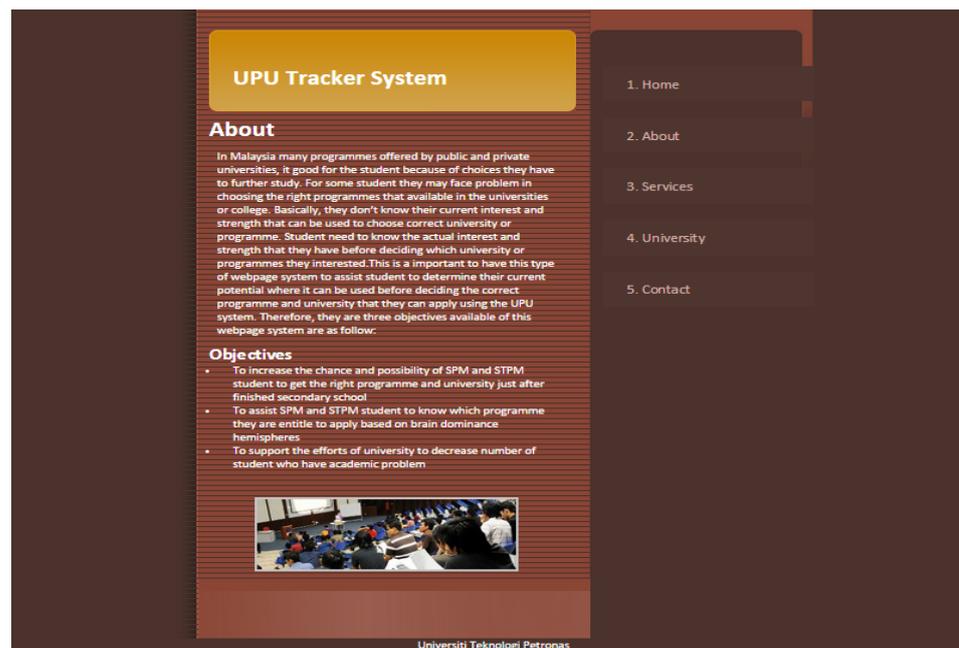
The final prototype interface is more user-friendly interface because users can view Home page, About page, Services page, University page and Contact page by just click the main tabs at the right of the system on each page.

Home



This page is main page to the system which contains welcome note and introduction about UPU Tracker System. At the top of this page, there are five different functions such as Home page, About page, Services page, University page and Contact page. Users can easily click the tab at the right side of the system if want to move to next page.

About



At this page, users will be introduced on how to use the UPU Tracker System. Each step will be shown at this stage where users can refer accordingly. In this page also including the objective of the system where users can know what are the outputs that they can achieve after using the UPU Tracker System.

Services

UPU Tracker System

Services

UPU Tracker System is a user friendly system where it will help student to choose right programme and universities

Please follow the step below:

- Step 1 (Brain Test)
- Step 2 (Generate information from Brain Test result)
- Step 3 (Specify the selection)
- Step 4 (Make your own decision)

Step 1:
Brain Test

Step 2:
Generate Information

Step 3:
Specify Selection

Step 4:
Make the Decision

Universiti Teknologi Petronas

Students as the users of this system are required to do the Brain Test. When the student clicked the tab Brain Test, the interface as in Step 1 will show up. The users are required to tick the entire question given that appealed to them and the result of the Brain Test will be shown. Later, the students have to click on the link provided based on their Brain Dominance in order to generate the list of universities and programmes in Malaysia.

Step 1

Right Brain/ Left Brain Quiz

Directions: Take this test by selecting the answer which best describes you at this present time. Every time you read a description or characteristic that applies to you, select the first response that seems right. After you are done, system will evaluate your responses automatically by adding them up. Whichever number is higher represents your dominance. Please answer all the question given in order to get the good result.

1. When you walk into a theater, classroom, or auditorium (and assuming that there are no other influential factors), which side do you prefer?
 - Right
 - Left
2. When taking a test, which style of questions do you prefer?
 - Subjective (discussion)
 - Objective (true/false, multiple choice, matching)
3. Do you often have hunches?
 - Yes
 - No
4. When you have hunches, do you follow them?
 - Yes
 - No
5. Do you have a place for everything and keep everything in its place?
 - No
 - Yes
6. When you are learning a dance step, is it easier for you to:

Step 2

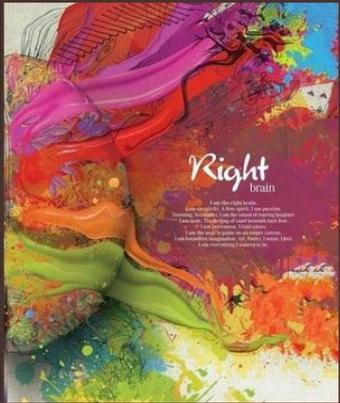
Please Choose based on Brain Dominance Test

Please select the criteria below based on your preferences



Left
brain

I am the left brain.
I am analytical & mathematical.
I love the alphabet & language. I am accurate. I love
directional language. I am practical.
I am logical. I am organized & plan to be there.
I am right-handed.
I am right-handed.

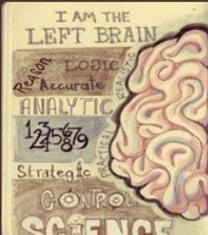


Right
brain

I am the right brain.
I am creative & artistic.
I love to draw & paint. I am imaginative. I love to
draw. I am colorful & expressive. I am
creative. I am right-handed.
I am right-handed.

Generate Left Brain Information

Generate Information for Left Brain



According to the Hemispheric Dominance test, you use your left brain the most. The summary briefly describes your dominance type. Remember, this only represents half of the picture. After you read the description listed inside the table below, click on the link below to determine the information related to the left brain dominant person before make decision regarding the placement in the higher education institution. Some of the traits associated with the left side of the brain are listed in the table. Remember, we use both side of our brain, but your left sides gets the most exercise.

Please use "Jump to" function below to generate the information

Type of Cognitive Processing	Brief Description
Linear	Processing information from part to whole; in a straight forward logical progression
Sequential	Processing information in order from first to last
Symbolic	Processes symbols an pictures; likes to use letters, words and mathematical symbols
Logical	Processes information piece by piece using logic to solve a problem
Verbal	Processes thoughts and ideas with words
Reality-Based	Processes information based on reality; focuses on rules and regulations

Jump to...

Generate Right Brain Information

Generate Information for Right Brain



According to the Hemispheric Dominance test, you use your right brain the most. The summary briefly describes your dominance type. Remember, this only represents half of the picture. After you read the description listed inside the table below, click on the link below to determine the information related to the right brain dominant person before make decision regarding the placement in the higher education institution. Some of the traits associated with the right side of the brain are listed in the table. Remember, we use both side of our brain, but your right sides gets the most exercise.

Please use "Jump to" function below to generate the information

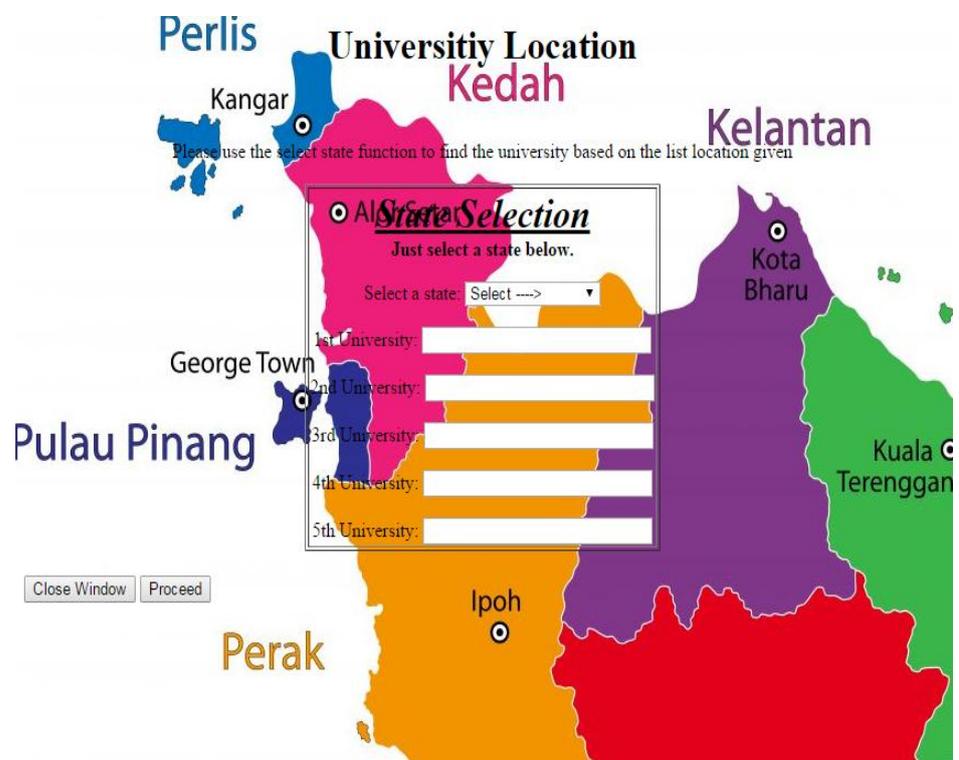
Type of Cognitive Processing	Brief Description
Holistic	Processing information from whole to part; sees the big picture first, not the details
Random	Processing information with out priority, jumps form one task to another
Concrete	Processes things that can be seen , or touched - real objects
Intuitive	Processes information based on whether or not it feels right know answer but not sure how it was derived
Nonverbal	Processes thought as illustrations
Fantasy-Oriented	Processes information with creativity; less focus on rules and regulations

Jump to...

For Step 3 below, students can narrow down their choices based on three main factors which are University location, University reputation and University education cost. These three factors are based on the result of the questionnaire made in requirements phase of this project. From these factors, the students can view all the factor that can affect them to make decision about university and programme that they want to choose.

Step 3

Specify university location



Specify university reputation

University Reputation

Please use the select function to determine university reputation based on the list of state given

The list sort from high to low university reputation

Reputation
Just select a state below.

Select a state:

1st University:

2nd University:

3rd University:

The background of the form features a teal color with large, white, stylized text that reads "YOU CAN'T BUY REPUTATION THAT".

Specify university education cost

Education Cost

Please use the select function to determine university education cost based on the list of state given

The list sort from low to high education cost

Education Cost
Just select a state below.

Select a state:

1st University:

2nd University:

3rd University:

4th University:

5th University:

The background of the form features a green color with large, white, stylized text that reads "EDUCATION COSTS STATE".

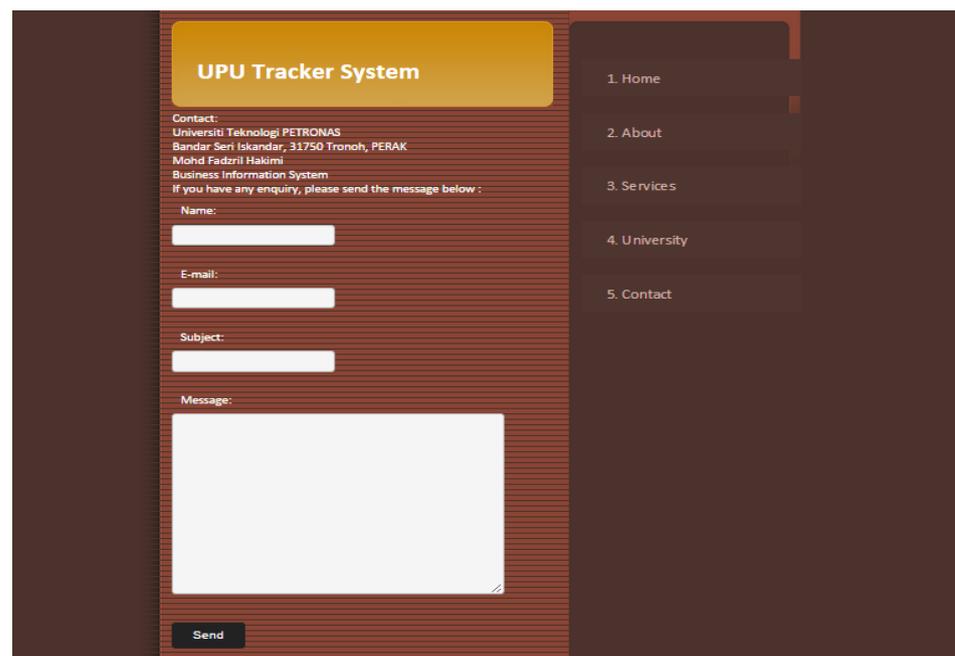
University

Users can find more information about public and private universities in Malaysia at this page. Users just click the link provided in the University page to view the details about that particular University.



Contact

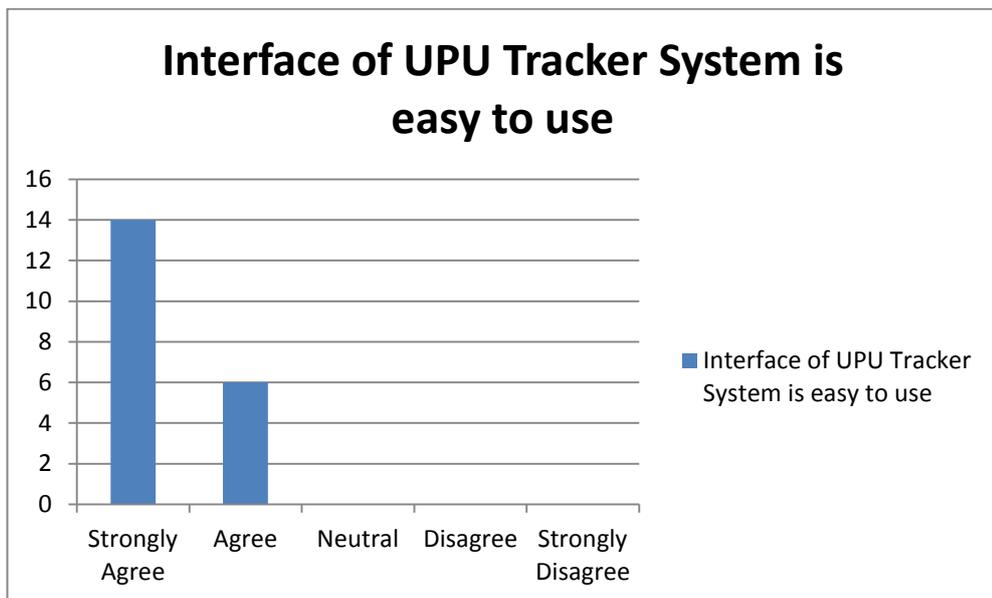
Students whose want to know about the system or University can use this platform to communicate where they can directly send the email to developer.



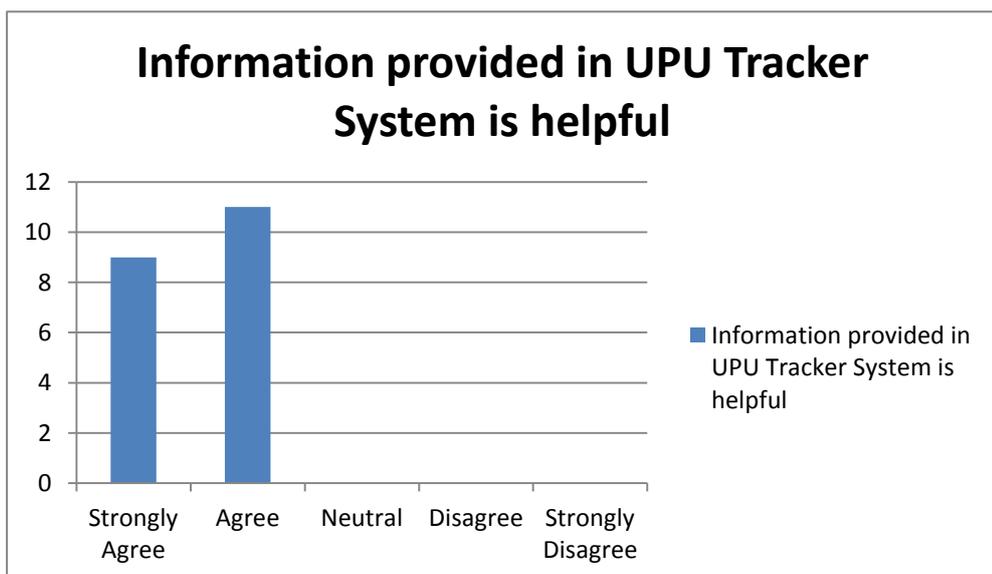
4.5 Satisfaction Testing

In order to capture feedback from the users regarding the UPU Tracker System, satisfaction testing already been conducted. All the feedback will be uses to enhance UPU Tracker System interface, usability and functionality. A satisfaction testing has been conducted which involved 20 respondents which is 12 male users and 8 female users.

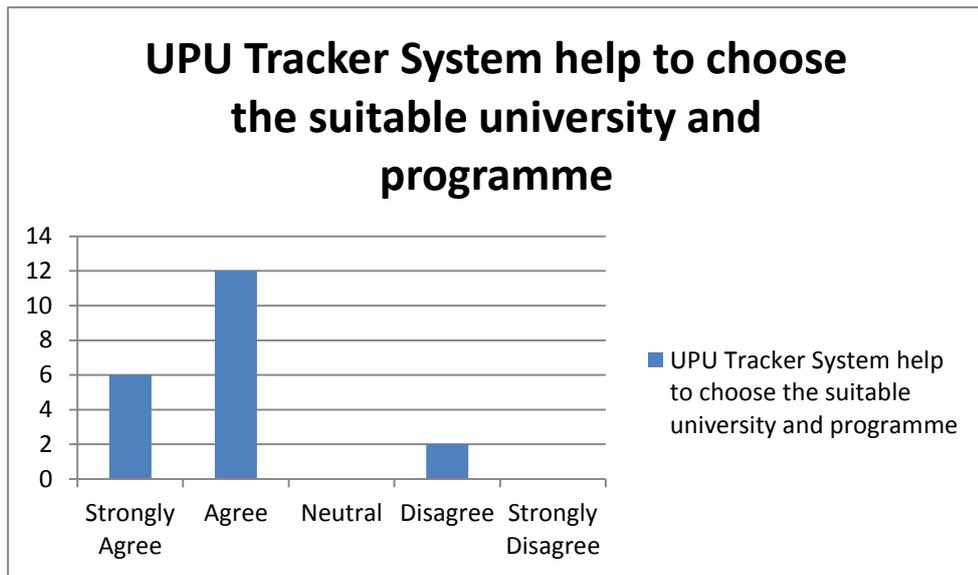
Question 2



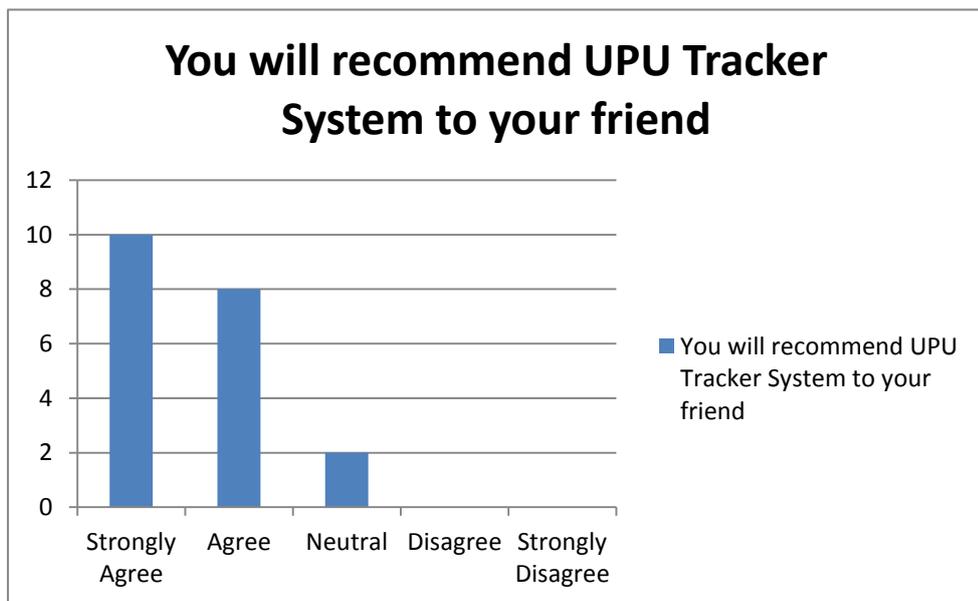
Question 3



Question 4



Question 5



Question 6

After analysed all the data from the satisfaction survey, many respondents claimed that the UPU Tracker System background color was not clear. They suggest that the background should be lighter because it contains much information. Users also suggested that the information about programme should be added more and focus directly to brain dominance hemisphere that students have. Last suggestion from user where requested the developer to display their brain test result once finish answering the entire question. These feedback were gather and analysed for system enhancements in the future.

CHAPTER 5

CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

UPU Tracker System is a web-based application system. In choosing the right methodology for the project, many factors need to be considered by the developer especially factors like time where it totally will give problem during the development. The methodology that already been chosen is Waterfall Model where it suits the current project environment. Method used to collect the data and information are through observation and research where all the methods stated are used iteratively. This system is created to determine suitable programmes and universities based on the brain dominance hemisphere test. From the brain test, students will be able to generate information about the programme, university, career and characteristics based on the test result. This system will suggest to users the programme and university that is suitable for them before the decision-making process. The final decision can be made after students specify the selection according to the three factors which are location, reputation and education cost of the university listed in Malaysia. It can be concluded that the UPU Tracker System can assist secondary school students who just finished the SPM or STPM in making the decision about the programme and university to pursue their studies. Thus, all objectives of this project are achieved.

5.2 Recommendations

In the future, more research needs to be done for this project where the significance in this particular topic to the society is very high. Strong concept understanding needs to be done by finding and gathering all the material needed in order to create very high feasibility project value. Focus can be more on the functions that are available or the capability of the system to support many universities which are available in Malaysia. Awareness to the topic chosen for the project needs to be strengthened by giving more exposure to the students and the universities, they also need to take this advantage by extending this type of project for their future use. Users need to find new target people in order to expand the usability of this type of system where it could benefit many students who have problems.

regarding the placement in the universities. Nowadays, android is a famous operating system for smart phone where many people from different age used it. Currently this project use simple webpage system where it has certain limitation for user access, to overcome this problem it is possible for developer to create android application which same function with this project. It totally will increase of the number of people who can use and access it using their own smart phone or tablet.

CHAPTER 6

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APPENDICES

Questionnaire

The purpose of this survey is to learn the factors that affect SPM and STPM student when deciding the Universities and programme after finished secondary school. All issues and problem will be collected based on the feedback from respondent, from that one system called **UPU Tracker System** will be develop to assist the student when making the decision.

Below are the detail objectives of this questionnaire:

1. To study the level of complexity students facing when making the decision about admission in higher institution
2. To identify all the possible factor that affect the decision making
3. To determine student awareness about the significance in choosing the right Universities and programme

Please do not hesitate to contact the following person if you have any queries:

MOHD FADZRIL HAKIMI

BIS Final Year Student

UTP, Tronoh, Perak

Email: ariel.hakimi@gmail.com

Section A: Demography

1. Age: _____

2. Gender: Female/Male

3. School: _____

4. Programme of Study (if applicable): _____

Section B: Decision making process

1. Please state the level of difficulty the process of choosing the University and programme that available in Malaysia?

- Very difficult
- Difficult
- Average
- Easy
- Very Easy

2. Please state how much support do you need in order to gain information to choosing the University and programme?

- Very dependent
- Dependent
- Average
- Independent
- Very independent

3. Please state the level of dependability in choosing the University and programme to the resources such as Advertisement, Newspaper, Internet, Magazines, etc.?

- Very dependent
- Dependent
- Average
- Independent
- Very independent

4. Please state how long do you spend in order to make decision regarding the University and programme that you will choose?

- 1 to 2 days
- 3 to 4 days
- 5 to 6 days
- One week or more

Section C: Decision making factors

5. Please state the sequence process while deciding the University and programme accordingly?

- University first, then programme
- Programme first, then university
- No sequence

6. Please state the level of emphasis that you put when choosing the programme available in University based on your own interest?

- Very emphasized
- Emphasized
- Average
- Less emphasized
- Not emphasized

7. Please state the level of emphasis that you choosing the University and programme based on their current popularity?

- Very emphasized
- Emphasized
- Average
- Less emphasized
- Not emphasized

8 Please state the level of emphasis that the difficulty level of the programme will affect while choosing the programme to enrol in?

- Very emphasized
- Emphasized
- Average
- Less emphasized
- Not emphasized

Brain Test Question

- 1) When you walk into a theater, classroom, or auditorium (and assuming that there are no other influential factors), which side do you prefer?
 - right = R
 - left = L
- 2) When taking a test, which style of questions do you prefer?
 - L= objective (true/false, multiple choice, matching)
 - R = subjective (discussion)
- 3) Do you often have hunches?
 - R= yes
 - L= No
- 4) When you have hunches, do you follow them?
 - R = Yes
 - L = No
- 5) Do you have a place for everything and keep everything in its place?
 - R = No
 - L = Yes
- 6) When you are learning a dance step, is it easier for you to:
 - R = learn by imitation the teacher and getting the feel of the music?
 - L = learn the sequence of movements and talk your way through the steps?
- 7) Do you like to move your furniture several times a year, or do you prefer to keep the same arrangement?
 - L = keep
 - R = Move
- 8) Can you tell approximately how much time passed without a watch?
 - L = yes
 - R = No
- 9) Speaking in strictly relative terms, is it easier for you to understand
 - L = algebra?
 - R = geometry?
- 10) Is it easier for you to remember people's names or to remember people's faces?
 - L = Names
 - R = faces
- 11) When given the topic "school", would you prefer to express your feelings through drawings or writing?
 - R = drawing
 - L = writing

- 12) When someone is talking to you, do you respond to the word meaning, or do you respond to the person's word pitch and feelings?
- L = word meaning (what is said)
 - R = word pitch and feeling (how it is said)
- 13) When speaking, do you use few gestures, or do you use many gestures (that is, do you use your hands when you talk)?
- L = few gestures (very seldom use hands when you talk)
 - R = many gestures (often use hands when you talk)
- 14) Your desk or where you work is
- L = neat and organized
 - R = cluttered with stuff that you might need.
- 15) Is it easier for you to read for main ideas or to read for specific details?
- R = main ideas
 - L = specific details
- 16) Do you do your best thinking sitting erect or lying down?
- L = sitting erect
 - R = lying down
- 17) Do you feel more comfortable saying/doing humorous things or saying/doing well-reasoned things?
- R = humorous things
 - L = well-reasoned things
- 18) In math
- L = you can explain how you got the answer.
 - R = you can get the answer but cannot explain how.
- 19) Did you notice the 1111?
- L = not significant
 - R = significant
- 20) Everything happens for an reason?
- L = of course everything happens for a reason simple cause and effect
 - R = intelligence is part of the cause and everything happens for an intelligent reason, there are no accidents in the universe that fact that you are reading these words is no coincidence.
- 21) Insight and Synchronicity
- L = Linear logical thinking and do not notice much synchronicity
 - R = Experience insight not using a linear thought process to obtain it, notice synchronicity
- 22) Dreaming
- L = Do not dream or recall dreaming
 - R = Lucid Dream and good recall

UPU Tracker System Satisfaction Testing Questionnaire

1. Gender

- Male
- Female

2. The interface of UPU Tracker System is easy to use

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

3. The information provided in UPU Tracker System is helpful.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

4. The UPU Tracker System helps you to choose the best programme and university to enrol.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

5. Will you recommend this website to your friends?

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

6. Leave your comment about UPU Tracker System for future enhancement.

Existing Webpage System

Ministry Of Higher Education Website



Malaysia Centre of Educational Excellence








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Ministry of Higher Education Malaysia
The Department of Higher Education is one of the four departments/centres under the Ministry of Higher Education



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- ▶ Why Study in Malaysia
- ▶ Malaysia Centre of Educational Excellence
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